

**WHAT DO WE KNOW ABOUT WHAT SCHOOL LEAVERS AND
GRADUATES ARE DOING? – A EUROPEAN PERSPECTIVE ON
DATA PRODUCTION AND UTILISATION**

By

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ABSTRACT

Considerable resources are spent on school leavers' and graduates' information systems (SLGIS) in numerous European countries, but it is not clear what happens to the results. This research investigates how school leavers' and graduates' data are produced and to what extent the data are then applied in educational policy planning, institutional decision-making and informing students. This investigation categorises the currently available SLGIS in Europe using documentary data, analysis of which leads to a typology and the selection of three distinct cases. These cases - England, Finland and the Netherlands – are explored based on 15 élite interviews in each country, and further documentary data. The reported uses of SLGIS are broadly similar across the different case study countries, despite the clear differences in the design of their SGLIS. This suggests that the 'value' might not be intrinsic to the data itself but it depends on the judgement of the society. On the other hand, their uses are contrasted in terms of data-production and data-utilisation based on the interplay of data-needs of the different actors regarding the SLGIS. The data-needs of the policy and the institutional levels differ substantially. For example, whereas policy is largely content with a national picture, institutions require more detailed information at the level of educational programmes. Findings like these suggest that national and international investment in SLGIS could be made more efficient.

To my family and my good friend Viki



Photo taken in Birmingham, 2012

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LIST OF ABBREVIATIONS

A-levels	General Certificate of Education Advanced Level
AN	Aarresaari Network
BBL	Beroeps Begeleidende Leerweg, Full-time vocational programmes
BIS	Department for Business, Innovation and Skills
BOL	Beroeps Opleidende Leerweg, Block or day release in vocational education
BTEC	Business and Technology Education Council
CATEWE	Comparative Analysis of Transitions from Education to Work in Europe, 1997-2000
CEDEFOP	European Centre for Development of Vocational Training
Céreq	Centre d'études et de recherches sur les qualifications, Centre for Research on Education and Qualifications
CHEERS	Careers after Higher Education, a European Research Study, 1998-2000
DESAN	DESAN Research Solutions
DfE	Department for Education (UK, England)
DLHE	Destinations of Leavers from Higher Education
ET 2010	Education and training systems in Europe, 2002
ET 2020	Strategic framework for European cooperation in education and training, 2009
EU	European Union
FDS	First Destinations Survey
GEMS	Graduate Employment-Market Statistics
GCSE	General Certificate of Secondary Education
HAVO	Hoger algemeen voortgezet onderwijs, Senior general secondary education
HBO	Hoger beroepsonderwijs, Professional higher education
HECSU	Higher Education Careers Services Unit
HEFCE	Higher Education Funding Council for England
HEGESCO	Higher Education as a Generator of Strategic Competences, 2007-2009
HEI	Higher education institutions
HESA	Higher Education Statistics Agency
HIERD	Oktatáskutató és Fejlesztő Intézet (OFI) Hungarian Institute for Educational Research & Development
ISTAT	Italian National Institute of Statistics
KIS	Key Information Sets
LA	Local Authority
LFS	Labour Force Survey
LSYPE	Longitudinal Study of Young People in England
MB	Middelbaar beroepsonderwijs, Senior secondary vocational education
NEET	Not in education, employment or training

NEPS	National Educational Panel Study
NQF	National Qualifications Framework
NVQ	National Vocational Qualification
OECD	Organisation for Economic Co-operation and Development
OFQUAL	Office of Qualifications and Examinations Regulations
Ofsted	Office for Standards in Education, Children's Services
OMC	Open Method of Coordination
REFLEX	Flexible Professional in the Knowledge Society New Demands on Higher Education, 2004-2007
ROA	Research Centre for Education and the Labour Market, Maastricht University School of Business and Economics
ROC	Regionaal opleidingencentrum, Regional training centres
SEN	Special educational needs
SES	Socioeconomic status
SF	Statistics Finland
SLGIS	School leavers and graduates information system
SLS	School Leavers' Survey
SSLS	Scottish School leavers' survey
TREE	Transitions from Education to Employment
UAS	Universities of Applied Sciences
UNESCO	United Nations Educational, Scientific and Cultural Organization
VAVO	Voortgezet algemeen volwassenen onderwijs, Secondary educational institutions
VET	Vocational education and training
VMBO	Vorbereidend middelbaar beroepsonderwijs, Preparatory vocational education
VMBO BL	Basic vocational track of preparatory vocational education
VMBO GL	Combined track of preparatory vocational education
VMBO KL	Middle-management track of preparatory vocational education
VMBO TL	Theoretical track of preparatory vocational education
VSNU	Vereniging van Samenwerkende Nederlandse Universiteiten, Association of Dutch Universities
VWO	Vorbereidend wetenschappelijk onderwijs, University preparatory education
WO	Wetenschappelijk onderwijs, Academic higher education
YCS	Youth Cohort Study

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CHAPTER ONE

INTRODUCTION TO THIS RESEARCH

This research investigates how data on school leavers and graduates are gathered, analysed and used in different national contexts. This chapter first outlines the research topic, its scope and its relevance for policy and practice. The second section of this chapter outlines the way in which the investigation is framed, in terms of the approach to international comparison and the approach to 'researching research'. These two frames inform the data collection and interpretation in this study. The third section presents the research topics and the research questions, and the fourth section explains the structure of the thesis.

1.1 Definition of research

This thesis investigates the information systems conducted in different European countries to find out about the trajectories of school leavers' and graduates' after the completion of formal education. The scope of the study is restricted by using three criteria to determine the type of school leavers' and graduates' information systems (abbreviated SLGIS in this report) to be included:

1. The SLGIS must collect and analyse school leavers' and graduates' data at the national level;

2. The SLGIS must provide evidence of post-educational outcomes from both secondary and tertiary education; and
3. The SLGIS must either collect data from more than one cohort of young people or the same cohort has to be contacted several times.

This research excludes SLGIS with a regional scope, covering a specific educational institution, or only one educational phase but not the others. This research does not analyse information systems whose sole purpose is to gather data on young people not in education, employment or training (NEET). However, regarding the case studies of this research such information systems are mentioned as further datasets covering a specific section of the school leaving population.

This research investigates how ‘evidence based policy-making’ works, setting it into a comparative context to reveal European similarities and national differences. Rather than examining the actual patterns of school leaving and graduation, this research studies ‘the social processes by which numbers are generated and the effect of these processes on behaviour and thought’ (Bogdan and Ksander, 1980: 302) and ‘the construction, interpretation, and display of statistics in quantitative social research’ to interpret the informal knowledge and procedures beyond the technicalities of statistics’ (Gephart, 1988: 9).

This new project is 'researching research' as it collects information on data-production and utilisation in relation to school leaving and graduation. The main questions asked are those connected to measuring and researching within a specific educational policy area, and how the data are made sense of and used later on by the different actors. To avoid confusion, the current research is referred to throughout as 'this research'. The research programmes under scrutiny are referred to as 'school leavers' and graduates' information systems' or 'SLGIS'.

The topic and the research questions for this investigation stem from previous work at the Hungarian Institute for Educational Research & Development (HIERD, in Hungarian: Oktatáskutató és Fejlesztő Intézet). The author worked in the project TAMOP 3.1.1, 6.1.1 entitled 'Chances of settling to an occupation' led by György Mártonfi (OFI, 2011). As a junior research assistant the author's task in the project was to collect data and contribute to a comparative analysis on guidance systems and school leavers' surveys within the vocational education sector (Hordósy and Király, 2011, Hordósy et al., 2012). This led to an interest in the methodology and utilisation of the SLGIS and to an application for a doctoral research project to pursue further analysis.

This research focuses on the geographical frame of Europe. Comparison lends itself more easily to national contexts that are closer to each other both culturally and economically. The other main reason for choosing Europe as a research context is

that over several decades, European integration has been encouraging policy convergence. The European Union Education and Training strategy for 2020 has an objective to improve the quality and efficiency of lifelong education and training. Given acceptance of the 'knowledge economy' imperative, this objective is central to EU policy and, in particular, to expectations for employability and mobility (EU, 2009).

Within the geographical frame of Europe, this research analyses the SLGIS at the nation state level. The description of SLGIS in this thesis refers to methodological, financial and institutional details, as well as the dissemination process and the subsequent utilization of the information from the national school leavers' and graduates' information systems. This research investigates how the SLGIS are used at the level of national education and labour market policy, and within educational institutions.

The European Union has started multiple research programmes and started collecting various types of statistical data regarding schools and universities (EU, 2009, Council, 2002). Moreover, nation states spend vast amounts of taxpayers' money to gain information about the national educational system and its outcomes. However, the utilisation of the gathered information has received little previous attention from researchers. What are school leavers' and graduates' information systems used for? Who uses them and to what extent?

Perhaps due to methodological differences in SLGIS, there are limited numbers of international comparative studies on how the SLGIS are carried out (Smyth et al., 2001). The evidence presented in this thesis will be useful for other countries considering such an information system. Also, at the European level it will help to 'encourage agreement on a 'best practice' template to facilitate the partial harmonisation of existing transition surveys' and other information systems gathering school leavers' and graduates' data (Smyth et al., 2001: i).

In principle, SLGIS promise several benefits. First, they can help governments and researchers to explore the mechanisms of knowledge societies, and yield important and relevant information on the outcomes of education and learning. Second, educational institutions may require information on their former students' performance in the next educational stage or at their subsequent work place. Third, they can distribute information about the necessary skills and competencies for the different careers, and prepare current students for the school to work transition (EU, 2009). Fourth, they may provide information which could be used to strengthen tuition and help the transition of students, particularly those faced by apparent barriers to further participation (Gorard et al., 2007)

1.2 Frameworks used in this research

As stated in the previous section, this research takes a comparative view on how different nation states set up their SLGIS and how the results of such data collections

are utilised by the different actors. The framework applied in this research is international comparative research to gain an understanding of the similarities and differences between the national SLGIS and relate those to the national educational and policy context.

The thesis draws on two approaches to address the problem of 'researching research'. These are (i) enumerology to understand the production and utilisation of research information within policy-making and (ii) ethnostatistics to understand how statistics are employed.

1.2.1 Comparing the SLGIS across national settings

This research describes and compares several national SLGIS within Europe. This sub-section first outlines what is understood as international comparative research and why it is applied in this research. Then the methodological implications of the international comparative frame are detailed along with the time and space frame used.

This research set out to compare different national approaches to measure school leaving and graduation, and it is framed as international comparative educational research. The first part of the term, 'international research' in Phillips and Schweisfurth's typology (2006) relates to trans-, and international issues in education, stressing the interdependence of the different communities through the

analysis of issues like multicultural education or peace education. The second part of the term 'comparative educational research' usually refers 'to all studies that inspect similarities and/or differences between two or more phenomena', 'between different people or groups' (Bray and Thomas, 1995: 473). The term international comparative research is used by Hantrais (2009: 4-5), who identifies it as a 'catch-all term to indicate comparisons across national, societal and cultural boundaries conducted within international settings'.

Another possible term, cross-national analysis, is not appropriate here. This term implies that the topic of the investigation has the equivalent meaning and purpose in the different national contexts (Hantrais, 2009). The importance of analysing societal contexts schools operate in dates back to the foundations of the comparative educational research field (Crossley and Jarvis, 2000). A systematic and profound examination of the cultural context is important to gain a deeper understanding of the phenomena and to reach appropriate generalisations (Noah and Eckstein, 1998, Parkyn, 1977).

The comparative frame for this research is chosen for three main reasons that derive from the above discussion. First, comparing the SLGIS allows assessing the educational and wider societal context they are situated in and comparing those. Second, comparing different national contexts halts the researcher from taking some assumptions for granted regarding the research phenomena. Third, comparing

different countries at the European level provides the opportunity to give an overview of the wider region itself. (See Appendix 3 for the Geographical levels of the analysis.)

The geographical frame is an important aspect when conducting international comparative educational research. Although this sort of research is generally associated with taking nation states or regions as the unit of analysis, Bray and Thomas (1995) suggest considering other geographical levels as well. They recommend combining the analysis of the different levels, like world regions, countries, nation-states, districts, schools, classrooms and individuals to gain a deeper understanding. The research questions of this research highlight the vision of improving the quality and efficiency of education and training for Europe's success, and to enhance employability and mobility (EU, 2009). In this research there are three main levels of analysis, two of which are implied already in the title of the research. The analysed region is Europe; the unit of analysis is the nation-state, as national school leavers' and graduates' information systems are investigated. Although the main focus for the research is the member states of the European Union, some other countries affiliated to the EU are drawn into the analysis as well. (See Appendix 3 for the Geographical levels of the analysis.)

A third level of analysis is that of sub-regions, as one of the hypotheses is related to educational policy transmissions. SLGIS are thought to develop in a similar manner

in sub-regions that share common characteristics. Cowen (2000: 336) argues that both the global and the nation-state 'have to be 'read' in combination with, and in contradiction to, concepts and realities such as 'region' or 'rim' (...)'.

The level of the nation-state implies homogeneity within a country (Bray and Thomas, 1995). However, within the United Kingdom for instance the four different home-countries have their own SLGIS. This new research uses data available for the smallest (country) unit of analysis and then combines these to give a picture of the higher levels of analysis, like the European. One set of the research questions is concerned with the utilisation of the school leavers' and graduates' information at the institutional level. This, however, does not become another level of analysis, rather a space where the utilisation of the SLGIS is observed.

International comparative educational research faces several problems. One crucial issue is to tackle the language difference. It seems obvious that the meaning of equivalent words, concepts, and educational phenomena might be diverse in the different national contexts and this has to be accounted for when comparing them. 'Language 'fixes' concepts' making it problematic to translate, and even good translations does not replace 'direct communications' (Phillips and Schweisfurth, 2006: 94, Halls, 1990: 29). Translations might also reveal the interests of the translator as they open up space for interpretation – therefore they have to be used carefully and reflectively (Welch, 1999). As the author's only languages spoken are Hungarian, English, German, some Spanish and some Dutch, translations and shorter summaries of documents in English have to be used when conducting this

research. Although comparative research between countries is easier to carry out by an international research team where the data are collected by locals using their own language and not moving between contexts, this is not an option for this research. As it is not possible to learn several other languages within the short time-frame of this research, the author had to ask the participants in this research to use English as a common medium of communication. This necessarily makes the interview situation more demanding for some interviewees and possibly causes data loss in countries that are not English-speaking. A further issue is being an 'outsider' to the research context. The original plan for this research was to examine Hungary's school leavers' and graduates' information system as well. These SLGIS were emerging in Hungary in 2008-2010 just before the start of this research. However, after the change in administration in 2010 this policy initiative lost support and was terminated. Therefore in this research only 'other' places are examined. Being an 'outsider' to all educational systems in the analysis might help the author towards a more neutral, a more objective way of evaluating them. However, this bears many challenges as well and raises the importance of being aware of the 'researcher' looking into certain educational phenomena in other countries.

1.2.2 How are data produced and used regarding the SLGIS?

Here the conceptual framework of the analysis of data production and data utilisation are outlined. This sub-section explains the approach taken to understand the data production and utilisation from the actors' perspective along with defining 'data',

‘information’ and ‘knowledge’. These concepts are used as an aid to ‘researching research’, gathering information about information systems.

To understand how SLGIS are constructed and used within a complex policy field, the conceptual framework for this research builds on *enumerology* as framed by Bogdan and Ksander (1980) and *ethnostatistics* as outlined by Gephart (1988, 2006). Both of these approaches assume an ethnographical perspective on the ‘organizationally and institutionally sanctioned nature, meaning, and use of quantitative practices and products’ (Gephart, 2006: 426). These concepts emphasise the actors’ perceptions of data and information rather than a ‘third person’ perspective which views data production from a particular theoretical standpoint. Table 1-1 outlines the differences between these two concepts: their definition and what they suggest to analyse, along with how they are applied in this research.

Table 1-1: Theoretical framework of this research

Enumerology	Ethnostatistics
Definition of the concept	
Studying the social processes of generating data, the 'lay' production of data	Studying how measurement happens, how social researchers use statistics
Levels of inquiry in the concept	
1) how a phenomenon becomes worthy of counting	1) observing the production of statistics
2) how counting is settled and negotiated by actors	2) questioning the underlying assumptions of statistics at work
3) how do actors use and make sense of the data?	3) analysing how statistics are argued and constructed
How is it applied in this research?	
Examining how school leaving and graduation became worthy of counting and whose data-needs the data collection covered. Moreover, the role of actors in regards how the production of school leavers' and graduates' data happens is investigated along with what the actors use the data for, if at all.	Examining how the data producers in particular and the expert data users more general create school leavers' and graduates' data and how they understand the statistical procedures they use.

(Amalgamation of: Gephart, 1988, Gephart, 2006, Bogdan and Ksander, 1980)

The reason for applying both concepts in this research stems from them complementing each other. Whereas enumerology is 'concerned with (lay) production and use of counts in policy and evaluation studies', ethnostatistics provides a more specific focus on 'how social scientists produce and use statistics in research' (Gephart, 2006: 426). Through applying the two concepts together in this study the perspectives of both the data producers and the data users are covered. Enumerology refers to a wider range of actors who are involved in the processes of setting the rules for the SLGIS, gathering the data, and in the varied ways of using them. Ethnostatistics on the other hand, refers to a more specific group of actors, that of data-producers and expert data-users who employ the data in statistical analysis.

Enumerology is the study of the social processes generating data. It analyses how certain phenomena become worthy of counting as well as how the processes of counting are settled. These two strands of analysis focus on ways in which phenomena are understood and the power relations which guide choices of data. Enumerology also includes the study of how actors use and make sense of data. This third line of enquiry deals with the 'affective and ritualistic meaning' that the collected data has within organisations and in broader society (Bogdan and Ksander, 1980: 307). Enumerology also suggests that the process of counting might change the understanding of the phenomena,

It is not that the figures produced are only scrutinized [in enumerology], it is that they are used to understand the people, the processes, the organizations, and the society who compile them, rather than for their factual content alone. (Bogdan and Ksander, 1980: 302)

Enumerology is applied in this research to understand how school leaving and graduation as a policy area became important to measure in some European countries but not in others. Using this ethnographic view of data production and utilisation helps to uncover whose data-needs are considered in the SLGIS in a given national context. Also, this research examines how the data are collected as well as

what they are used for – if at all – by the different actors at the policy and institutional level, and amongst the citizens.

Ethnostatistics is the study of ‘how measurement happens’ and how individuals who produce the data understand the statistics they use. Gephart (1988) suggests that there are three levels of conducting an ethnostatistical study. These could be employed sequentially or simultaneously: (i) observing the production of statistics, (ii) questioning the underlying assumptions of statistics at work, and (iii) analysing documents as objects concentrating on how the statistics are argued and constructed (Gephart, 1988). For the purposes of this research the three different focus points are employed at once to gain an understanding of (i) the school leavers’ and graduates data production process, (ii) the analysis and understanding of the data through statistics by actors, and (iii) how the data then is ‘translated’ into other formats to serve as information.

To understand how SLGIS operate, the perspective of the researchers gathering the data and providing it for dissemination is just as important as that of the users. The responsibilities of the users and their power over the data are different. Starting from the policy maker deciding what data to collect, through the data-expert who ‘makes sense’ of the data for the policy-making structure. Furthermore, through the institutional level at which actors might be expected to react to the results of the SLGIS. And finally to the individual citizens who might need the data to inform their

decisions or holding the policy and institutional level accountable. This study combines enumerology and ethnostatistics to provide a broad view of the thinking and practices of the actors involved in the design and use of SLGIS.

A further crucial distinction is used in the research literature regarding 'data', 'information' and 'knowledge'. Data are 'a set of discrete, objective facts about events' whereas information conveys a 'message' that aims to inform and thus, make a difference (Davenport and Prusak, 1998: 2; 3). A further definition given by Davenport and Prusak (1998: 5) is 'knowledge', termed as 'a fluid mix of framed experience, values, contextual information, and expert insight that provides a framework for evaluation and incorporating new experiences and information'. Thus, knowledge is not a rigid structure and therefore it can handle complexity of this new information. The distinction between these terms becomes important if and when the actors using the SLGIS are signalling the difference. The question here is, therefore, do they think that any 'data speaks for itself' or do they consider the 'meaning-making process' when using data? Furthermore, what do the actors consider important and relevant knowledge gained through the SLGIS?

1.3 *Research questions*

This section outlines the research questions that 'predispose [...] us to look in certain directions at particular methodologies' (Newby, 2010: 65, Robson, 1993). There are

several aspects of SLGIS that are of interest and the next few paragraphs describe these along with the research questions that derive from them.

The research questions were fairly set at the start of this enquiry, due to the work preceding the thesis at HIERD between 2009 and 2010. Following the literature review, the aspects that underpin this research shaped the questions to focus more on the utilisation of the school leavers' and graduates' information systems beyond how they are conducted.

The international comparative research framework of this research requires constant comparison of the topics of research outlined here as well as understanding them within their societal context. The questions of this research are in line with those proposed by Bogdan and Ksander (1980) in relation to enumerology and incorporate some of the focus points of ethnostatistics outlined by Gephart (1988, 2006) as well. The lines of enquiry in this research are as follows,

- Before 'counting': How do any phenomena become worth counting? How are procedures of counting settled? How does the fact of counting change the understanding of the phenomena?
- Whilst 'counting': How are statistics created? How are statistics employed? How do different actors understand their role in enumerating? How do actors

in different roles affect the process of counting? What are the main contextual factors of counting?

- After 'counting': What does the process of counting achieve? What is the 'affective and ritualistic meaning of quantitative evaluation and policy research'? How and to what extent are the statistics convincing and influencing the different actors? (Amalgamation of: Gephart, 1988, Gephart, 2006, Bogdan and Ksander, 1980: 307)

The specific research questions are grouped under the headings: aims, research design and methods, institutional set up and financing, history, implementation and European level considerations of SLGIS.

Aims of school leavers' and graduates' information systems

First of all this research explores why school leavers' and graduates' information systems exist and how their results are used in the several countries conducting them. In a wider context it is important to understand what information-need the SLGIS satisfy and to what extent they are successful in satisfying those needs from the viewpoints of different stakeholders.

1. What is the focus of SLGIS in different European countries?

2. What are the 'data-needs' of the different actors concerning school leaving and graduation and its wider impacts?
3. What are the main aims of the data collections and which actors set these aims?

Research design and methods of the SLGIS

This research explores how the school leavers' and graduates' data are produced. It assesses what aims are set to be achieved through the specific research designs and methodologies used.

4. What are the research questions of the SLGIS?
5. What are the main characteristics of the research design in the different countries? Do they use a longitudinal or a cross-sectional research design?
6. How is the range of respondents chosen? Is it a sample survey or is it a 'census' approach, collecting data from everybody?
7. What methods are used to collect the data for the SLGIS?

Institutional set up and financing scheme of the SLGIS

This study analyses and compares how the different SLGIS are financed and to what extent the different stakeholders contribute to conducting the data collection. This research also explores who the data-producers are, describing the institutions involved in running the SLGIS. The discussion also refers to the relation between the parties financing the surveys and the organisations involved in producing the school leavers' and graduates' information.

8. Who finances the SLGIS?
9. What organisations are involved in producing the data?
10. What is the relation between the financing parties and the data producers?
11. How is the process of decision making set up in relation to collecting and using the SLGIS data?

History of the SLGIS

As many SLGIS to be examined have been on-going for a number of decades, this research explores the history of these information systems. The changes in the SLGIS are examined from a retrospective viewpoint, along with the major drivers behind the changes. Alterations in the research question, research design, methodology, the institutional setting and the funding background in particular are analysed.

12. How have the SLGIS changed in relation to their funding scheme and institutional set up?
13. What were the major changes in the research question, research design, methodology and implementation over time to reach their current format?
14. How were decisions made on alterations of the research and who were involved in these decisions?

Implementation of the SLGIS

Besides the stated research aims it is important to explore how the SLGIS results are used by the different stakeholders. The role of the SLGIS is analysed in terms of how it shapes national and institutional policy.

15. How are the results of the information systems disseminated, who has access to the data?
16. How are the results of the information systems used?
17. What impact do the data have on the institutional assessment, career guidance systems, educational and labour market policy?

European level – comparing SLGIS

The research explores possible implications of ‘system characteristics’ via comparing the SLGIS within Europe.

18. Which European countries do or do not conduct SLGIS? Are there any regional characteristics of SLGIS?
19. What do SLGIS tell us about the European level of school leaving and graduation?
20. What are the most crucial characteristics of a ‘good information system’ within this policy area?

1.4 Organisation of this thesis

There are four main sections of this thesis. The first main section (Chapters 2-4) summarises the existing knowledge on SLGIS and how ‘data’ in general is applied within policy making and institutional settings. The second main section of the thesis outlines the research designs and methods applied in this research (Chapter 5). The third main section discusses the results of the cross-sectional phase of this research presenting all SLGIS that are available within Europe, before discussing the results collected in the three case studies (Chapters 6-10). The last main section of the thesis summarises the results to arrive at the policy implications and some further areas of research interest (Chapter 11-12).

In the first main section the three chapters set the research context. First, Chapter Two summarises what is known about the SLGIS so far. This chapter reviews how the research in the area of school leaving and graduation is conducted and discusses a comparative study on the methodologies of graduates' information systems. Then Chapter Three takes a closer look at the data producers and how data are employed at three different levels, Europe, the nation-state and the educational institutions themselves. Finally, Chapter Four outlines a number of alternative views of what education is for, that SLGIS analysed in this research could take.

The second main section of this report outlines the methodology used in this research. Chapter Five provides details of the research design, the sampling and the research methods of the two phases of this research. The first, cross-sectional phase analyses the currently available European SLGIS along a number of methodological characteristics. This phase informs the sampling for the second, case study phase. In the case study phase three national SLGIS are investigated, namely those of the Netherlands, England and Finland.

The third main section of this thesis detailing the findings are organised along the two phases of this research. The description of the first-phase results in Chapter Six refers to the existence or the absence of SLGIS in the different nation states of the European Union and then analyses the methodological similarities and differences of

the SLGIS. From this cross-sectional analysis a number of typologies are produced. One of these typologies based on the research design and the population covered in the SLGIS is used as the basis of sampling for the second phase.

The description of results at the second phase refers to the actors involved in producing the SLGIS data, to the methodology of the three different national SLGIS and to how the data from the SLGIS are used by the different levels of actors. The chapters describing findings from the second, case study phase are organised in a similar manner. From Chapter Seven to Chapter Ten the national cases are detailed starting with the Netherlands, then describing England and finally, Finland. All of these chapters then draw on all three cases to establish the similarities and differences between the national systems. Chapter Seven introduces the national educational systems and their SLGIS pointing out the most fundamental differences between them. Chapter Eight analyses the question 'who' in relation to the SLGIS: who pays for the information systems and who collects the data? This chapter describes the cases along two main aspects, that of institutional background of the SLGIS and the financial setup separately for the secondary and tertiary levels. Chapter Nine provides a discussion of the 'how' and 'what' questions. First, the three different methodological traditions of the SLGIS are described, again, starting with the Netherlands, then describing England and finally, Finland. The methodologies of the national SLGIS are analysed along their research design, the methods and data collection procedures, discussing the space and time covered, the sampling frame and the process of reporting the SLGIS outcomes. Then, a comparison of the

methodologies is provided, before the fifth section (Section 9.5) compares the research instruments used within the different national SLGIS. Chapter Ten and Chapter Eleven discuss the 'why' question. Why are data collected on school leavers' and graduates' by the different actors in these nation-states? Whose data-needs do SLGIS satisfy and whose data-needs are met only partially or not at all? In Chapter Ten the data-needs of the policy level is discussed within the three national systems, then the opinion of the institutional level are outlined, and third, the data-needs of other stakeholders are detailed. Chapter Eleven builds on the opinion of all actors, detailing the interrelated data-needs and to what extent the national SLGIS satisfy those.

The fourth main section of the report provides the conclusions of this research. Chapter Twelve points out the implications of this research for further enquiry, summarises the answers to the research questions before pointing out the implications for policy and practice.

CHAPTER TWO

WHAT IS KNOWN ABOUT SCHOOL LEAVERS' AND GRADUATES' INFORMATION SYSTEMS SO FAR?

This research does not aim to contrast the existing datasets on school leaving and graduation itself, it only analyses how such data are acquired in the different national or international settings. Therefore this chapter considers what is known so far about SLGIS, considering the evidence about how they are conducted, their focus, and how the information is used.

Traditionally, gathering data on school-to-school or school-to-work transitions seems to be the policy and research agenda through which school leaving and graduation has been researched. School-to-school transitions in this respect means transitioning from compulsory schooling to post-compulsory education, either to further education or higher education level. This chapter therefore considers 'transitions' as a case of the path-dependency of educational systems and their embeddedness in the societal and economic context and describes in Section 2.1 how they are usually viewed in previous research. Second, Section 2.2 draws on international transitions research pointing out their main focus and how they aimed to analyse the complex nature of school-to-school and school-to-work transitions. Finally, Section 2.3 summarises a recent study that compared European graduates' information systems. This is one of the only pieces of research evidence known to touch on the topic of this research.

2.1 *How are ‘school-to-school’ and ‘school-to-work’ transitions researched?*

The term ‘transition’ usually signifies two distinct concepts. It either refers to societies in fundamental socioeconomic transformation or it means the movement between educational levels and from the educational system to the labour market (Evans and Robinson-Pant, 2008). This thesis focuses on information systems gathering data about transitions related to schooling, further and higher education, and the world of work.

The conventional view of transition from school to work defines it as the period between departing from compulsory education and arriving into a stable work position in the labour market (Müller and Gangl, 2003). Some authors argue that transitions are becoming more complex and they seem to mean multiple changes between different positions, as experiencing shorter or longer terms of unemployment, gaining different types of employment like part-time and fixed-term jobs, as well as continuing learning and training alongside work as opposed to going into full-time employment just after school leaving (Stern and Wagner, 1999, Field et al., 2009, Ecclestone, 2009, Wolbers, 2003b, Couppié and Mansuy, 2003).

‘[T]he relatively enduring features of a country’s institutional and structural arrangements which shaped transition processes and outcomes’ are suggested to build up its transition system (Smyth et al., 2001). These transition systems are

changing over time within any society along with wider change, therefore the change of the societal and economic context has to be analysed as well (Raffe, 2008).

School-to-work transition has been an important research agenda in several European countries for the past few decades. A more detailed, wider-ranging research interest has emerged in the 1990s (van der Velden and Wolbers, 2003b). Comparing different national characteristics of transition systems can highlight the contextual differences, and their importance and role played in influencing the outcomes (Müller and Wolbers, 2003b). However, the cross-national model-building in the case of transition systems has worked only when drawing on a small number of countries. This can be due to equivalences not necessarily working between contexts and the level of complexity encompassed in the transitions research (Raffe, 2008, Hannan and Wrequin, 2001).

Researchers analysing the school-to-school and school-to-work transitions use a number of different concepts and theories,

These include theories of social stratification and social reproduction, labour market segmentation, networks, human capital, signalling and insider–outsider theories. (...) However, as a result of this diversity of perspectives, transition system research often appears theoretically eclectic and fragmented. (Raffe, 2008: 278)

The sociological model of education argues that there are substantial differences in 'the aims, resources, and mechanisms that guide the decisions of individual actors' in relation to transitions that have to be uncovered by the research (Müller and Gangl, 2003). In a recent review of the school-to-work transitions research-field, Raffe (2008) argues that the societal approach as the underlying view of education is crucial,

The societal approach emphasises the holistic interrelationships among different social and economic institutions, including education and training, the labour market and industrial relations systems, the production system, family structures and cultures, and so on. These interrelationships generate different national 'logics' and a degree of coherence within each country. (Raffe, 2008: 278)

Although transition-research is claimed to be built on the societal approach, Raffe (2008) also points out that it rarely accounts for other types of outcomes than those 'economically' measurable. The transition-studies do not provide a wide-range of information on other domains of the young persons' life or the different attitudes behind choosing one or the other career path. Transition from school-to-work within the human capital model is understood as a series of events that convert education and training into working abilities and job positions (Couppié and Mansuy, 2003).

Initial transitions are thought to be of particular importance within the human capital concept,

The early part of an individual's career is the optimal time to invest in education and training. (...) A lack of training and entry to unskilled occupations is likely to reduce lifetime earnings and increase the risk of experiencing periodic spells of unemployment. (Bradley and Nguyen, 2004: 484)

According to Raffe (2008: 292) the outcomes of the international comparative viewpoint underpin 'the path-dependency of countries and the failure of national transition patterns to converge'. This suggests for this research that the diverging national structures of the educational and the labour market system affecting the transition patterns possibly go along with necessary differences within the SLGIS.

2.2 School leaving, graduation and transitions researched at the European level

This section provides an outline of the research programmes conducted at the European level regarding school leaving and graduation. It points out what focus they had, what methodology they used and what problems were encountered when conducting them. The European Union has been involved in financing cross-national

educational research for decades. Some of these were concerned with the school-to-school and school-to-work transitions or with a more general concept of school leaving or graduation. These research projects build on international networks of experts within educational and labour market research, drawing on their knowledge of their own national setting (Normand, 2010, Lawn and Grek, 2012, Lawn and Lingard, 2002, Halász, 2012).

These research projects aim to compare data on school leaving and graduation cross-nationally. The main information sources to analyse transitions from school-to-work providing a system level view are built on numeric data (Raffe, 2008). As there is no internationally agreed methodology of measuring outcomes after school leaving or university, the transition information either derives from micro-data, drawing on the nationally collected, separate research outcomes; or it is gained through internationally organised research programmes, such as the Labour Force Survey for example (Raffe, 2008). In terms of their time-frame, these research projects are concerned mainly with the initial transitions from education to the world of work. Thus they do not provide a longer term view, for instance a picture of lifelong learning.

Regarding the time-scale of the transition research, although there are several longitudinal research programmes conducted, a substantial part is gathering data in a cross-sectional manner. The timing of such research programmes through snapshots views transitions from a retrospective viewpoint. Longitudinal data would be better

suited to analyse mid and longer-term outcomes as well as to describe cross-country differences (Raffe, 2008, Couppié and Mansuy, 2003). The available datasets are constrained especially in relation to the time-scale applied,

A retrospective school leavers' survey cannot expect to chart the development of occupational aspirations in school pupils; nor can it observe the process of vocational guidance. It can however record young people's retrospective views of different sources of advice, and their relative helpfulness. (Raffe, 2008: 47)

One of the first research projects on school-to-work transitions ran between 1997 and 2000 with the title Comparative Analysis of Transitions from Education to Work in Europe (CATEWE). This project built on the expertise of a wide range of researchers from Ireland, Germany, Scotland, the Netherlands, France, Belgium, Portugal and Sweden (Gangl et al., Date unknown). This research project used the Labour Force Data and in addition some 'longitudinal data from school-leaver surveys, which unfortunately exist in only a small number of European countries' (Gangl and Müller, 2003: v-vi). The CATEWE project was followed by multiple comparative research programmes, mainly on the transitions from the tertiary level to the labour market. Examples are: the Careers after Higher Education, a European Research Study (CHEERS) project running between 1998 and 2000; The Flexible Professional in the Knowledge Society New Demands on Higher Education (REFLEX) in Europe project

running between 2004 and 2007; and the Higher Education as a Generator of Strategic Competences (HEGESCO) running between 2007 and 2009.

The CATEWE study pointed to the importance of gaining data on transitions that lend themselves more easily to international comparison. The research team suggested that some changes to the LFS could be made, a possible cohort-study at the European level could be set up, as well as the national level information systems could be harmonised to some level,

(...) while full harmonisation of existing national transition surveys is not feasible, it is recommended that agreement should be reached on a template which represents best practice and principles for the partial harmonisation of these surveys. (Smyth et al., 2001: 11)

The CATEWE project pointed out why the comparative aspects of the data on transitions should be enhanced,

The improvement of existing data sources coupled with the collection of new data would greatly enhance our ability to understand transition systems across Europe in years to come. (Smyth et al., 2001: 12)

This research through comparing the information systems provides some further insight into whether and how the said aim of improved data could be achieved.

2.3 Comparative studies on SLGIS

The previous section listed a number of research projects that compare school-to-work transitions between European countries. Beyond these there are a few research reports comparing the methodology of school leavers' and graduates information systems, as for instance that of Mainguet (1999). Their work reviewed the then existing research programmes on school-to-work transition with a view on the research methods used, the sources of information and the topics covered. They also reviewed the international research programmes tapping into the topic of transitions. A further account of how the data on school transitions are collected was published in 2001; this work reviewed the data needs of policy-makers and researchers (Raffe, 2001). A more recent account to contrast how the actual school leavers' and graduates' data are acquired and used in the different nation states was published in 2012. As Gaebel et al. (2012: 16) suggest in the study entitled *Tracking Learners' and Graduates' Progression Paths* (TRACKIT), 'the tracking of students and graduates has so far received little attention, at least at European level'. Their work is concerned with the methodology and how the data about current and former students is used at the policy level as well as within HE institutions in different European countries.

Gaebel et al. (2012) gathered information through desk-based research, contacting national governments with questionnaires on their student and graduate tracking systems, and conducting further field visits to selected higher education institutions. The study covered the following countries: Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Turkey and the United Kingdom.

Note that the study by Gaebel et al. (2012) concerns students and graduates of higher education institutions, analysing how they are tracked within and after university by either the national policy level or the institutions themselves. Therefore this research has some overlaps with the TRACKIT project regarding national 'graduate tracking'. The TRACKIT report describes the methodologies of graduates' information systems was published once the initial planning and field-work phase of this research has finished, it could not inform this inquiry. However, the TRACKIT study was used to cross-check outcomes of the first-phase results presented in Chapter Six as well as it helped to elaborate the second-phase results described in Chapter Seven to Chapter Ten.

The TRACKIT project concerned the national as well as the institutional 'student and graduate tracking' procedures. It considers how the data are collected in terms of the

methods and the coverage, and how the information is used at the policy and the institutional levels. This section outlines the most relevant results of the Gaebel et al. study (2012), namely those about graduate tracking systems and the interplay between the policy and the institutional levels regarding the data-production and data-utilisation. This section also considers to what extent the TRACKIT project provides answers to the research questions of this research. The codes to the research questions can be found in Section 1.3.

Regarding graduate tracking, out of the 32 higher education systems analysed 26 conduct national graduates' data collections regularly, whereas 28 of the 31 higher education systems have some institutional tracking mechanisms in place. (There is no information included on Turkey regarding the institutional level graduate tracking systems.) The main methods of data collection quoted by Gaebel et al. (2012) are conducting surveys or gathering administrative data. Surveys are associated with factual as well as subjective aspects gathering information on evaluation, motives and attitudes towards the previous education and the current employment. However, surveys bear some level of bias especially regarding non-response, and the quality of the data is dependent on the contact information to the graduate. Administrative data on the other hand provide information about the entire graduate-population with little extra effort and investment, and they can provide a longitudinal view of the graduates' lives. Administrative data are usually restricted in terms of their scope and the amount of information they cover, they do not provide any information beyond the factual aspects. These results are parallel with research questions 5, 6 and 7 of this

research, especially regarding the research design, the circle of respondents and the methodology of SLGIS as well as research questions 17, 18 and 19 regarding the European level. The TRACKIT study gathers information on the student and the graduate tracking systems. As its focus is higher education, it does not provide information on SLGIS conducted in secondary education.

The blind spots of tracking identified are lifelong learners, mobile students and international students. The TRACKIT study suggests that these groups already make a substantial share of the student population and their ratios are becoming higher due to the EU mobility programmes and the internationalisation of higher education. This topic also corresponds with the research questions 17, 18 and 19 of this research.

A generic model for graduate tracking is described as follows,

(...) a national body, a research initiative or a consortium of higher education institutions provides a standard survey scheme and supports institutions in implementing it. The standard questionnaire could usually be augmented by the individual institutions. While they have a major role to play in ensuring a high response rate, the data would be collected and evaluated centrally. An institution would receive its own data, but could also benchmark itself (or ask to be benchmarked, depending on the approach) against institutions of a

similar kind. Aggregated data could be published, and used for research or other purposes. (Gaebel et al., 2012: 40)

However, as the TRACKIT study further elaborates, the questionnaires are sometimes too restrictive for the institutions and there is some level of change underway to make them more 'pragmatic', 'simpler, shorter and focused on the core data' (Gaebel et al., 2012: 40). Further issues with graduate tracking systems suggested in the study are the time and resource needs, the time-lag in applying the data and if there are multiple information systems, the lack of comparable data. The TRACKIT study suggests that although linking up student data and graduates' information is deemed important, it is often problematic due to data-protection restrictions. Furthermore, such data-regulations prevent the identification of students from disadvantaged social or ethnic backgrounds (Gaebel et al., 2012).

The graduate data at the policy level is used for policy planning and for quality assurance purposes and in some cases for allocation institutional funding. The graduate data at the institutional level is used 'for quality assurance, enhancement or reform of studies, and resource allocation' as well for promotional activities, gaining funding, accreditation purposes and applying the data in counselling (Gaebel et al., 2012). The TRACKIT study suggests that the interplay of the national and the institutional level usually means the universities being dependent on nationally collected data or nationally collected contact details. These results correspond with

research questions 1, 2 and 3 set for this research in Section 1.3. This research provides some further insights to the policy level data-needs and what processes the SLGIS are used in both for the secondary and the tertiary level educational policy-making.

Regarding the importance of tracking graduates at the institutional level, the study suggests that without it 'institutions and their staff have relatively little chance of assessing the real impact of study programmes, and their relevance for the labour market' (Gaebel et al., 2012: 38). Without regular and institutionalised tracking mechanisms teachers in higher education 'are unlikely to see how their former students are faring professionally' (Gaebel et al., 2012: 38). As for the external reasons for tracking, the study mentions legal requirements, financial incentives, quality assurance, and accreditation procedures. In some cases another external 'incentive' is league tables. The study suggests that the unintended consequence of them being published by the media is that 'they are instrumental in keeping universities committed not only to tracking employment, but also to supporting the entry of graduates into the labour market' (Gaebel et al., 2012: 39). A further external driver for setting up tracking mechanisms is the European Standards and Guidelines for Quality Assurance. In some countries the tracking information became either a prescribed practice for institutions or the type of information required is circumscribed by the policy level. The data collection procedures along these are both set through standards and prescribed methods, or it is left to the institution how they collect the information. These results relate to the research questions 14, 15 and 16 of this

research regarding the dissemination, the way of using and the impact of SLGIS. The TRACKIT study, however, provided more detail regarding the institutional view on SLGIS and less insight at the policy level. This research aims to give more information regarding the interplay between the policy and the institutional level data-needs for both the secondary and the tertiary SLGIS.

The possibilities that are embedded in a holistic approach to student and graduate data gathered and used within the institutions are related to evidence-based decision-making. Applying such data within the institutional governance and management has to be coupled with capacities to analyse the data and some technical solution to enhance utilisation of it. As the TRACKIT study suggests, in some cases not more data, but better coordination of data would be ideal and institutions need to 'establish explicit feedback loops which would ensure systematic use of the results of tracking and their contextualisation' (Gaebel et al., 2012: 54).

On a general level, the TRACKIT study provides an in-depth cross-national analysis of the existing graduates' information systems. It looks at several aspects of the student and graduate tracking systems. It analyses their methodology and their application at the policy and the institutional levels. This research follows a similar pattern, giving details of how information is collected on school leavers' and graduates' in European countries and analysing what the SLGIS outcomes are used for. This research provides more contextual information about why and how SLGIS fit

the data-needs of the different actors in the selected countries. This is achieved through a comparison of availability of SLGIS in European countries and in-depth approach to analyse several national contexts.

CHAPTER THREE

WHO IS USING 'DATA' AND HOW?

This chapter takes a general view on data production and utilisation regarding three different levels: Europe, the national policy making and the institutional levels. The first section details how the European Union started to have more influence on educational policy matters and how data are collected to monitor the progress of common EU-level policy aims.

After having outlined the European Union's role in data collection regarding education, the next two levels to be analysed concern the nation state. Section 3.2 provides a brief discussion on whether and how policy-makers apply research evidence and other data in their work. Section 3.3 then summarises the research evidence on how educational institutions apply data in their internal procedures.

The last section (Section 3.4) of this chapter suggests that there seems to be a data-gap regarding the interplay of the data-needs of the policy and the institutional and possibly the European levels.

3.1 The European Union as an educational policy context

This section first outlines how and why the European Union started to have an influence on national educational policies and then it discusses what type of data are gathered by the integration regarding education.

Although the European idea started off as a project of peace promotion after World War II., the process of European integration has been generally geared towards the economic issues of the community. The crucial idea was that through the free trade of goods and services all participating nation-states gain something. Education in the forming years of the community was seen as 'national responsibility' (Dale and Robertson, 2009: 32), thus the European policy-making within the field of education concerned issues strongly linked to the economic agenda like that of vocational education and training as was part of the labour market and social policies (Beukel, 2001).

The beginning of the 1970s was marked by more direct links to a common educational policy. The discourse of homogeneity can be observed in the initiation of the first meeting of educational ministers, or the Commission asking Professor Henri Janne to 'formulate an educational policy at Community level' (Lawn and Grek, 2012: 36, Halász, 2012, Beukel, 2001). The Janne-report (1973) argued the necessity of a common educational policy and to further the European agenda beyond the economic issues. It argued that education was 'about fundamental values and was,

therefore, a crucial part of the cultural policy' (Lawn and Grek, 2012: 36), a crucial part of the Europeanization process. The suggested areas where common educational policies could be started according to Janne (1973) were the following: knowledge of languages; mobility and exchanges of people; cooperation in research and permanent education. However, Halász (2012) argues that educational policy was more influenced by a report from 1974 entitled 'Education in the European Community' (EUROPEAN COMMISSION, 1974). This document set out the European mobility of students, teachers, researchers and educational and youth administrators; bringing a European dimension into education; and establishing a research cooperation with further organisations like the Council of Europe, the Organisation for Economic Co-operation and Development (OECD) and the United Nations Educational, Scientific and Cultural Organization (UNESCO) (EUROPEAN COMMISSION, 1974). It can be argued that these processes are geared towards both the humanistic idea of a common and shared European identity and are underpinned by investing into human capital to better compete globally as well (EU, 2009).

The relation between the transnational and the national levels of education systems set out in the document 'Education in the European Community' characterised the first few decades of Europeanizing education,

Recognition of the importance of Community action in the education field does not mean that there must be a common European policy in the overall sense applicable to certain other sectors. The educational traditions and systems of individual countries are rightly prized and Europe is in many respects enriched by their diversity. Thus, to set out with the objective of harmonization and coordination of their structure and content would be as undesirable as it would be unrealistic. On the other hand, national educational systems are in a state of continuing review and development, and in this context the evolution of a Community prescriptive in education should be regarded as increasingly important for the future. What is required for the present is a common commitment to the development of a strategy of educational cooperation by a more systematic interchange of information and experience. (EUROPEAN COMMISSION, 1974: 6)

As Beukel (2001) pointed out, the crucial argument of the document 'Education in the European Community' was the increased cooperation between different stakeholders of education across the member-states. Cooperation was seen as a weak or soft procedure of governance, thus it was not considered to be a major threat to national interests in education. Halász (2012) argues that therefore this could have been the only successful model for Europeanizing education. This period was marked by the first Action Programme within education: this document created the Education Committee of the European Community (Beukel, 2001, Council, 1976).

The document 'Education in the European Community' seems to have been underpinned by a humanistic view of education as it promotes closer relations and better cooperation between the national educational systems as well as getting to know each other through learning foreign languages, equal opportunities for access for all and better facilities within the education and training systems. Although there have been on-going attempts to gather information about different policy agendas, this was one of the first documents to suggest information to be collected on the educational systems within Europe (Council, 1976: No C 38/2; No C 38/3; No C 38/4).

Cooperation in the field of education was enhanced through setting up organisations like the European Centre for Development of Vocational Training (CEDEFOP) in 1975 and the Eurydice network in 1980 that established a common knowledge base about education within Europe (Halász, 2012). Moreover, through attaching funding to the mobility initiatives, the importance of the programmes concerning different sectors and levels of the education system like COMETT, ERASMUS, LINGUA and others grew substantially in the 1980s (Halász, 2012, Beukel, 2001). According to Lawn and Grek (2012), the mobility programmes had a crucial role in attempts to create shared values across Europe, particularly in the early 1990s during a crisis of the community. As Lawn and Grek (2012: 44) argue, the Europeanization process 'found in the fields of education and culture some of the most influential carriers of a common European consciousness'.

The Maastricht treaty in 1992 expanded the concept of 'free trade' to include the mobility of labour and capital (Swan, 1991). One consequence of this extension was a need to secure the acceptability of national educational qualifications across the EU. The first White Paper on the Learning Society in 1995 (EUROPEAN COMMISSION, 1995) linked the project of cooperating within the field of education to the information society and to a more general economic agenda,

The idea of a European dimension in education had gradually shifted away from being a sensitive political issue, working across state borders, and become embedded in a common economic and commercial policy which placed the European education 'sector' within a European economic trading zone. (Lawn and Grek, 2012: 47)

A latest crucial turning point in the process of Europeanization of education was marked by the Lisbon Strategy agreed in 2000. From this point onwards education has a key role in building the 'European knowledge economy' (EUROPEAN COUNCIL, 2000, Council, 2001), with its emphasis on enhancing the EU competitiveness through investment in human capital. Furthermore, this strategy redefined education as a 'new fluid, flexible and cross-national phenomenon' (Lawn and Grek, 2012: 83). The Lisbon Strategy set the ground-rules for new procedures of policy making at the community level: the Open Method of Coordination (OMC) (Alexiadou et al., 2010, Lange and Alexiadou, 2007, EUROPEAN COUNCIL, 2000).

The Open Method of Coordination was a new policy tool consisting of a number of different policy procedures. These are setting short, medium and long term goals; guidelines for achieving these goals; launching quantitative and qualitative indicators and benchmarks for global comparisons'; translating these into national and regional policies; and accompanying the procedure with monitoring and evaluation as well as peer reviewing (EUROPEAN COUNCIL, 2000). Based on the procedure of the OMC since the beginning of the 2000 two important policy programmes were launched within the field of education and learning. Both the *Education and training systems in Europe* (ET 2010) in 2002 and the *Strategic framework for European cooperation in education and training* (ET 2020) in 2009 identified common problems and set European level benchmarks in the field of education to achieve within the given time period (EU, 2009, Council, 2002). Examples of the common policy issues are: raising higher education enrolment, reducing early school leaving, supporting active citizenship, and so forth (EU, 2009, Council, 2002).

'Soft governance' of the European educational policies describes well the persuasion through unobtrusive powers of best practices and the 'hidden politics of data and standards' (Lawn and Grek, 2012: 51). The governance through devices like setting up new European organisations, associations and networks where experts from across the different educational systems can meet, 'may not be visible or even disciplining to its members, who are nevertheless creating it' (Lawn and Grek, 2012: 66). In an article based on interviewing important actors within educational policy in Europe, Lawn and Lingard (2002: 302) conclude that these actors confirmed 'the

existence of a gradually emerging and distinctive European policy culture in education, constructed through a wide array of committees, exchanges, commissions, networks and regulations, in which they worked to use, shape and imagine a European education of the future’.

This section now considers the main reasons why and how data are collected at the European level. One of the important measures of the European integration process has been collecting trans-nationally comparable data within several different policy areas. The field of education also has its set of indicators and measurements, and there are possibilities of comparing them across Europe. Beyond these overall data collections, the European Union is also involved in financing different cross-national research projects related to more specific research areas. Halász (2012) argues that the importance of research data gathered from the nation states is underpinned by two main reasons. First, the European, transnational level has to convince the national level about the significance of the proposed policy change and this can be effectively done through providing a solid evidence-base. Second, the transnational decision makers are ‘far away’ from the national educational field and this creates information shortage that can be partly filled through commissioning research projects within education.

The project of informing Europe and the decision making of the Union started with setting up a statistical team at the construction of the EU that led to ‘measuring’

Europe and presenting a diverse set of data through the Eurostat website (Michelis and Chantraine, 2003). To accompany the statistics on diverse policy areas provided by the Eurostat, Eurydice gathers 'qualitative' information on educational systems and policies (Lawn and Grek, 2012).

Especially the work programme *Education and training systems in Europe* (ET 2010) and the *Strategic framework for European cooperation in education and training* (ET 2020) brought new guidelines on a number of policy issues within education after 2000 (EU, 2009, Council, 2001, Council, 2002). Along the change in terms of redefining education as 'learning', a 'task force on lifelong learning and statistical was created' in 2001 (Lawn and Grek, 2012: 102). This task force was building on former data development processes of the Eurostat, the OECD and the UNESCO (Normand, 2010). Due to this work, a number of indices were set related to the policy issues of the ET 2010 and ET 2020 (EU, 2009, Council, 2002).

The European Union does not have direct measures of the outcomes after school or university. However, one of the largest research endeavours of the EU, the Labour Force Survey, is used to relate educational and labour market outcomes at the national and regional level. This new research analyses how school leaving and graduation is measured at the nation-states' level and whether and how the separate national information systems provide any information about Europe.

3.2 Why and how do policy-makers use 'data'? (Or, do they?)

This section covers two questions regarding how data are utilised by policy-makers; first, the type of information that is used within policy making and second, the models in which data are applied at the policy-level.

Data for policy-making can derive from primary research or secondary research built on a systematic review or meta-analysis. The primary sources are categorised along the methodological divide into quantitative, qualitative and pluralistic approaches by Davies et al (2000). The quantitative evidence dominates the discussion about 'what works' in different policy settings, whereas qualitative approaches are said to 'address issues such as why one intervention may be better than another, and they can contribute to an understanding of the context within which policies must be framed and implemented' (Davies et al., 2000: 10). According to Fitz-Gibbon (2000: 72-73) the type of information to answer the crucial question of 'what works' in education are 'observational data from surveys; evidence from specific evaluation projects; and the findings from true experimental research'. In education some information sources classified as 'qualitative' can have big impact and that they carry persuasive power. They are 'setting agenda, raising issues and providing 'thick' descriptions' of important problems within the educational system (Pawson, 2006: 73, Fitz-Gibbon, 2000).

Regarding the application of data in the policy-process, Weiss (1979) lists six different models of why and how this occurs based on the observation of policy-making. Here these six models are compared to each other. The knowledge-driven, the problem-solving and the interactive models deal with a more specific 'policy problem', whereas the tactical, the political and the enlightenment models refer to a broader perspective of policy-making.

Regarding the first two models, in the knowledge-driven model 'the sheer fact that knowledge exists' should lead to changes, while in the problem-solving model data enables answering an existing policy-question (Weiss, 1979: 427). Whereas these two models suggest a linear process, the third, interactive model is built on an iterative process. Both the knowledge-driven and the problem-solving models are built on evidence-base created through social research mainly as opposed to the interactive model, where a variety of sources and actors provide the data for the decision.

The political and the tactical model of policy making described by Weiss (1979) are in contrast with the enlightenment model. Whereas in the political model data are used as 'ammunition for the side that finds its conclusions congenial and supportive', as their arguments were settled prior to the data emerging; in the tactical model the policy seems to be using data, however, it is 'not the content of the findings that invoked but the sheer fact that research is being done' that dominate (Weiss, 1979:

429). In contrast, the enlightenment model brings more than new data to the policy-making process, it changes approaches to a policy area: here the 'concepts and theoretical perspectives that social science research has engendered that permeate the policy-making process' (Weiss, 1979: 429). Other 'classifications' of research utilisation suggest that it could be instrumental, conceptual, symbolic/mobilising/persuasive, and having a wider influence (Weiss, 1988, Estabrooks, 1999, Nutley et al., 2003, Squires et al., 2011). Although employing data within the policy process can have huge impact, it is not without limitations and is a fragile process dependent on the context and the actors of the network taking part.

According to several authors there is little research evidence detailing the actual process of data-utilisation within policy-making (see for example: Davies et al., 2000, Pollitt, 2006, Askim, 2007). Moreover, as Pollitt suggests, the evidence available paints a rather disappointing picture,

Grand statements about the importance of performance information for democracy sit alongside extensive if patchy evidence that ministers, legislators and citizens rarely make use of the volumes of performance information now thrust upon them. (Pollitt, 2006: 48)

This is the second data-gap that this research aims to address beyond that of how the SLGIS relate to the European level. This research provides evidence on how

policy-makers measure school leaving and graduation, whether and how they apply the evidence afterwards, and how the national policy-processes of using SLGIS data compare between different national settings. This research beyond pointing out how the SLGIS are used in policy-making provides a more general discussion of data-utilisation at the policy level.

3.3 Why and how do institutional actors use 'data'?

This section deals with the other main group of actors whose view on the SLGIS is considered in this research: the school and university level decision-makers, data-experts and professionals. This section provides a discussion of why data-utilisation happens within institutions before outlining several models of using data within this level.

The majority of the research carried out in relation to how schools use data in their practice relates to assessment information and data on internal progression of students (see for example: Kelly and Downey, 2011, Wayman and Stringfield, 2006, Schildkamp and Kuiper, 2010). Accountability is the main source of external reasons for institutions to use data. The main internal driver is to understand the processes behind attainment and attempt to raise the outcomes (Kelly and Downey, 2011, Kerr et al., 2006, Schildkamp and Visscher, 2009). As Young (2006: 521) suggests, this is due to the 'state and federal accountability policies [placing] tremendous faith in the power of data—especially standardized test data—to effect school improvement'.

One of the crucial findings of research into institutional data-utilisation is that the application of data occurs through a networked system of individuals (Kelly and Downey, 2011, Coburn and Talbert, 2006). Further important suggestions are that individuals at the different levels of the organisation have diverse concepts of what evidence is (Coburn and Talbert, 2006), a different degree of faith in using it (Coburn and Talbert, 2006), diverging attitudes, (Kerr et al., 2006, Saunders, 2000), skills (Sharkey and Murnane, 2006, Schildkamp et al., 2012) and responsibilities (Sharkey and Murnane, 2006, Wayman and Stringfield, 2006) to use data.

Several studies in this area of inquiry suggest that data used within the school context is limited due to a number of reasons. These are the available skills, time and resources to analyse data, attitudes towards analysing and applying data in the teaching process, and hoarding data by certain sections or levels of the educational organisation (Kelly and Downey, 2011, Kerr et al., 2006, Schildkamp et al., 2012, Kelly et al., 2010, Davies et al., 2000). Young (2006: 522) suggests that even when schools produce 'outward signs' of accepting the logic and the importance of analysing data, 'old practices dissociated from that logic may persist internally through loosely coupled systems'.

A possible classification of the processes in which schools use assessment data is suggested by Schildkamp et al. (2012). Note, that these mainly concern internal

affairs, they do not relate to external processes like being accountable for the policy level, or informing the wider public,

- Monitoring: Schools can use the examination results to monitor how well they are doing.
- Instructional and curricular decisions: Schools can analyze the examination results and base certain instructional and/or curricular decisions on the results (...)
- Supporting conversations: The examination results can form a starting point for discussion [with colleagues, students and parents]. (...)
- Professional development: School leaders can use the final examination results to shape professional development (...)
- Reflecting on one's own functioning: Teachers may use the final examination data to reflect on their own functioning (...)
- Policy development and planning: (...) setting school and district priorities and goals (...)
- Strategically: Schools can make their school examinations easier or change the norm when grading the school examinations (...) (Schildkamp et al., 2012: 232, Originally from: Schildkamp and Visscher, 2010)

There is less evidence related to the higher education level regarding how data are used. There are a number of studies on whether and how league tables and rankings have changed institutional practices; what happens to course evaluation and student

satisfaction data within the institution; and the procedure of 'informing choice' in higher education (see for example: Davies, 2012, Kember et al., 2002, Hazelkorn, 2013, Turner, 2005, Newton, 2000). However, there is little evidence detailing how any of these datasets are actually applied within the institutional decision making processes.

Therefore the third data gap identified for this research is to analyse how a particular set of data are employed within the different institutions – if at all. This research also aims to provide a similar classification to that of Schildkamp and Visscher's (2010) regarding the procedures in which schools and universities apply the information they gain about their former students.

3.4 Further gaps in knowledge identified for this research

This section summarises the data-gaps identified in the literature and suggests a further line of inquiry for this research. The three gaps in the literature identified so far relate to the application of data at the European, the national policy and the institutional levels. This section suggests three more aspects in which this research provides a new approach on using data through the example of the SLGIS. These are: a further possible level of analysis, the connection between the levels and the nature of the 'data' that is in the focus of this research.

The majority of the studies cited in the previous sections analyse the application of evidence within policy-making or examine the school or university context of applying assessment data or more general research evidence. As Pollitt (2006) suggests, there is a further level of analysis, the 'lacuna is even greater with respect to use by citizens' when compared to the policy level data utilisation (Pollitt, 2006: 52). This research provides some level of information on what school leavers' and graduates' data are available and in what format to the wider public in the different nation states and at the European level. However, this research does not uncover the view of the individual citizen to a full extent beyond the remarks provided by policy or institutional actors as citizens of the given national context.

Generally, the studies on data-utilisation cited earlier detail either the policy, or the institutional, or the citizens' level, the different viewpoints are analysed separately. There is little research that examines the field of education as a network of many different actors producing, and using, ignoring or abusing evidence. Analysing the interconnectedness and interrelatedness of actors provides a better understanding of what helps and what hinders data utilisation at the different levels and furthermore, what are the features of an information system which suits the needs of the different actors.

A useful typology to help the analysis of the interrelated nature of the policy and the institutional level is provided by Garn (2001). In this typology the *bureaucratic*

accountability model is 'based on procedural compliance with established standards and regulations', along which the state bureaucrats gather information and make decisions. Within the *performance accountability* model, indicators set by the state are used to 'stimulate action, monitor compliance, and include rewards or sanctions'. In this model it is still true that the state gathers information about the institutional level to hold it accountable. Another model is *professional accountability* based on the institutional level actors demonstrating that 'they have the appropriate knowledge, values, and skills to ensure competence and serve the public interest' (Garn, 2001: 578). Here the state level has to provide sufficient information for the institutional level to enhance accountability. The *market accountability* model is based on the choice of the individual and this choice holds the institutional level accountable. In this model the state's responsibility is to provide sufficient information about the institutional level to the individual citizens. There is some evidence of a shift between these models regarding the role of government in society. As Davies (2012) suggests, this shift happens from the 'government as provider' through the 'government as purchaser' to the 'government as informer'. This shift between the outlined models of accountability means changing responsibilities at the levels of policy, institution and the individual citizens.

The research literature on policy level and institutional level data-utilisation analyses how assessment, internal progressions or final exam data are applied. These are strongly related to the internal issues of the institutional level, there is a direct link between the data and the institution. However, this research concerns data from

‘beyond’ the school or the university, therefore the link between the results gained through the SLGIS to the institutional level is less clear. This research has to pay more attention to the relevance of the data at the institutional as well as the policy level.

CHAPTER FOUR

WHAT DOES THE 'DATA' TELL US ABOUT THE EDUCATIONAL SYSTEM?

This last introductory chapter takes a broader look on what education can be considered to be for – these are the views which can be reflected in the SLGIS analysed in this research. The first section here outlines the possible approaches to understand what education is for: it could be viewed from a societal, a humanistic, or a human capital perspective. The second section of this chapter provides a brief discussion of how the European Union views education especially regarding the policy initiative of lifelong learning.

4.1 How do actors view education via the SLGIS?

The ways information systems are set up and used by the different actors pre-suppose answers to the crucial question of 'what education is for'. This section outlines three possible understandings of what education is for: the sociological, the humanistic and the economic. This research aims to uncover how these stances inform the design and use of different school leavers' and graduates' information systems. This chapter considers the different standpoints and the possible questions they pose in relation to school leaving and graduation.

The sociological model considers education to be a common good that has a social purpose (Field, 2002, Ouane, 2009, Schuller, 2009). Therefore the focus of the sociological view of education is how the 'group' gaining education benefits or deteriorates the wider society. Education is thought of as a possible vehicle for social mobility, but is also often viewed as a vehicle to reproduce social inequalities and the acceptance of the status-quo (Macionis and Plummer, 2008). A sociological model would foreground the implications of education and training for social mobility and social stratification.

The second, humanistic model considers education as a means of achieving a fulfilled person through personal development. In a humanistic model the learning-needs of the individual person are in the focus. In this model the individual is in the centre as opposed to the previous approach and its focus on society. Such view of education concerns questions of the extent and process of personal fulfilment, identity formation and citizenship.

The third, economic view treats education as an investment that is similar to investing in physical capital (Psacharopoulos and Patrinos, 2004, Brown and Sessions, 2004). The core idea of human capital theory is that investment in education generates a stream of future benefits for the individual. Research in the human capital tradition typically concentrates on productivity benefits. The outcome for the individual is higher earnings and the outcome for society is a more productive economy (Becker,

1993, Cohn, 1979). The value of education can then be judged on how much difference it makes to earnings. This depends not only on how much people earn after education but the lost earnings whilst they were in formal education and the relative value which is placed on present earnings foregone and future earnings (Becker, 1993, Mincer, 1974). Cohn (1979) suggests that, in principle, the human capital 'rate of return' to education includes non-monetary (e.g. sense of self-esteem and cultural awareness) as well as monetary benefits. In fact anything that education adds to an individual's satisfaction should be included. However, in practice, rates of return are usually calculated only through earnings,

Although returns to individuals should be measured according to satisfaction derived now and in the future, data and conceptual problems have forced researchers to define returns in terms of income and earnings alone. (Cohn, 1979: 38)

In addition to bringing both private income benefits to the individual, education brings benefits to the wider society. These social benefits are referred to as externalities and they 'include education's impacts on economic development goals that are part of the quality of life but that also benefit future generations' (Stevens and Weale, 2004, McMahon, 2004: 211). Therefore, the 'difference between the private and the social rate of return reflects the degree of public subsidization of education' (Psacharopoulos and Patrinos, 2004: 6)

A human capital theory approach prompts questions around the returns to education, how the initial earnings and the earnings over a lifetime compare for the different educational levels and sectors (Psacharopoulos and Patrinos, 2004, Becker, 1993, Cohn, 1979, Mincer, 1974).

4.2 European approaches to the relationship between formal education and the labour market

This section considers how the notion of lifelong learning became important in the European endeavour to see what perspectives on it are important. Is this concept more connected to the economic agenda or is it more concerned with the humanistic or the sociological perspective on why education and learning happens? This section first explores the general aspects of lifelong learning and the history of how it emerged, then it discusses briefly the notions attached to it and points out the major ambiguities of the concept.

Lifelong learning as an emerging concept in the 1960s-1970s was mainly tied to a humanistic, rights-based approach, in which education had a social purpose of emancipation and empowerment (Field, 2002, Schuller, 2009). In the 1980s the concept was overshadowed by the rising unemployment levels which occupied the transnational and national policy makers' attention. In the 1990s the lifelong learning started to be an important reference point within national educational policies, along

with an emphasis on the economic arguments for education (Edwards et al., 2002, Jarvis, 2009, Rubenson, 2009, Schuller, 2009). A third, recently emerging trend is the growing importance of an 'inclusive liberalism', where the failures of the market are recognised, for example that large groups are not participating in this new process of learning throughout the whole life course. Thus, this latter strand of lifelong learning seems to combine elements from the previous trends (Rubenson, 2009).

The role of the European Union in relation to promoting lifelong learning became more significant during the last two decades. The EU's growing interest in education and the recently emerging importance of the open-method of coordination resulted in several strategy documents on lifelong learning (Halász, 2003). The EU documents stress the importance of personal fulfilment and the learning for active citizenship (Jarvis, 2009), along with emphasising the importance of being employable at the individual level, and enhancing the competitiveness of the transnational and national level (Edwards and Boreham, 2003, Jarvis, 2009). As for the latest developments within this policy arena, the EU is one of the most important promoters of the new view of lifelong learning that integrates some of the humanistic and sociological elements with the human capital concept (Rubenson, 2009).

Lifelong learning suggests learning should be spread across the whole lifespan, in opposition to 'front-end' education that is tied to childhood (Tight, 1998). Lifelong learning, referring to the time-line of the individual's life is complemented with life-

wide learning suggesting that learning takes place in different sections, spaces and places of our lives (Harrison et al., 2002). Life-wide education widens the space where learning can happen. Smith and Spurling (1999) suggest that space is the designed learning environment and use 'place' to define the characteristics of it, through the importance of informal and non-formal learning the learning space should be understood more broadly.

The concept of lifelong learning is not without ambiguities. There are questions around first, equal access to and second, the agenda-setting of lifelong learning. More highly skilled and educated workers engage in more lifelong learning as measured by the official statistics of the EU for example (Coffield, 2002, Cropley, 1976, Tuijnman, 2002). (See Appendix 2 for the lifelong learning ratios measured by the EU for 2011.) Some other economic and social groups can be seen as underrepresented in the arena of lifelong learning, like 'individuals from families with less prestigious occupational background, with lower incomes, the unemployed or economically inactive, the elderly, severely disabled people and ex-offenders' (Preston, 1999, Gorard, 2009: 92, Griffin, 2009, Szigeti Toth, 2009). The inequalities encountered are long-standing, pervasive and thought to be connected to factors outside education. Gorard (2009) argues that through these a negative learner identity emerges related to formal learning. This identity combined with being 'positioned beyond the margins, within insecure residence entitlements, no access to paid work, and living on hand-outs from whatever source' has rather different implications concerning lifelong learning for some economic and social groups

(Preston, 1999: 571). Both initial compulsory education and lifelong learning raises equality questions, and 'whether education reproduces or transforms social relations, which was associated with the 1960s' disillusion with schooling, [and thus] may still be one that can be asked of lifelong learning itself' (Griffin, 2009: 267).

Lifelong learning is a widely referred to concept by the European Union and recently national governments are promoting it extensively as well. Field and Leicester (2000) raise the issue whether lifelong learning is rather a permanent schooling process as the learning provisions are often provided by the educational organisations – through this, the agenda of learning can be set by them. Influencing the agenda, the topic and the settings of learning can be thought of as a form of control and exercising power (Foucault, 1981, Lambeir, 2005).

Lifelong learning as a concept has an impact on how educational careers are viewed; therefore it influences the 'tracking' and 'measuring' of those as well. SLGIS aiming to follow-up the outcomes of education on the individual level are extremely affected by this 'promise', presenting 'a variety of opportunities from the cradle to the grave' (Preston, 1999: 562).

One of the main questions deriving from the above discussion for this research is whether SLGIS provide data on the notion of lifelong learning. The majority of the SLGIS were started whilst the notion of lifelong learning was formed. The growing

importance of lifelong and life-wide learning within the policy discourse might have changed the context of the SLGIS as well in two respects. First, learning is said to stretch well beyond compulsory education and initial post-compulsory schooling; it is for a lifetime with shorter or longer periods of returning to it. Second, learning can happen 'beyond school' as well. This research accounts for whether the SLGIS provide information about these questions.

CHAPTER FIVE

METHODS OF THIS RESEARCH

This chapter describes and justifies the methods used in this research. First, the structure of this research is outlined in Section 5.1; then the two phases of the research are detailed along with the research design, the sampling for the different phases, and the data collection and analysis procedures used. The last two sections of this chapter are concerned with the research ethics applied and the major limitations encountered when planning this research.

5.1 Research Design, methods of data collection and sampling procedures used in this research

School leavers' and graduates' information systems are widely known and yet little is accessible on how they are built up and, more importantly, how they are utilised by the different stakeholders. To address the research questions detailed in Section 1.3 this enquiry is based on a mixed design approach incorporating a snapshot of school leavers' and graduates' information systems and a descriptive multiple case study design. Relying on triangulation between different designs and also methods of data collection helps to gain an understanding of SLGIS from different angles (Bryman, 2008, Denscombe, 2007, Robson, 1993, Gorard and Taylor, 2004, Gorard, 2013).

The first phase of this research is a cross-sectional analysis of different school leavers' and graduates' information systems using available documents. In this phase the differences in the focus of the SLGIS are investigated along with their research design and methodology. The second phase compares multiple cases of national school leavers' and graduates' information systems and their utilisation process. The purposive sampling for this second stage is based on the typology of research design and population covered in the SLGIS resulting from the first phase of this research.

Both research phases combine a set of data collection methods and therefore the analysis requires a combination of different approaches as well, as Table 5-1 shows.

Table 5-1: The research strategy for this investigation

Research Phase and Design	Data collection method	Data analysis method
1. Cross-sectional design	Collecting documents	Content analysis; Comparative approach; Creating a typology
2. Case study design	Interviewing and collecting documents	Content analysis; Thematic interview data analysis; In-depth case study approach; Triangulation with method and data sources

The first phase of this research is a 'static' picture, a snapshot of the 'current' versions of the SLGIS – these features are generally associated with 'quantitative' approaches. Regarding the analysis of the first, 'quantifiable' phase and its static outcomes, it uncovers the differences among cases. The second phase explores and explains these differences using a thematic analysis – this phase can be regarded as

‘qualitative’ (Bryman, 2008, Hartas, 2010). This methodological combination of the data collection can be regarded as the ‘new political arithmetic’ in which first the trend, the bigger picture of European SLGIS are analysed then an in-depth approach is used to examine the SLGIS in their context (Gorard and Taylor, 2004: 59).

The field-notes in Appendix 8 provide details of the piloting of the research instruments, how contacts were reached in the three case study countries as well a brief discussion of the challenges encountered throughout the fieldwork and the steps taken to gather good quality interview data.

In the first phase all European countries are analysed in terms of whether they have school leavers’ and graduates’ information systems. Based on these outcomes the case studies are chosen for the second phase. The section on the latter phase outlines how the informants for this research are selected.

5.2 First, cross-sectional phase of this research: snapshot of all European SLGIS

This section discusses the characteristics of the first, cross-sectional phase of this research in terms of the research design, the sampling used, the data collection and the data-analysis procedures.

5.2.1 Research design of the first, cross-sectional phase

The first phase of this research describes the SLGIS that exist currently across Europe. The cross-sectional design here helps to find variation among the groups or clusters of school leavers' and graduates' information systems without accounting for change over time (de Vaus, 2001). The snapshot of the SLGIS covers the school year 2010-2011. As the methodologies of SLGIS tend to persist, the longer process of data collection does not affect the results to a great extent. More importantly, the nature of the topic and the difficulties of gathering information within this field make the first phase on-going over the time period 2010-2013. For instance, a further account of graduate tracking systems is published in 2012 (Gaebel et al., 2012), and thus a new source opens up to complement the former data collection of this research.

The unit of analysis in this phase is the nation state and its national school leavers' and graduates' information system. The scope of this part of the study included European Economic Area (Iceland, Liechtenstein and Norway) countries as well as the European Union. Switzerland was added to the investigation as well.

The factors and variables of interest regarding the SLGIS selected in the first phase of this research are the following,

- Focus of the school leavers' and graduates' information system

- Research design: is it cross-sectional or longitudinal design?
- Methodology: what is the method of data collection?
- Population: is it based on a sample, or is it a census-type approach?
- Timing of the research: repetition of research and age group covered

This first, cross-sectional phase aims to describe the differences between the school leavers' and graduates' information systems without drawing any causal inferences to maintain internal validity. The international comparative frame of the research raises problems of comparability and thus internal validity, as the school leavers' and graduates' information systems and the information available on them varies to a great extent (Hantrais, 2009). As data are collected on all the SLGIS that are present in the selected region, no sampling is required thus avoiding issues regarding external validity (Bryman, 2008, de Vaus, 2001). This phase is replicable as the information used – mainly documentary data – is available online for future analysis.

5.2.2 Sampling in the first, cross-sectional phase

During the first phase, which involved an on-going data collection, the whole 'population' of European nation-states is investigated. The unit of analysis is the nation state and its SLGIS; in the case of the United Kingdom for instance, this refers to the four home-countries. As the definition of research in Section 1.1 set it out, this research is restricted to systematic national school leavers' and graduates' information systems. Countries with only sectorial or no regular SLGIS are excluded from the detailed description of the subsequent phases of this research. Table 5-2

shows the different groups of countries within Europe in terms of what information system they run, if at all. The first phase of the research can thus explore 16 different national SLGIS listed in the first column of Table 5-2.

Table 5-2: School leavers and graduates surveys in different regions

School leavers' and graduates' information systems	Tertiary level research only	No regular data collection
Austria	Norway	Luxembourg
Belgium	Greece	Lichtenstein
France	Hungary	Iceland
Germany	Romania	Cyprus
Netherlands	Slovakia	Malta
Switzerland		Portugal
Denmark		Bulgaria
Finland		Estonia
Sweden		Latvia
England		Lithuania
Ireland		Poland
Northern Ireland		Slovenia
Scotland		Czech Republic
Wales		
Italy		
Spain		

(Sources: Gaebel et al., 2012, Arnesen et al., 2012, APM, 2012, OKM, 2007)

Table 5-3 and Table 5-4 compare the SLGIS known to the author at the start of the research and closer to the end of the three year research period. In 2010 the author only found information on thirteen SLGIS in ten countries. However, by the end of the research in 2013 thirty-one different information systems from 16 countries are known and described in the first cross-sectional phase in Chapter Six (counting the home countries of the United Kingdom once and not counting the UK itself as

separate). The difference in the first account and the final list of SLGIS can be explained with the language differences of these information systems. In many cases a first SLGIS is easily found due to accessible information; others, however, become more visible throughout the process of this research.

Table 5-3: SLGIS known to the author in 2010

	<i>Title of school leavers' and/or graduates' information system</i>
England and Wales	Young Cohort Study Longitudinal Study of Young People in England
Finland	Transition from school to further education and work
France	L'enquête 'Génération92, 98, 2001, 2004
Germany	Nationale Bildungspanel
Netherlands	BO, VBE, HBO monitors
Northern-Ireland	School Leavers' Survey
Republic of Ireland	School Leavers Survey
Scotland	Scottish School Leaver Survey; Destinations of Leavers from Scottish Schools Follow up Survey of Leavers From Scottish Schools
Sweden	The Entrance to the Labour Market
Switzerland	TREE (Transitions from Education to Employment)

Table 5-4: SLGIS known to the author in 2013

	<i>Title of school leavers' and/or graduates' information system</i>
Austria	Statistics Austria: Education-related employment career monitoring
Belgium	Flemish Longitudinal Research in Secondary Education
Denmark	From education to labour market (Fra uddannelse til arbejdsmarked) Graduate employment (Nyuddannedes beskæftigelse)
England and Wales	Youth Cohort Study (YCS)
England	Longitudinal Study of Young People in England (LSYPE)
Finland	Statistics Finland: Transition from school to further education and work Aarresaari Network First destinations Aarresaari Network Career follow-up
France	L'enquête 'Génération 92, 98, 2001, 2004, 2007, 2010 Les bacheliers
Germany	Nationale Bildungspanel (NEPS) Hochschulabschlüsse
Italy	ISTAT survey on the educational and work experiences of upper secondary school leavers AND ISTAT Graduate Survey Graduates' employment conditions Survey of 2011
Netherlands	ROA School-leaver and graduate surveys AND VSNU WO-Monitor
Northern-Ireland	School Leavers' Survey
Republic of Ireland	School Leavers Survey What do graduates do? First Destination Report
Spain	Young people's entrance to the labour market (Observatorio de Inserción Laboral de los Jóvenes) University Observatory for Employment (Observatorio Universitario de Inserción Laboral)
Scotland	Scottish School Leaver Survey (SSLS) Destinations of Leavers from Scottish Schools AND Follow up Survey of Leavers From Scottish Schools On Track
Sweden	The transition from upper secondary school to higher education The Entrance to the Labour Market; Upper secondary school leavers The Entrance to the Labour Market; University graduates
Switzerland	Transitions from Education to Employment (TREE) Graduate Survey
United Kingdom	Destination of Leavers from Higher Education (DLHE)
Wales	Careers Wales Destinations

5.2.3 Methods and data analysis in the first, cross-sectional phase

The first phase of this research uses documents not only as a supplementary method but on their own right to collect information on a range of different SLGIS (Silverman, 2004, Newby, 2010). The procedure of finding the relevant documents is built on multiple stages and it is an on-going and iterative process; this is necessary as this research observes current affairs where new information arises time to time, and the research being comparative over several societal and language settings.

The first steps of gaining information on the existing school leavers' and graduates' information system preceded this research project. The author was working in Hungary at HIERD with Dr Gábor Király, gathering data on school leavers from vocational education and training, and comparing how this data are collected. During this work, documentary data were collected through searching the internet and educational journals systematically. The list of the phrases used for this search can be found below.

English:

- Destination of students, student destination survey;
- School leavers survey;
- Youth in transition;
- Career follow up;
- Transition from school to work

French:

- Enquête sur le devenir des anciens élèves;
- Une enquête sur le parcours des anciens élèves;
- Enquête auprès des anciens élèves;
- Enquête sur l'orientation des anciens élèves;
- Statistique sur les anciens;

- L'insertion de la vie active des anciens élèves;
- Le devenir professionnel

German:

- Schulabgänger
- Bildungs survey

This work (Hordósy and Király, 2011, Hordósy et al., 2012) helped to focus the research topic and the relevant research questions for this research. Therefore when this research starts in 2010, some level of information is already available for the author on the SLGIS within Europe. The documents gathered for the cross-sectional phase of this research are web-based official documents that provide some detail about the school leavers' and graduates' information system. As the SLGIS in the several national contexts take very different shapes in terms of their institutional setting, a number of steps are taken to find sufficient information on them. First, building on the already available documents, more specific search-terms are entered into search-engines beyond the ones listed from earlier work. In a second step, the educational ministry websites are searched for details on the SLGIS; these websites are searched both in English and in the home-language, using translating engines. The aim here is to find any documents that refer to data on school leavers' and graduates'. In a third step the search is extended to other websites, like the labour market ministries, educational research organisations, as well as national statistical organisations. In a fourth step to identify any SLGIS that is not conducted by the

national governments, a systematic search is conducted through the Education Resources Information Center (ERIC) for academic articles on school leavers and school-to-work transitions. To cross-check the available information gathered, a study published in 2012 is used; the TRACKIT research confirmed the vast majority of the country-description regarding the SLGIS and it also flags up some further information systems.

This research is unique in terms of gathering data on the methodology of school leavers' and graduates' information systems. The only other known description of this topic at the start of this research was a Hungarian study on European school leavers' surveys. That study was built on a questionnaire sent to the different European educational ministries asking them about their vocational educational and training system (VET) and within that, their school leavers' survey procedures for VET (Volan-Elektronika-Zrt, 2007). Although this study does not provide standard nor similar amounts of information for all countries, some of its references are used in this research to find SLGIS. A second study that provides a similar account of tracking systems within Europe is published in 2012 as detailed in Section 2.3. This study, however, only deals with higher education graduates and how they are followed-up in the different national and institutional settings (Gaebel et al., 2012). A further set of resources to inform the first phase of this research are research projects mainly financed through European funds to compare school leavers' and graduates' outcomes, as the already mentioned CATEWE, CHEERS, REFLEX and HEGESCO projects.

The first phase of this research aims to give a description of the 'bigger picture', to provide an account of all the SLGIS that currently exist within Europe. The approach used here can be regarded as 'quantitative' as the documents are not analysed in depth but certain variables are compared between cases. A number of key variables are defined for the analysis, these are as follows,

- Focus of the school leavers' and graduates' information programme
- Research design of the SLGIS
- Methodology of the SLGIS
- Population of the SLGIS
- Repetition of the SLGIS
- Age group covered of the SLGIS
- Time Period of the SLGIS
- Region of the SLGIS

The type of documents collected and analysed at this stage are official documents and statistics, most often describing the SLGIS and the methodology in a research report. The documentary data gathered is coded and cross-tabulated along these variables; Chapter Six describes the findings of the first phase of this research. The comparison outlines the main, already existing similarities and differences between the school leavers' and graduates' information systems, and looks for patterns as

well as possible ways to group the cases (de Vaus, 2001). The analysis performed in this phase is fairly standardised, thus little contextual information of the educational and societal systems is provided. Beyond the language differences and arising problems of using documents from several different European countries, the analysis and categorisation has to account for the quality and the level of details being extremely varied in the documents analysed here. At this stage it is possible to investigate the content of the documents – what they mean – although many authors warn that the way documents are created and used are important aspects to analyse (Prior, 2002). The second phase of this research allows for a more detailed consideration of these.

5.3 Second, case study phase of this research: Multiple case studies comparing SLGIS

This section outlines the second, case study phase of this research. This section details the research design, the sampling and the methods used. In terms of the sampling, both the selection of case study countries for this phase and the selection of research participants are detailed. Regarding the research methods detailed in this section, the two main sources of data collection procedures used are conducting interviews and analysing documentary evidence.

5.3.1 Research design of the second, case study phase

The second phase of this research builds on several case studies to describe and compare the selected national school leavers' and graduates' information systems. The case study approach here is chosen to gain a holistic picture of the selected SLGIS and to achieve this, a number of data collection procedures are used (Hakim, 2000, Yin, 2009).

In these case studies the unit of analysis is, again, the nation state and its national SLGIS to be understood as a whole and within its educational and societal context. In this phase the 'comparative dimensions' are the following: the aim of the selected SLGIS, their design and methodology, their history, and their process of implementation and utilisation (Hartas, 2010: 165). The case study design used here encompasses some level of information regarding change over time. The information on the history of the SLGIS is necessarily retrospective, the past needs to be reconstructed using different sources through which important pieces of evidence might be lost or the sequence of events might defer (de Vaus, 2001).

The SLGIS explored in the second phase are selected based on an inductive typology created in the first, cross-sectional phase. The main aspects for choosing between the available national information systems are the SLGIS methodology (research design and population covered), capturing regional diversity and analysing

an established SLGIS. The rationale behind choosing the different cases is detailed in the sampling sub-section for this phase, 5.3.1.

The SLGIS do not change rapidly, so the limited timespan of this research does not threaten the internal validity through history and maturation (de Vaus, 2001). The internal validity of this research phase might be threatened by the comparative approach itself. The context of the SLGIS in the different nation states might differ to a tremendous extent, which makes it difficult to compare them. Moreover, gaining contextual knowledge about the different educational and societal systems within a short time period can be problematic as well. The purposive sampling for this phase of the research allows choosing 'typical' cases that are different in crucial aspects, thus avoiding problems in relation to external validity (de Vaus, 2001).

5.3.2 Sampling during the second, case study phase

The 'focused sampling' in the second phase of this research accounts for the research design, the sampling and the European region of the SLGIS, as 'especially illuminating examples' are sought (Hakim, 2000: 170). To find the most relevant cases for this research non-probability purposive sampling is employed (Bryman, 2008). The target population of the research is all European nations which have systematic national school leavers' and graduates' information systems. Sub-section 5.2.2 points out the difference between the SLGIS known at the start and identified at the end of the research process; note that choice for the second phase has

necessarily been built on the first account of SLGIS known in 2010.

The selection for the case study approach represents both dimensions of Table 5-5 to have one information system that is cross-sectional and one that is longitudinal as well as to have a SLGIS based on samples and one using a census-type approach. Moreover, all three distinct regions that are known to have school leavers' and graduates' information systems, mainland Europe, Northern-Europe and the United-Kingdom and Ireland are represented. Note that at the time of sampling for the second, case study phase of this research no Central and Eastern European or Southern European information systems are known to the author. (See Appendix 3 for the Geographical levels of the analysis.) A further crucial aspect when selecting the national SLGIS within categories is how established and long-standing they are. Thus, although Germany's panel study is a remarkable attempt to collect longitudinal data on school leaving, graduation and working life, it only starts in 2010 therefore the results and the implementation cannot be analysed within the time frame of this research.

Table 5-5: Categorisation of the SLGIS based on methodology and region known in 2010

Research Design and Population	Cross-sectional design (regular)	Longitudinal design
Sample	TYPE 1 Netherlands – Mainland Europe Sweden – Northern Europe Republic of Ireland – UK + Ireland (Belgium) – Mainland Europe (Austria) – Mainland Europe	TYPE 3 Germany – Mainland Europe Switzerland – Mainland Europe France – Mainland Europe England – UK + Ireland Scotland (SSLS) – UK + Ireland
‘Census’	TYPE 2 Northern-Ireland – UK + Ireland	TYPE 4 Finland – Northern Europe Scotland (only 2 contacts) – UK + Ireland

To maximise variation with a minimum number of cases, three nation-states are chosen for the case study phase of this research. First, the Netherlands is chosen as an example from mainland Europe with a SLGIS based on samples of subsequent cohorts queried in cross-sectional snapshots (Type 1). Second, Finland is selected from among the Northern-European countries having a census-type sampling frame and a longitudinal design (Type 4). And third, England is chosen to represent research programmes with longitudinal designs based on samples of several cohorts (Type 3). As the research programme entitled Youth Cohort Study (YCS) involved Welsh young people in its sampling, some information is gathered about the Welsh context of school leavers’ and graduates’ research as well. Conducting research in England and Wales is convenient and saves resources because the author being based at the University of Birmingham.

The case study phase of this research is built on interviews and documentary data analysis. The selection of the research participants to inform the enquiry on SLGIS happens through combining purposive sampling with snow-ball sampling for elite interviews. First, experts on educational research are identified; during the fieldwork discussions with these experts in both the Netherlands and Finland highlight the most crucial questions of their educational system. Second, individuals easily identifiable are selected in each country as 'experts' on SLGIS. These interviewees are either taking part in the data production or utilising the data within the educational decision making process. Third, further suggestions for contacts are gained from each of the previous groups.

This process results in interviews with practitioners and administrators who are involved in producing as well as using the school leavers' and graduates' information. The main purpose of using elite interviews in this research is to gain information that is not otherwise systematically available along with contextual details and insider interpretation of the SLGIS (Gillham, 2005). Three main groups of elite interviewees are queried in this research: specialist academics, advanced practitioners and expert administrators (Gillham, 2005). A similar pattern of interviews in each case study country is aimed to be achieved. Table 5-6 shows the final distribution of the interviews conducted in the different case study countries, pointing out the four main organisational affiliations; a total of 44 interviews are carried out. Research institutes are organisations involved in gathering the school leavers' and graduates' data. Interviewees at ministries are usually working within the data analysis teams. Schools

and universities are chosen to represent a good mix of institutions and their leadership level was consulted. Further experts are academic researchers and other professionals involved with the school leavers' and graduates' data. A total of 60 people are consulted in the three countries, 18 in the Netherlands, 19 in England and 23 in Finland. Three further interviews are conducted in Wales; two with ministerial employees and one with a research institute and a total of 11 people are consulted. A list of organisations interviewed and the pseudonym used to refer to the organisation can be found in Table 14-3 in Appendix 8.

Table 5-6: Number of interviews conducted in the different case study countries

	Netherlands	England	Finland
Research institute	5	3	3
Ministry	3	2	3
School/University	5	5	5
Expert interview	2	3	5
TOTAL Number of interviews	15	13	16
TOTAL number of interviewees	18	19	23

5.3.3 Methods and data analysis in the second, case study phase

The second phase uses a case study approach which requires collecting different kinds of information from wide range of sources (Hartas, 2010). This new research uses two sources of data, analysing documents and conducting interviews (Hakim, 2000, Yin, 2009).

The field-notes of the fieldwork in the different case study countries and a list of the organisations partaking in the interview process are provided in the following

appendices: for the Netherlands, see Appendix 10 and Appendix 11; for England see Appendix 12 and Appendix 13; for Finland see Appendix 14 and Appendix 15.)

5.3.3.1 *Documentary data to be collected*

The documents in this research either provide details about the actual SLGIS, or they are objects showing how the school leavers' and graduates' data are utilised in different contexts. Documents help to triangulate the interview data; these two sources complement each other as they touch on different aspects of the SLGIS (Gorard and Taylor, 2004). The documentary data are important sources in the first phase of the research 'as the sole approach to a research problem, to provide reference or background material'. In the second phase, however, they serve as 'a more substantive resource in a multi-method triangulated approach, [...] used alongside interview evidence' (Hartas, 2010: 187). The documentary data used here are mainly published, printed and official, but some of them are unpublished and semi-official received from the interview participants (Hartas, 2010).

5.3.3.2 *Interview data – conducting elite interviews*

To gain information on all the main topics outlined by the research questions, a semi-structured, thematically focused interview guideline is used, suited to the experience of the expert interviewee. This interview structure leaves space for comments and discussion which is crucial as the interviewees 'know more than the researcher about certain key dimensions of the area but will also be alert to the implications of

questions, and of their answers to them' (Gillham, 2005: 54, Hartas, 2010, Kvale and Brinkmann, 2009, Newby, 2010).

The interview guideline is based on a systematic literature review of the areas outlined by the research questions. As the interviews are conducted with carefully selected people and they were chosen based on their assumed knowledge on the topic, the interview guidelines have to be individualised to a certain extent. The main topics across the interviews are largely the same. Depending on the organisation, the interviewees' professional area and the interviewees' position, certain themes are covered in different depth as well as viewed from a different angle. (A sample of the interview guidelines is provided in Appendix 5. One ministerial, one research institute and one school interview guideline is provided, in Appendices 0, 0 and 0 respectively.)

Most interviews in this research are conducted face-to-face as the structure of the interview and the topic requires the personal interaction and the elaboration of the questions. However, telephone interviewing has to be used a total of six times mainly to reach further contacts provided during the fieldwork. The disadvantages of this are the lack of personal contact, a shorter time available and a higher risk of the technical equipment's failure. A timeline of this research is provided in the Appendix 6.

5.3.3.3 Combining different data in the analysis

The two sources of data (documentary and interview) in the second phase of this research are applied to complement each other. The documentary analysis provides data on the focus and the structure of the SLGIS, and to certain extent information about how they are used. The interview data are employed to reveal the data-production processes of the SLGIS and an in-depth picture of what their outcomes are used for. The transcribed interviews are analysed manually, using a two-level coding system. The first level of codes derives from the research questions mainly and some of them emerge during the fieldwork and the manipulation of the data; these codes are largely the same across the three case study countries. The second level of codes emerges entirely from the collected interview data itself and varies substantially between the cases.

5.4 Research ethics

In this section the main ethical issues concerning the research are addressed and the measures taken to conduct an ethically satisfying provision are described. This educational enquiry aims to be ethical regarding ‘the collection of [the] data, in the process of analysing the data and in the dissemination of the findings’ (Denscombe, 2007: 117).

The first phase of this research is built on documentary data; the relevant documents are official, publicly available research reports or methodological descriptions found

via the internet and browsing academic literature. Therefore no ethical issues arise beyond those of ethically conducted data-analysis.

The second phase of this research is built partly on interview data. The participants are professional adults from the selected countries who are either producing or using the school leavers' and graduates' information. The recruitment of the participants happens mainly through sending emails accompanied by further telephone calls. The contact letter, the information sheet and the consent form can be found in Appendix 4. The information sheet provides details on the purpose of the study, the reason the participant is invited to take part, the description of the interview setting and topics, the details of data storage and confidentiality and how the results are used later on. The ethical guidelines and codes followed are mentioned in the information letter, as well as the funding details of this research.

These are the several categories mentioned in the information letter as the reason why the person is contacted. They could be,

- Representative from the financing body [of the SLGIS]
- Managers of the survey currently and from the past
- Policy makers as users of the survey data
- Representatives from the guidance system as users of the survey data
- Institutional leaders as users of the survey data

- Other experts who have used the survey data extensively (From the information letter; see Appendix 5)

For the telephone interviews the information letter is altered to indicate that the interview is carried out over the phone at the agreed time and using the given Skype ID or phone number, and that the author makes a recording of it.

In the second phase of the research the main ethical issues arising are confidentiality and anonymity of interviewees. To keep all participants' identity anonym and confidential, the interviewees are described with their organisation throughout the thesis (e.g. research institution or ministry). Moreover, the thesis avoids stating how many informants from the different organisations are consulted through using a 'possible plural' for suggesting who the informant is, e.g. interviewee(s). Any data that might be problematic regarding the opinion of the interviewee emerging is fully anonymised and treated with special care. Informants of the research are shown a longer version of the case study description to identify any problematic pieces of data; the contact letter for this approach can be found in Appendix 4. A list of organisations interviewed and the pseudonym used to refer to the organisation can be found in Table 14-3 Appendix 8.

In accordance with the University of Birmingham's Code of Practice for Research guidelines on data storage, data are stored for a minimum of 10 years safely on

password protected computers (UoB, 2011). The contact list containing personal details such as names and email addresses is stored in an encrypted file and destroyed after the PhD project. Access to the results of this research is offered to the participants, providing a short version of the case study of the participant's country and further emerging materials published after finishing this research.

This research is in line with the British Educational Research Association's Ethical Guidelines for Educational Research and the University of Birmingham's Code of Practice for Research (BERA, 2011, UoB, 2011). The University of Birmingham's Humanities & Social Sciences Ethical Review Committee has approved the research under the reference number ERN_11-0766.

5.5 Limitations of this research

Several limitations need to be taken into account when drawing inferences from the evidence provided by this study. First, as there is very little research conducted on how evidence is produced and used within education, this research could not build on many previous accounts. This 'limitation', however, provides the niche in the research evidence that this research aims to address.

The second limitation derives from the comparative nature of this research, related mainly to language and context. Some of the documents collected for this research

have to be translated from the native language to English to enhance the analysis. Within the constrained time-frame of a doctoral research it is not possible to learn two additional languages to a sufficient extent. Therefore English language is used in the Dutch and the Finnish context as well, raising the problem whether this approach hinders understanding of the national context itself. As the author is not from any of the researched countries, the understanding of the national context in terms of social, economic and political aspects are constrained and subject to variation.

A third limitation concerns resources and time constraints. The preliminary data collection and the fieldwork in three national contexts have to be carried out within a three year period of a doctoral research project by the author. This time-frame limits the number of countries that can be examined, thus not the entirety of Europe is analysed within the second phase of this research. Moreover, the number of interviews conducted within each national setting has to be fewer than twenty to fit within the two-week fieldwork in the Netherlands and Finland. (A timeline of this research is provided in the Appendix 6.)

Due to the international comparative approach comparing three different countries, there was little space to distinguish and account for the different administrative and hierarchical levels within both the policy and the institutional level. Therefore, although the research literature on data utilisation generally makes a distinction between elected representatives and the managerial level within policy making or the

leadership, the managerial and the teachers' level within institutions, this research did not aim to cover these. Distinctions are made, however, at all levels by describing the expertise and the responsibility of the interviewee(s).

As the scope of this research is to provide a national-level picture of how SLGIS are set up and utilised, it is impractical to distinguish between the different administrative and hierarchical layers both within the policy and the institutional level. Therefore, although the research literature on data utilisation generally makes a distinction between elected representatives and the managerial level within policy making or the leadership, the managerial, and the teachers' level within institutions, this research did not aim to cover these. Distinctions are made, however, at all levels by describing the expertise and the responsibility of the interviewee(s).

CHAPTER SIX

FIRST PHASE OF THIS RESEARCH – SNAPSHOT OF SLGIS

This chapter analyses documentary information to provide an overview of all European countries regarding whether they collect school leavers' and graduates' information. The existing school leavers' and graduates' information systems are then scrutinised to establish the similarities and differences along some common variables. This chapter first refers to the regional differences within Europe regarding where the different SLGIS are present and where no such data collection can be found, before analysing the focus of the information programme to reach a classification of the SLGIS. The second main part details the characteristics of the information systems regarding their research design and methodology to arrive at a typology. It also details the main aspects of timing in the school leavers' and graduates' information systems.

6.1 Regions and countries with and without school leavers' and graduates' information systems

The first, cross-sectional phase of this research provides a picture of what SLGIS are available currently in Europe. All 27 member states of the European Union are under scrutiny and additional nation-states that have special relations with the EU are drawn into the analysis, these latter are Iceland, Norway, Liechtenstein and

Switzerland. This section provides a discussion of the regional distribution of the information systems.

This research sets out to examine SLGIS that provide an overall, system level picture of the educational system. Table 6-1 points out which countries have only a tertiary level graduate information system, and which countries do not run any regular research projects. Table 6-1 also provides information about which countries and regions do generally run school leavers' and graduates' research programmes. The majority of the countries in Northern and Western Europe conduct SLGIS; there are fewer such information systems found in Southern Europe. It is only the Central and Eastern European countries and some nation-states from other regions that do not conduct systematic SLGIS at all.

Table 6-1: Regions and the level of the educational system covered in the SLGIS

	School leavers and Graduate surveys	Tertiary Level Surveys only	No regular surveys
Continental Europe	Austria Belgium France Germany Netherlands Switzerland		Luxembourg Lichtenstein
Nordic Countries	Denmark Finland Sweden	Norway	Iceland
UK and Ireland	England Ireland Northern Ireland Scotland Wales		
Southern Europe	Italy Spain	Greece	Cyprus Malta Portugal
Central and Eastern Europe		Hungary Romania Slovakia	Bulgaria Czech Republic Estonia Latvia Lithuania Poland Slovenia

The next sections only provide information about the countries listed in the first column of Table 6-1, as these are the countries running school leavers' and graduates' information systems that satisfy the circumscription given by the definition of this research.

6.2 The main focus of school leavers' and graduates' information programmes

This section details two aspects of school leavers' and graduates' information systems: first, what level of the educational system are they collecting data on and second, what is the main topic, the main focus of them?

There are three main approaches to conducting SLGIS regarding the levels of the educational system; the first two columns of Table 6-2 provide an overview of this aspect (Title of columns: Name of research: secondary level; Name of research: higher education level). Several countries conduct separate information collections for their secondary level school leavers and a different project for the higher education leavers; these are Denmark, Northern-Ireland, Norway, the Republic of Ireland, and Spain. A second set of countries using a holistic, overall approach to gain school leavers' and graduates' data are Austria, Belgium, the Netherlands and Sweden. A third category is those countries that have a holistic, overall SLGIS and in addition to that they conduct regular data collections within the higher education sector. These countries are: England, Finland, France, Germany, Italy, Scotland, and Switzerland.

Table 6-2: Level of the educational system covered and the focus of SLGIS

Country	Name of research: secondary level	Name of research: higher education level	Focus of the leavers information programme
Austria	<i>Statistics Austria: Education-related employment career monitoring</i>		First experiences at the labour market and career pathway (STATISTICS AUSTRIA, 2012)
Belgium	<i>Flemish Longitudinal Research in Secondary Education</i>		Transitions from school to labour market and to further education (KULeuven, 2011)
Denmark (1)	From education to labour market (Fra uddannelse til arbejdsmarked)		Transitions from school to labour market and to further education (StatisticsDenmark, 2012)
(2)		Graduate employment (Nyuddannedes beskæftigelse)	Transitions from school to labour market and to further education (Jensen, 2012)
England and Wales	Youth Cohort Study (YCS)		Life of young people including school leaving and graduating (ESDS, 2008d)
England	<i>Longitudinal Study of Young People in England (LSYPE)</i>		Life of young people including school leaving and graduating (DfE, 2011)
Finland (1)	<i>Statistics Finland: Transition from school to further education and work</i>		Transitions from school to labour market and to further education (STATISTICS FINLAND, 2012g)
(2)		Aarresaari Network First destinations	First destinations of leavers (Saino, 2010)
(3)		Aarresaari Network Career follow-up	First experiences at the labour market and career pathway (Puhakka and Tuominen, 2011)
France (1)	<i>L'enquête 'Génération 92, 98, 2001, 2004, 2007, 2010</i>		Transitions from school to labour market and to further education (Céreq, 2010)
(2)		Les bacheliers	Transitions from school to labour market and to further education (Lemaire, 2010, Lemaire, 2012)
Germany (1)	<i>Nationale Bildungspanel (NEPS)</i>		Life of young people including school leaving and graduating (UNI BAMBERG, 2010a)
(2)		Hochschulabschlüsse	First experiences at the labour market and career pathway (Rehn et al., 2011)
Italy (1)	<i>ISTAT survey on the educational and work experiences of upper secondary school leavers</i>		Transitions from school to labour market and to further education (ISTAT, 2011b, ISTAT, 2012, ISTAT, 2011a)
(2)	<i>ISTAT Graduate Survey</i>	Graduates' employment conditions Survey of 2011	First experiences at the labour market and career pathway (Cammelli, 2012)
Netherlands	<i>ROA School-leaver and graduate surveys VSNU WO-Monitor</i>		Transitions from school to labour market and to further education (ROA, 2009b, VSNU, 2007b)

Country	Name of research: secondary level	Name of research: higher education level	Focus of the leavers information programme
Northern-Ireland	School Leavers' Survey		First destinations of leavers (DENI, 2010)
Republic of Ireland	School Leavers Survey		Transitions from school to labour market and to further education (Byrne et al., 2008, ISSDA, 2007)
(1)		What do graduates do?	First destinations of leavers (HEA, 2010)
(2)		First Destination Report	
Spain	Young people's entrance to the labour market (Observatorio de Inserción Laboral de los Jóvenes)		First experiences at the labour market and career pathway (García-Montalvo and María Peiró, 2011)
(1)			
(2)		University Observatory for Employment (Observatorio Universitario de Inserción Laboral)	First experiences at the labour market and career pathway (Gaebel et al., 2012)
Scotland	<i>Scottish School Leaver Survey (SSLS)</i>		Transitions from school to labour market and to further education (Howieson and Croxford, 2008)
(1)			
(2)	<i>Destinations of Leavers from Scottish Schools AND Follow up Survey of Leavers From Scottish Schools</i>		First destinations of leavers (ScotStat, 2009, ScotStat, 2010)
(3)		On Track	First experiences at the labour market and career pathway (SFC, 2010)
Sweden	The transition from upper secondary school to higher education		Transitions from school to labour market and to further education (STATISTICS SWEDEN, 2012)
(1)			
(2)	The Entrance to the Labour Market; Upper secondary school leavers		First experiences at the labour market and career pathway (Samuelsson, 2004)
(3)		The Entrance to the Labour Market; University graduates	First experiences at the labour market and career pathway (Samuelsson, 2004)
Switzerland	<i>Transitions from Education to Employment (TREE)</i>		Transitions from school to labour market and to further education (Bergman et al., 2010b, Bergman et al., 2010a)
(1)			
(2)		Graduate survey	First experiences at the labour market and career pathway (BFS, 2011)
United Kingdom		Destination of Leavers from Higher Education (DLHE)	First destinations of leavers (HESA, 2007)
Wales	Careers Wales Destinations		First destinations of leavers (CAREER SWALES, 2012b, CAREER SWALES, 2012a)

The educational level the information systems depict is important because if there is no holistic, system level information collection about school leavers and graduates, it is not possible to compare the outcomes of the educational sectors and levels. The second two set of countries producing school leavers' and graduates' information comparable across levels allow the assessment of the educational system as a whole. Comparability within *and* between the different levels and sectors of the system allows room for calculating the rates returns to education through applying a cost-benefit analysis, as well as the economists of the human capital theory set it out (Psacharopoulos and Patrinos, 2004, Becker, 1993, Cohn, 1979).

The presence or absence of a holistic school leavers' and graduates' information system poses two further questions. One is the attention of the central government: what levels and which sectors are 'important' enough to collect school leavers' and graduates' information from? The second question concerns 'responsibility'. If the data depicts a system level picture, national policy-making can be seen responsible for the outcomes. If it evaluates a sector at the institutional level, schools and universities can be held accountable for their school leavers' and graduates' results, shifting responsibility away from the national level.

The stated focus of the school leavers' and graduate' information systems listed in the last column of Table 6-2 is analysed on the basis of their description in the

research reports and on the main websites of these data collections. These heuristic categories are then assigned to each school leavers' and graduates' data collection. The categories are permeable as SLGIS set out to give answers to several interrelated questions. For the purposes of this analysis one category was chosen that sums up best the research focus of the school leavers' and graduates' information system.

Four main ideal-types of SLGIS have been identified regarding their stated focus: they are either (i) examining the transition process from school-to-work or school-to-school, or (ii) analysing young people's life span more generally, (iii) or collecting data on the initial destinations of school leavers' or graduates', or (iv) gathering information on the experiences of the first job and the training former students had.

The *first type* of SLGIS is dealing with the *transition process from school-to-school or school-to-work*. It aims to gather data on the relatively short period of being between schools and the labour market, with an emphasis on how former students are able to find a workplace or how they assess their progress at further training or a higher education institution. As the already mentioned international research project entitled CATEWE set 'transition' in its conceptual framework,

(...) the concept of transition is seen as referring to a sequence of statuses or positions achieved over a period of time from a point in full-time education (...)

to a point some years later when the majority of such system leavers have achieved a “stable” adult status. (Hannan F. et al., 1999: 18)

This type of SLGIS is usually conducted in Continental Europe; Finland and Sweden represents the Nordic countries and such research programmes can be found in Scotland and in Ireland as well.

The *second main* type of SLGIS analyses the *lifespan of young people more generally*, concentrating on broader issues beyond the educational experiences and the young person’s progress to further and higher education and the labour market. Germany and England (two projects) conduct these types of information systems.

The *third type* of school leavers and graduates’ information system collects data on the *destinations of the leavers* after compulsory schooling. This type sets out to collect data on the immediate destinations of leavers, soon after leaving school or university. This SLGIS gathers data on the current status of the former student, their first work experiences and, most importantly, their view on their previous education. These information systems can be found in the United Kingdom and Ireland and such projects are conducted in Finland as well.

The *fourth type* of school leavers' and graduates' information system collect data on *young people's first impressions of being on the labour market* and their experiences after entering it. These projects – as opposed to the ones dealing with the first destinations and the transitions process – set out to gather information on the longer term career outcomes of school leavers' and graduates' and their experiences at the labour market. The information collected on the experiences of leavers within the educational system plays a role only in relation to how applicable their skills and knowledge gained from education are in their labour market positions. The SLGIS within this category are conducted in Continental Europe, in Finland and in the Southern-European countries.

The most established and older SLGIS dating from the 1970-1980s tend to examine the transition period from school to work or to further education, or the first destinations of leavers'. SLGIS that were started in the 1990s were mainly concerned either the transition process, or the first experiences of leavers and their initial career pathway. The latest school leavers' and graduates' information systems started after 2000 are diverse in their focus. Many deal with the transition process and there are a number of research programmes in the other three categories as well.

6.3 *Methodological characteristics of the different programmes*

This section on the methodological characteristics of the school leavers' and graduates' information systems details two main areas. The first is the relation

between the research design and the sampling of the SLGIS, the second is the timing and geographical frame of the information systems.

The school leavers' and graduates' information systems analysed in this research have either a longitudinal design, collecting data from one or more cohorts throughout a longer period of time; or they use a cross-sectional design to reach a cohort once, repeated with a subsequent cohorts every year, or every few years. Regarding the population covered two main types of school leavers' and graduates' information systems are identified. They are either built on a sample or on a census. Those SLGIS that gather information from a part, a sample of the cohort of leavers or young people, collect the data generally through surveys. The other type of sampling procedure is based on collecting information from all young people leaving school or university. The methodology here is either gathering data through a short questionnaire or linking different administrative datasets.

Out of the 31 school leavers' and graduates' information systems listed in Table 6-3, there are 16 research programmes that gather data in a cross-sectional way being based on multiple cohorts and 15 that are using a longitudinal design researching one or more cohorts. The number of leavers' and graduates' information systems using a sample as the frame of their population is 22, whereas only 9 of them are based on a census.

SLGIS that follow former students over time can establish causal inferences about the changes at the individual level (Ruspini, 2002, Gorard, 2013). As Howieson and Croxford (2008: 16) suggest in their appraisal for the Scottish school leavers' survey, 'repeated contacts enable analysis of individuals' transitions including their movement in and out of education, employment, and unemployment and capture the sequential ordering of events and influences in their lives'. On the contrary, cross-sectional studies do not allow causal claims (Gorard, 2013). Information systems that gather data from a sample are restricted to provide a system level picture, whereas a census approach can give information at the national, regional, institutional and usually even smaller organisational structures, like study programmes level. The majority of the studies take one point in time from which they ask the respondents to give information about their educational past and their present within another educational institution or the labour market: the problem with this approach is that 'interpretations of their [the former students'] own past behaviour and attitudes are coloured by subsequent events and outcomes' (Howieson and Croxford, 2008: 16). When using national datasets, the 'current' position of the person is recorded; in sample surveys they are asked to provide information about their past.

Table 6-3: Research design and sampling of the school leavers' and graduates' information systems

Country	Name of research: secondary level	Name of research: higher education level	Research Design And Population
Austria	<i>Statistics Austria: Education-related employment career monitoring</i>		Longitudinal Census
Belgium	<i>Flemish Longitudinal Research in Secondary Education</i>		Longitudinal Sample
Denmark (1)	From education to labour market (Fra uddannelse til arbejdsmarked)		Longitudinal Census
(2)		Graduate employment (Nyuddannedes beskæftigelse)	Longitudinal Census
England and Wales	Youth Cohort Study (YCS)		Longitudinal Sample
England	<i>Longitudinal Study of Young People in England (LSYPE)</i>		Longitudinal Sample
Finland (1)	<i>Statistics Finland: Transition from school to further education and work</i>		Longitudinal Census
(2)		Aarresaari Network First destinations	Cross-sectional Sample
(3)		Aarresaari Network Career follow-up	Cross-sectional Sample
France (1)	<i>L'enquête 'Génération 92, 98, 2001, 2004, 2007, 2010</i>		Longitudinal Sample
(2)		Les bacheliers	Longitudinal Sample
Germany (1)	<i>Nationale Bildungspanel (NEPS)</i>		Longitudinal Sample
(2)		Hochschulabschlüsse	Longitudinal Sample
Italy (1)	<i>ISTAT survey on the educational and work experiences of upper secondary school leavers ISTAT Graduate Survey</i>		Cross-sectional Sample
(2)		Graduates' employment conditions Survey of 2011	Cross-sectional Sample
Netherlands	<i>ROA School-leaver and graduate surveys VSNU WO-Monitor</i>		Cross-sectional Sample
Northern-Ireland	School Leavers' Survey		Cross-sectional Census
Republic of Ireland (1)	School Leavers Survey		Cross-sectional Sample
(2)		What do graduates do? First Destination Report	Cross-sectional Sample

Country	Name of research: secondary level	Name of research: higher education level	Research Design And Population
Spain (1)	Young people's entrance to the labour market (Observatorio de Inserción Laboral de los Jóvenes)		Cross-sectional Sample
(2)		University Observatory for Employment (Observatorio Universitario de Inserción Laboral)	Cross-sectional Sample
Scotland (1)	<i>Scottish School Leaver Survey (SSLS)</i>		Longitudinal Sample
(2)	<i>Destinations of Leavers from Scottish Schools AND Follow up Survey of Leavers From Scottish Schools</i>		'Longitudinal' (2 data points) Census
(3)	On Track		Longitudinal Sample
Sweden (1)	The transition from upper secondary school to higher education		Cross-sectional Census
(2)	The Entrance to the Labour Market; Upper secondary school leavers		Cross-sectional Sample
(3)		The Entrance to the Labour Market; University graduates	Cross-sectional Sample
Switzerland (1)	<i>Transitions from Education to Employment (TREE)</i>		Longitudinal Sample
(2)		Graduate survey	'Longitudinal' (2 data points) Sample
United Kingdom		Destination of Leavers from Higher Education (DLHE)	Cross-sectional 'Census'
Wales	Careers Wales Destinations		Cross-sectional Census

(Bergman et al., 2010b, Bergman et al., 2010a, Byrne et al., 2008, Céreq, 2010, DENI, 2010, ESDS, 2005b, ESDS, 2005c, ESDS, 2005a, Howieson and Croxford, 2008, ROA, 2009b, ScotStat, 2009, ScotStat, 2010, STATISTICS FINLAND, 2010, VSNU, 2007b, ESDS, 2008d, ESDS, 2012a, HESA, 2007, CAREER SWALES, 2012b, CAREER SWALES, 2012a, Gaebel et al., 2012, Lemaire, 2010, Lemaire, 2012, Rehn et al., 2011, HEA, 2010, García-Montalvo and María Peiró, 2011, STATISTICS AUSTRIA, 2012, StatisticsDenmark, 2012, Jensen, 2012, UNI BAMBERG, 2010a, SFC, 2010, STATISTICS SWEDEN, 2012, Saino, 2010, Samuelsson, 2004, KULeuven, 2011, ISTAT, 2011b, ISTAT, 2012, ISTAT, 2011a, Cammelli, 2012, BFS, 2011)

In relation to the timing of the school leavers' and graduates' information systems there are three main topics to consider: a) since when are they running, b) how often is a new cohort sampled and c) what is the age group covered, or in other cases, how much time after leaving are former students queried? The first two topics are listed in column 4, (Starting year And Repetition), the last one in column 5 (Age group/ Time after leaving) of Table 6-4.

As Table 6-4 shows, the majority of the listed SLGIS are built on multiple samples of cohorts. Only two of them deal with data from a single cohort, these are the Swiss *Transitions from Education to Employment* (TREE) project and the English *Longitudinal Study of Young People in England* (LSYPE) (Bergman et al., 2010b, Bergman et al., 2010a, ESDS, 2012a). The majority of the cross-sectional SLGIS are built on annual or biannual samples, whereas the longitudinal sample surveys have bigger gaps between the subsequent cohorts. The higher costs associated with longitudinal projects compared to cross-sectional accounts provides one plausible explanation for this (Howieson and Croxford, 2008, Collingwood et al., 2010).

The majority of the school leavers' and graduates' information systems define their population through setting a time after leaving a specific institution, only six research programmes set an age of the respondents from whom to gather data. The majority of the research programmes deal with the first 1-3 years after school leaving and graduation. Some longitudinal projects follow the respondents up to five-ten years

after leaving the educational system. As the Austrian, Finnish and Danish examples indicate, through the combination of registry data it possible to follow up multiple cohorts for a long time-period as well.

Table 6-4: Timing: Starting year, repetition, age group or time after leaving

Country	Name of research: secondary level	Name of research: higher education level	Starting year And Repetition	Age group/ Time after leaving
Austria	<i>Statistics Austria: Education-related employment career monitoring</i>		N/A New cohort yearly	1, 12, 18, 24 months after leaving
Belgium	<i>Flemish Longitudinal Research in Secondary Education</i>		1999 3 cohorts between 1999-2006	Contacts made at the ages of 23, 26, and 29
Denmark (1)	From education to labour market (Fra uddannelse til arbejdsmarked)		2000 New cohort yearly	2 months after leaving, then yearly from 1 to 10 years
(2)		Graduate employment (Nyuddannedes beskæftigelse)	2004 New cohort yearly	4 to 19 months after graduation
England and Wales	Youth Cohort Study (YCS)		1995 New cohort biannually	2, 3, 4 contacts yearly, between the ages 16-19
England	<i>Longitudinal Study of Young People in England (LSYPE)</i>		2004 One cohort	Yearly from the age 13/14 till 23/24. Terminated before planned
Finland (1)	<i>Statistics Finland: Transition from school to further education and work</i>		1990 New cohort yearly	One year after leaving secondary or university
(2)		Aarresaari Network First destinations	2005 New cohort yearly	One year after leaving university
(3)		Aarresaari Network Career follow-up	2000s New cohort biannually	Five year after leaving university
France (1)	<i>L'enquête 'Génération 92, 98, 2001, 2004, 2007, 2010</i>		1992 New cohort every 2-3 years	3, 5, 7 and 10 years after leaving
(2)		Les bacheliers	Cohorts from 1996, 2002, 2008	Yearly after school, at university
Germany (1)	<i>Nationale Bildungspanel (NEPS)</i>		2010 One panel of multiple cohorts	For 10 years, contacts yearly; connected to school levels
(2)		Hochschulabschlüsse	1989, 1993, 1997, 2001, 2005 and 2009	1, 5 years and for some cohorts 10 years after leaving
Italy (1)	<i>ISTAT survey on the educational and work experiences of upper secondary school leavers</i> <i>ISTAT Graduate Survey</i>		1998 New cohort every 3 years	3 years after leaving school or university
(2)		Graduates' employment conditions Survey of 2011	1997 New cohort yearly	1, 3, 5 years after leaving university
Netherlands	<i>ROA School-leaver and graduate surveys</i> <i>VSNU WO-Monitor</i>		1989 New cohort yearly; biannually for WOs	1.5 years after leaving/graduation
Northern-Ireland	School Leavers' Survey		1979 New cohort yearly	At leaving
Republic of Ireland (1)	School Leavers Survey		1980 New cohort yearly or biannually	12-18 months after leaving school
(2)		What do graduates do? First Destination Report	1987, 1992, 1997, 2002, 2006, 2007,	9 months after graduating

Country	Name of research: secondary level	Name of research: higher education level	Starting year And Repetition	Age group/ Time after leaving
2008				
Spain (1)	Young people's entrance to the labour market (Observatorio de Inserción Laboral de los Jóvenes)		1996, 1999, 2002, 2005, 2008 and 2011	Within 5 years of accessing the labour market after leaving; 16-30 year olds
(2)		University Observatory for Employment (Observatorio Universitario de Inserción Laboral)	N/A	N/A
Scotland (1)	<i>Scottish School Leaver Survey (SSLS)</i>		(1970) Recently: 1991; 1993; 2001; 2003	At the ages of 16/17, 18/19, 21/22, 23/24
(2)	<i>Destinations of Leavers from Scottish Schools AND Follow up Survey of Leavers From Scottish Schools</i>		2005 New cohort yearly	3 months and 9 months after leaving
(3)		On Track	2004 Two cohorts: 2004; 2007	For 5 years after leaving, 4 times interviewed
Sweden (1)	The transition from upper sec. school to higher education		1989 New cohort yearly	At leaving
(2)	The Entrance to the Labour Market; Upper secondary school leavers		1996 New cohort yearly (?)	3 years after leaving upper secondary school
(3)		The Entrance to the Labour Market; University graduates	1996 New cohort yearly (?)	3 years after leaving university
Switzerland (1)	<i>Transitions from Education to Employment (TREE)</i>		2000 One cohort	Between the ages of 16-26, yearly till 2007 then 2010
(2)		Graduate survey	1977 New cohort biannually	1 year after graduation; since 2002, 1+5 years
United Kingdom		Destination of Leavers from Higher Education (DLHE)	1995 New cohort yearly	6 months after graduation
Wales	Careers Wales Destinations		1995 New cohort yearly	At leaving

(Bergman et al., 2010b, Bergman et al., 2010a, Byrne et al., 2008, Céreq, 2010, DENI, 2010, ESDS, 2005b, ESDS, 2005c, ESDS, 2005a, Howieson and Croxford, 2008, ROA, 2009b, ScotStat, 2009, ScotStat, 2010, STATISTICS FINLAND, 2010, VSNU, 2007b, ESDS, 2008d, ESDS, 2012a, HESA, 2007, CAREER SWALES, 2012b, CAREER SWALES, 2012a, Gaebel et al., 2012, Lemaire, 2010, Lemaire, 2012, Rehn et al., 2011, HEA, 2010, García-Montalvo and María Peiró, 2011, STATISTICS AUSTRIA, 2012, StatisticsDenmark, 2012, Jensen, 2012, UNI BAMBERG, 2010a, SFC, 2010, STATISTICS SWEDEN, 2012, Saino, 2010, Samuelsson, 2004, KULeuven, 2011, ISTAT, 2011b, ISTAT, 2012, ISTAT, 2011a, Cammelli, 2012, BFS, 2011)

The geographical area of the information systems is generally the nation-state as national information systems were sampled for this research. However, in the case of the United Kingdom several national school leavers' information systems exist in the four home-countries and there is one research project contacting graduates covering the entire UK as well. As discussed earlier, Scotland had an established, long standing data collection that was terminated recently. The data currently are acquired through statistical data collections and following up the young people subsequently. The Northern-Irish statistical collection gives information on the destinations of school leavers'. In relation to England and Wales, the Young Cohort Study was a long-standing data collection that gathered data from both countries. The newer research programme following on from the YCS that started in 2004, the Longitudinal Study of Young People in England is based on an English sample. Through merging the YCS and the LSYPE research programmes there is no data collection on Welsh young people anymore; it is the guidance service in Wales that gathers information on school leavers. The entire-UK perspective is only available for the higher education level, as all universities within the United Kingdom have to collect information on the destinations of their graduates through the Destinations of Leavers from Higher Education.

6.4 *Typology of the research programmes*

Cross-tabulating the research design and the sampling frame of the SLGIS as two dimensions, a typology of four can be identified. The codes of the research projects

within the given country in brackets can be found in the first column in Table 6-2, Table 6-3 and Table 6-4.

- *Longitudinal designs based on sample survey*: Belgium, England and Wales, England, France (1), France (2), Germany (1), Germany (2), Scotland (1), Scotland (3), Switzerland (1), Switzerland (2);
- *Longitudinal designs based on census*: Austria, Denmark (1), Denmark (2), Finland (1), Scotland (2);
- *Cross-sectional designs based on a sample survey*: Finland (2), Finland (3), Italy (1), Italy (2), Netherlands, Republic of Ireland (1), Republic of Ireland (2), Spain (1), Spain (2), Sweden (1), Sweden (2);
- *Cross-sectional designs based on census*: United Kingdom, Northern-Ireland, Sweden (3), Wales.

The most ‘popular’ methodologies are those being built on a longitudinal or a cross-sectional sample design, the least information programmes can be found in categories relating to census-type approaches. School leavers’ and graduates’ information systems that are based on a census usually collect less detailed information about the individuals’ circumstances, either due to the methodology of linked administrative data or to reduce respondent burden (Ruspini, 2002). SLGIS that gather data once or multiple times directly from a sample population usually provide a broader range of information about several topics relating to leaving or graduating. This typology – the earlier version of it – combined with the regional aspect served as the sampling basis for the second phase of this research.

6.5 Concluding remarks on the first, cross-sectional phase of the research and implications for the second, case study phase

This first analytical section of the research provides an overview of ‘what is out there’, which are the existing school leavers’ and graduates’ information systems within Europe. Further details about the SLGIS along the variables analysed in this phase are provided in Appendix 7 for all countries under scrutiny. This first phase of the research permits highlighting some of the similarities between countries, where evidence of borrowing is apparent. The first such example is from the UK and Ireland context where the former joint English and Welsh survey was originally based on the Scottish experiences (Howieson and Croxford, 2008). The second is that of the Nordic countries, where administrative data linking to acquire national datasets is common practice (Myrskylä, 2001, UNITED NATIONS, 2007, Ruspini, 2002).

As Section 5.3.2 on the methodology of this research suggests, the first, cross-sectional phase of this research served as the basis of the selection of cases for the second, case study phase. Using the earlier version of the typology based on research design and population covered by the SLGIS (See Sub-section 5.3.1), the aim of selecting cases is to maximise variation with the least number of cases. Beyond using the typology of research design and population covered by the SLGIS, two further aspects are taken into account. First, the variation between the regions of Europe is maximised, second, established and long-standing SLGIS are chosen for the analysis. As the sampling section (Section 5.3.2) for the second phase of this

research outlines, the three nation states and their SLGIS to be analysed are the Netherlands, England and Finland, in order of the fieldwork. A timeline of this research showing the fieldwork in details is provided in Appendix 6. The fieldwork experiences and the organisations consulted are described in Appendix 8 separately for all three case study countries; Appendix 10 and Appendix 11 for the Netherlands, Appendix 12 and Appendix 13 for England and Wales and Appendix 14 and Appendix 15 for Finland. The following chapters provide details on the three cases chosen for the second, case study phase of the research: the Netherlands, England and Finland.

CHAPTER SEVEN

THE INTRODUCTION TO THE CASES – THE THREE EDUCATIONAL SYSTEMS AND THEIR SLGIS

This chapter provides background information to the case study phase of this research, introducing the Dutch, the English and the Finnish structure of education. Further background details can be found in the appendices to the different case studies. These provide a longer description of the contextual facts, like the population, the economic situation, the educational system and the most important current debates on education. These descriptions can be found in Appendix 16 for the Dutch case; Appendix 20 for the English case; and Appendix 27 for the Finnish case.

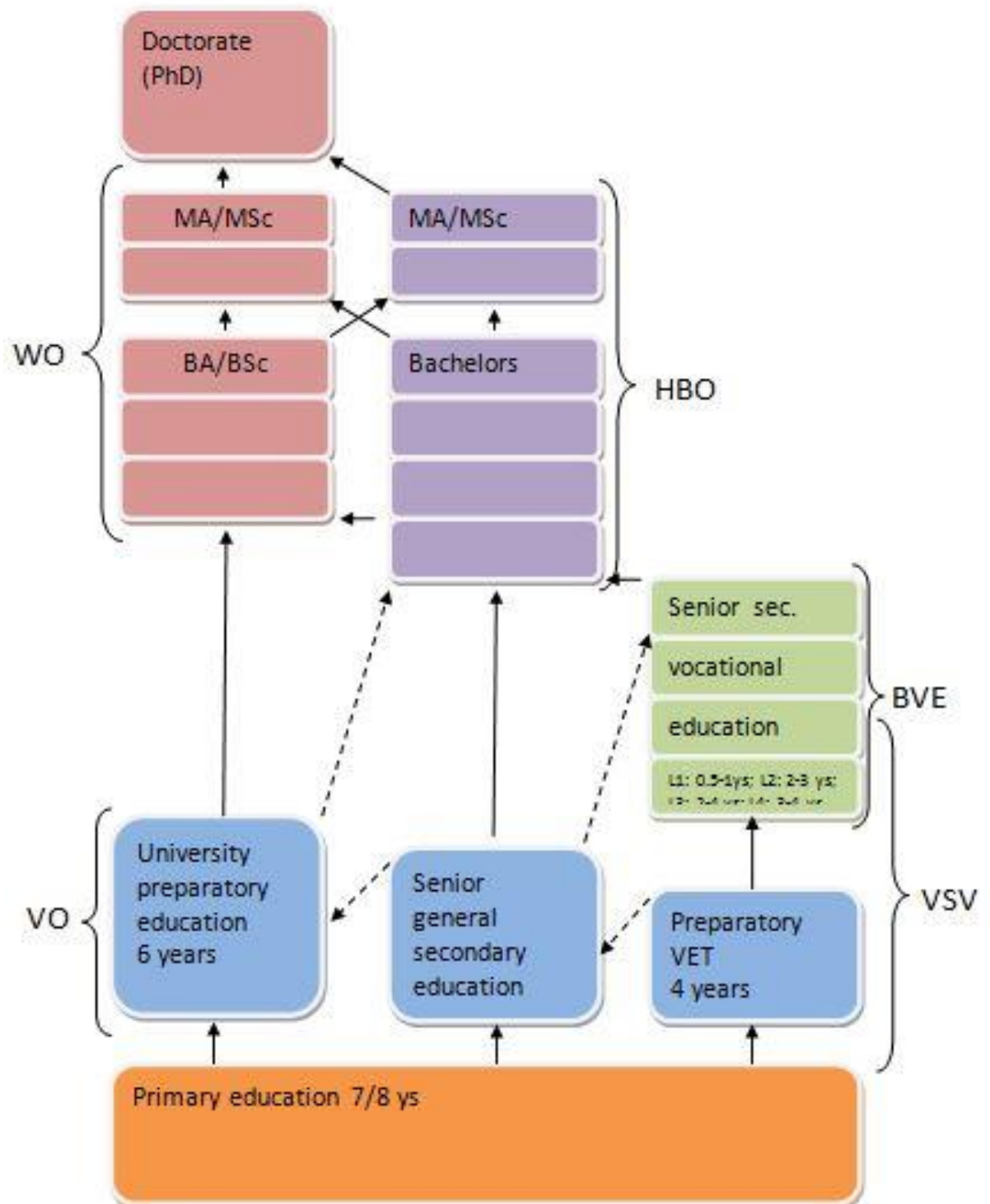
Beyond introducing the national educational systems of the cases, this chapter provides an introduction to the SLGIS describing the main features and some historical points. This chapter ends with a short discussion on how the educational systems and the SLGIS compare to each other.

Note that the case studies of the SLGIS are mainly built on the interviews conducted in these three countries. Although many stakeholders are consulted, a case study using an average of 15 interviews and several documents cannot aim to provide all

viewpoints, or the entirety of the views of those interviewed. Nor can this research aspire to uncover the interrelated nature and the history of the connections of the different actors within these national contexts. The case studies are a good indicator of the different data-needs arising at the political or at the institutional level of the different educational sectors and they also provide a good overview of the success factors of the data systems that aim to fulfil these data-needs.

7.1 The educational system and the SLGIS of the Netherlands

Figure 7-1: Dutch educational system



(Source: Nuffic, 2011)

The Dutch education system resembles the Germanic model in which early tracking of students is accompanied with a strong separation of the vocational and the academic tracks. As Figure 7-1 shows, after the primary education of 7/8 years (orange colour) pupils can either enrol into the preparatory vocational (voorbereidend middelbaar beroepsonderwijs), or the senior general secondary (hoger algemeen voortgezet onderwijs), or the university preparatory educational track (voorbereidend wetenschappelijk onderwijs), all marked by blue colour. These secondary level schools last 4, 5 and 6 years and are abbreviated VMBO, HAVO and VWO respectively. As even the name of them shows, they prepare the students from the age of 12 for a specific further track. The vocational track (abbreviated MBO), marked green on Figure 7-1, prepares students for a specialised vocation at the post-secondary level (ISCED 3). The tertiary sector is divided into higher professional institutions and academic institutions, the former are called hogescholen or hoger beroepsonderwijs (abbreviated HBO), the latter are called universiteits or wetenschappelijk onderwijs (abbreviated WO). These two tracks are markedly different (purple and red colour). Whereas the vocational or professional higher education provides a more specific, more vocational degree usually up to a Bachelors' level, the academic higher education track means an almost automatic continuation of the Bachelors' degree into a Master's-level degree within an academic subject. Further details about the Dutch educational system and the current educational debates can be found in Appendix 16.

The history of the Dutch school leavers' and graduates' information system can be traced back to the 1980s. When at the end of the 1980s the Netherlands faced high levels of youth unemployment, the main policy initiative to overcome this challenge was the application of the Germanic model of higher levels of work-school relations. Beyond the higher levels of apprenticeships and the stronger emphasis of the labour market outcomes of educational courses a further measure was to gain information on school leavers and graduates and their labour market position.

The Dutch SLGIS is based on data collected in a cross-sectional manner at all levels of the educational system and has existed for more than 20 years. The system is built up of separate surveys measuring school leaving and graduation 1.5 years after the former student has left the institution and these are then combined into a national-level report. Thus the Dutch SLGIS gives a comprehensive picture of the whole educational system. The data also serve as one component of the labour market forecast studies.

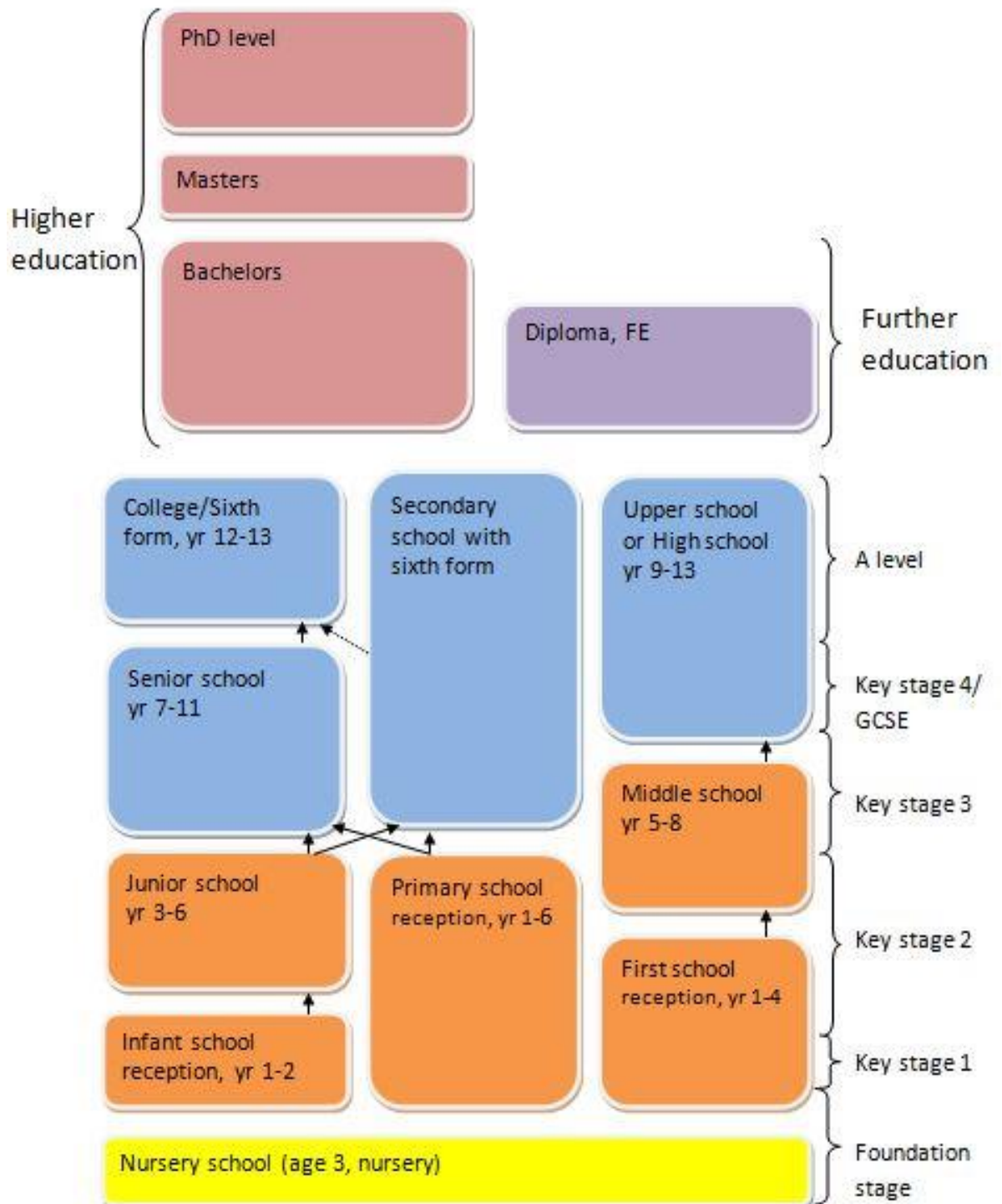
As suggested in Figure 7-1, there are three main streams at both the secondary and the post-secondary or tertiary level – the SLGIS mirrors this picture. Thus, there are school leavers' monitors conducted separately for the VWO, the HAVO and the VMBO students, these are the basis for the secondary level research programmes. On the MBO, senior secondary vocational level there are several separate surveys a) accounting for the different stages (1-4) and b) the two different tracks, BOL and

BBL. Furthermore, the agricultural MBOs have their separate survey. Additionally, a survey system covers the HBO, the professional higher education sector. Within this the arts schools require a separate survey for both their BA and MA level students. At the WO, academic higher education level one survey-system serves all universities gathering data on the MA level and in some cases, on the BA students. Beyond these research programmes, an early school leavers' survey was set up recently to cover former students who did not finish a specific school, do not have a basic qualification, and are not in the official education register anymore (ROA, 2011, DESAN, 2012). A detailed account of the early school leavers' survey is provided in Appendix 18.

The Dutch school leavers' and graduates' information system is conducted at the national level, as this was the focus of this research. However, one institutional level survey is introduced in the next sections to show an example of the alternatives to the national system. From the several research organisations conducting similar school leavers' surveys (SLS) one organisation is chosen whose report is mentioned in a school interview.

7.2 The educational system and the SLGIS of England

Figure 7-2: English educational system



(Source: Eurydice, 2010b)

The educational system of England is traditionally diverse, allowing for diverse student choice at all the levels. As Figure 7-2 shows, the primary sector (orange colour) consists of several different types of institutional routes. As there is no selection before primary, these schools cater for all abilities. Primary and junior schools end at the age of 11 and secondary schooling begins after this age. The primary and secondary education is divided into four – two and two – key stages that end with the General Certificate of Secondary Education (GCSE). The last five years of the compulsory education, from the ages of 11 to 16 are marked with colour blue on Figure 7-2. Education and training after this period is referred to as post-16 choices. Secondary education can be completed in secondary schools, grammar schools, school sixth forms or sixth form colleges, or in some parts of England in upper schools. The end of the compulsory education is marked by the General Certificate of Secondary Education (GCSE). Post-16 full-time education marked blue on Figure 7-2 is rather specialised in England. It can aim for getting a diploma in a specific field or study for the General Certificate of Education Advanced Level, usually referred to as A-levels (Eurydice, 2010b, OFQUAL, 2009). The higher education system marked purple on Figure 7-2 provides different types of academic qualifications at the tertiary level. The majority of the students are enrolling for a Bachelor's level degree. A third of students in 2010/2011 were studying at postgraduate level (HESA, 2012). Further details about the English educational system and the current educational debates can be found in Appendix 20.

Conducting SLGIS in England has a long tradition, the information systems here date back to the mid-80s. The most established SLGIS follow school leavers' exiting the secondary level and beginning their university career or their working life. These information systems give a national picture on the notion of school leaving and they are supplemented by separate research programmes focusing on different educational sectors.

Therefore, this research gathered information about a number of different SLGIS present in England. The *Youth Cohort Study* (YCS) conducted from 1985 till the end of 2000s and the *Longitudinal Study of Young People in England* (LSYPE) started in 2004 are research programmes that give an overall picture of the transition process from compulsory education to further education, higher education and the labour market as well as young people's life in general. These two information systems follow one or more cohorts for a number of years to gather data on the transition process and provide a national level picture.

A further English school leavers' dataset that has been gathered in the first decade of the 2000s was linked to the Connexions services providing career guidance and counselling. Although Connexions' task was both a universal provision for the 13-19 age group and to provide targeted guidance for young people not in education, employment and training (NEET), some argue that this latter bared higher importance (Mulvey, 2006, Roberts, 2013, Watts, 2001). Therefore the datasets that

Connexions provided were more geared towards the NEET-group as well and no general destinations figures were gathered. After the Connexions service was replaced by the National Careers Service in 2011 (NATIONAL CAREERS SERVICE, 2013), the data currently provided on the DfE's website on NEETs derives from the Statistical First Release, the Labour Force Survey and the regional NEET figures (DfE, 2013a, Data.Gov, 2013). As this research does not aim to describe information systems that only cover NEETs, these datasets are not analysed here.

For both the further education colleges and the higher education universities there are SLGIS that collect information at the level of the institution. These data collections started in the 1990s and gather information on the initial labour market outcomes of college leavers' and university graduates'. These data collections aim to get a snapshot of a cohort's initial destinations after leaving the institution through surveys. In the case of the *Destinations of Leavers from Higher Education* survey (DLHE) the aim is to collect information on at least 4/5th of the graduates to gain comparable data on the whole university sector.

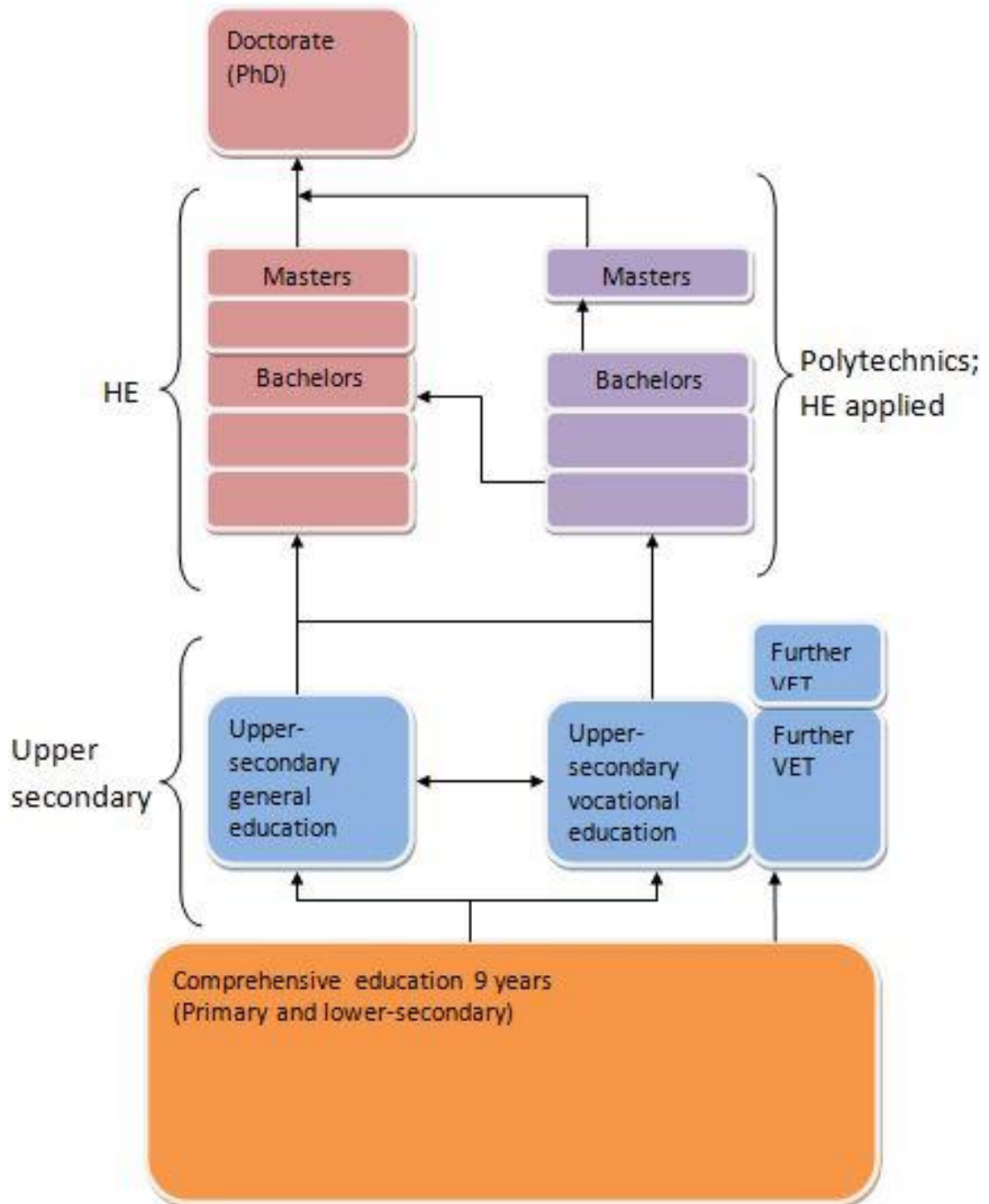
The SLGIS in the United Kingdom are different in terms of their time-scope as well as their geographical coverage. Whereas the YCS' first 12 cohort covers England and Wales, the 13th cohort and the research that replaced it, the LSYPE deal only with England. The college data collections are conducted only for England but separate and similar accounts can be found in the other home-countries. The DLHE, however,

collects data for the whole of the United Kingdom as all nationally UK-funded university level programmes are covered in this survey.

The reason for gathering data on Wales at the start of this research was to gain comparable information on how the Youth Cohort Study was used in England and in Wales. However, the information gained through the Welsh interviews offers a more rounded picture, and so a separate account of the Welsh case is provided in Appendix 28.

7.3 The educational system and the SLGIS of Finland

Figure 7-3: Finnish educational system



(Source: MinEdu, Date unknown)

The Finnish education system has a clear structure: after the 9 year long comprehensive education (orange colour on Figure 7-3) pupils choose either the general upper-secondary or the vocational upper-secondary education (blue colour on Figure 7-3). Both of these give the opportunity to go on to one of the sectors of the equally dual-structured higher education (purple and red colour on Figure 7-3). Higher education institutions are either universities or universities of applied sciences (UAS); this latter are sometimes referred to as polytechnics. Further details about the Finnish education system and the current debates can be found in Appendix 27.

Finland's approach to gathering data is similar to that of other Nordic states: if possible, information is collected through compiling different administrative registers (Myrskylä, 2001). *Registers* are defined in a document on the Nordic way of data collection by the United Nations as follows,

Systematic collection of unit-level data organized in such a way that updating is possible. Updating is the processing of identifiable information with the purpose of establishing, updating, correcting or extending the register. (UNITED NATIONS, 2007: 47)

This system makes it possible to conduct even the national census through combining more than 30 different registers. The census or any other information set can be compiled applying short timeframes, in this case, annually (Research institute

10, FI). Combining different registers is an unobtrusive method as it does not require contacting the individual.

The use of registers is possible due to a number of reasons. First, the Nordic model of welfare regime (Esping-Andersen, 1996) is built on a high level of redistribution and solidarity favouring the welfare state. Therefore national organisations such as Statistics Finland have stable and high levels of funding to perform their task. Second, state organisations are said to be trusted not to misapply the data (Research institute 10, FI). And third, the wide use of the personal identification number helps the data collection and makes data compilation more feasible. This number is used as an educational ID as well as a tax ID later on, thus allowing the educational background to be linked to the labour market outcomes and making it possible to produce SLGIS data.

Through combining registers, school leavers' and graduates' information is produced on virtually everyone, it is a census of all school leavers' from upper-secondary schools and all graduates' from higher education institutions. The data are reported one year after leaving and the methodology allows choosing any other time-frame as well.

Although this type of robust information is available on school leavers and graduates within Finland, there are further data collections present. One is the 'career follow-up'

conducted by the Aarresaari Network (AN), the national career guidance organisation. This research initiated by the universities aims to gather information on the longer term labour market outcomes of graduates. The other two approaches analysed in this research are conducted either right after graduation, or approximately a year after leaving HE. These research programmes are to measure the perceived quality of education and the initial labour market outcomes. They are called the 'exit-poll' and the 'initial destinations' survey.

7.4 Summary and comparison of the cases – the three educational systems and their SLGIS

The three national school leavers' and graduates information systems seem to mirror the structure of the national educational systems they gather data about. Therefore the differences in the educational systems can explain some of the variation between the SLGIS. Finland's educational structure is represented in the SLGIS as a comprehensive system of all levels and sectors. This system is complemented at the HE level with further SLGIS as explained in Chapter Ten. The Dutch schooling systems streams pupils into separate sectors and levels and this is mirrored by the SLGIS being built on separate sectorial accounts. Similarly, the diversity of the English educational system and the strong separation of the vocational and academic tracks are reflected in the SLGIS constituting from separate sectorial accounts of school leavers' and graduates'. However, whereas there is a national level picture of the Dutch system, the diverging educational sectors and levels of the English system are not mapped in one comprehensive SLGIS. This difference cannot

be justified through the educational systems being dissimilar; therefore the next chapters seek further explanation.

CHAPTER EIGHT

WHO PAYS FOR THESE DATA? – THREE FUNDING SCHEMES AND INSTITUTIONAL SETUPS FOR THE SLGIS

This chapter provides an overview of the institutional setups of the SLGIS and the way the different information systems are financed. This chapter details the three cases in the first three sections along the two sub-topics to then arrive at a summary and a comparison between the cases in Section 8.4.

8.1 Institutional background and funding schemes of the Dutch SLGIS

The Dutch SLGIS used to be conducted by one research organisation that provided information on the institutional as well as the national level. Initially the SLGIS was funded jointly by the national policy level and the institutions. Several major changes occurred over time. For instance there is greater competition regarding the research organisations conducting the surveys and the funding schemes have diverged as well. Before detailing the funding schemes of the information systems, the institutional background of the Dutch SLGIS is clarified.

8.1.1 Institutional background – Dutch SLGIS

The Research Centre for Education and the Labour Market (ROA) at the University of Maastricht used to provide all educational levels with school leavers' and graduates' information. Currently their responsibility is to carry out the national level survey of the secondary education level (VWO, HAVO and VMBO), a national picture on the senior secondary vocational level (MBO), institutional level and national level picture on the professional higher education level (HBO) and an overall insight into early school leaving. The organisation involved in the fieldwork of these projects is called DESAN.

The academic universities used to have their graduate surveys conducted by ROA between 1998-2007 (VSNU, 2007a, Verdonk, 2008). It started in a period when the university budgets were said to be higher (Research Institute 3, NL). In 2007 the Association of Universities in the Netherlands (VSNU), the contact organisation between universities and ROA for the graduate survey, decided to tender the fieldwork. This was won by IVA, a research institute of the University of Tilburg (VSNU, 2007a). The main reasons for changing to appoint IVA and VSNU taking 'more control' seems to be that ROA was providing the research for a higher price and they were said to be inflexible with regards to changing the graduate research along the requirements of the universities (Research institute 3, NL). Even before the tender, the picture of who conducted surveys seemed to be diverse in the WO-field. ROA was the subcontractor for eight universities, two institutions conducted their research in cooperation with ROA and another three had local initiatives for their

graduates' survey (VSNU, 2007a). (Further discussion of this specific change regarding the provider of the WO-Monitor can be found in Appendix 17.)

8.1.2 Funding scheme – Dutch SLGIS

There are two main funding structures of the school leavers' and graduates' information systems in the Netherlands. Either the ministry or ministries are funding a major part of the research, or they contribute with a smaller budget or none to it and institutions themselves pay for ROA-DESAN or VSNU-IVA to conduct the research. The funding structure for the surveys ROA conducts is described as follows,

In the higher vocational education which we do, it's the school who finances it. (...) all the lower ones, there we get a subsidy from three ministries: the Ministry of Education, the Ministry of Social Affairs and the Ministry nowadays called Economics, Innovation and Agriculture. (Research institute 1, NL)

8.1.2.1 Secondary level

Currently the secondary level surveys provide a national level picture, whereas in earlier years they also gave institutional level accounts. This is due to institutions being less willing to order this sort of research for themselves and the funding from the central government only covering a smaller national sample instead of separate institutional account (Research institute 1, NL).

Using the ministerial subsidy ROA provides a national level picture, as a sample of '20-25% [of the leavers cohort] is enough as long as it's kind of representative' (Research institute 2, NL). As a ministerial interview at the vocational level suggests, 'we subsidize ROA to do this work, to follow the school leavers and to research where they are working after graduation [meaning school leaving in this case] after 1.5 year' (Ministry 3, NL). ROA receives an annual subsidy 'to carry out the school leavers' survey and to provide data which is useful for the society' (Research institute 1, NL). Meetings are held six times a year between ROA and the ministry to discuss the research process and the focus of the reports. As a ministerial interview explains the role of ROA,

(...) of course we pay for a lot of this, we have a say in it of course. But I think this institute do a rather good job, we don't have to stir so much. (Ministry 2, NL)

As the interview at ROA suggests, the topics of the research are discussed with the ministries involved in financing the research. During the 'balancing act' the suggestions are debated. The civil servants are said to be 'very critical' and 'they come up less with ideas than shooting away ideas' (Research institute 1, NL). Although a ministerial interview used the expression 'we have' a research institute to carry out school leavers' surveys, ROA has a level of independence. The ministry

does have a say in the report as they are funding it, 'but it's a report of the Research Centre for Education and Labour Market, and it's in this sense independent from the opinion which they have' (Research institute 1, NL).

One of the MBO schools interviewed had some level of school leavers' information collected within the institution. However, in another interview within the same institution the interviewee(s) referred to the national ROA data when asked about their leavers. Furthermore, some of their former students are participating in a one-off school leavers' research conducted by a university in the same city (School 2 - guidance, NL). The other MBO-school interviewed used to purchase research from ROA, but the assumption here is that they were referring to the national sample, as they mentioned a response rate of 10%. For the past 10 years they gain the school leavers' data from a research organisation called Duo-Onderwijsonderzoek, DUO-O (School 1, NL). DUO-O should not to be confused with the organisation DUO that belongs to the Ministry of Education and provides the sample of school leavers' for ROA at the secondary level.

There is some level of competition within this field of research that seems to have emerged relatively recently. There are a number of other research organisations conducting for-profit research within education and some of these conduct SLGIS as well. The research organisation DUO-O conducts research for schools at the secondary and senior-secondary level, ordered by the institutions themselves.

Institutions like School 1 are the contracting party and funder of the work of DUO-O: there is no ministerial involvement. DUO-O has carried out the school leavers' surveys and other satisfaction-surveys for secondary and senior secondary level institutions for 15 years (Research institute 4, NL). For the senior vocational secondary level DUO-O conducts the survey for approximately half of the MBO schools, between 30 and 40 institutions (Research institute 4, NL).

8.1.2.2 Tertiary level

The Dutch graduates' survey has been funded primarily by the institutions themselves both in the professional and the academic higher education sector. Other organisations involved are the council for HBO institutions called HBO-RAAD and the council for WO institutions called VSNU. Both of these organisations provide some level of funding for the graduates' research.

At the HBO-level the individual institutions provide ROA with the contact details of the sample, they pay for the majority of the research costs and they receive extensive reports on all their study programmes, the institution as a whole, and how their results compare to other HBOs. As the ROA interview suggests, 'the HBO council pays a little amount of money for ROA for drafting a report, but the whole fieldwork component and most of the other work is paid by the institutes themselves' (Research institute 1, NL).

The VSNU and IVA approach for the higher education level consists of a 'basic fieldwork set' financed through VSNU 'that [includes] an email, and the two reminders, and everything you want more there is a price for it' (Research institute 3, NL). Universities have to finance their own additional method requirements, for example any additional reminders, a survey at the Bachelor's level or research in the years between the biannual national data collections. In 2007 VSNU and the board of universities decided that it is enough for them to receive this sort of graduates' information every second year, 2009, 2011 and 2013. However, nearly half of universities have a separate, individual contract with IVA to carry out the same survey every year (Research institute 5, NL).

8.2 Institutional background and funding schemes of the English SLGIS

The English school leavers' and graduates' information system is built on separate accounts covering the different educational levels and sectors. Therefore the following sub-sections provide an overview of the three sectorial approaches. These are the YCS and the LSYPE for the secondary level; the college destinations data; and for higher education, the DLHE and the DLHE longitudinal research. Whereas the secondary level accounts are financed by the policy level and provide only a national picture about school leaving, for the college and university sectors the financial duties are with the institutions. While in the case of the universities there are institutional and national level accounts of graduation, at the college level the data are sparse and a national level data are absent.

8.2.1 Institutional background – English SLGIS

The first two information systems analysed in this sub-section are the 13 cohorts of the Youth Cohort Study and the subsequent Longitudinal Study of Young People in England. The YCS and the LSYPE are research projects initiated and financed by one or more ministries, conducted by external or internal research groups. The relation of the ministry with the 'principal investigators' of YCS is explained in the researcher interview as follows,

[The YCS] was always being managed by the department, and it's just different contractors who have done it. Don't know in terms of who have managed it internally, but it always had kind of in-house analysts. (Research institute 6, EN)

Gill Courtenay from the institution Social and Community Planning Research was the researcher responsible for the project in the early years of formation till the 7th cohort. This institution was founded in 1969 and in the 1990s it became the National Centre for Social Research (NatCen). From cohort 8 onwards the principal investigators associated with the YCS were varied. The list of organisations named on the ESDS website can be found in Appendix 22. Cohorts 12 and 13 of the YCS from 2004 and from 2007 respectively were run by the Department for Children, Schools and Families and its successor currently named Department for Education (ESDS, 2008a,

ESDS, 2008c). The data collectors for these exercises were TNS Social Research and GfK NOP for the 12th cohort and British Market Research Bureau (BMRB) for the 13th cohort.

The principal investigators of LSYPE according to the ESDS website were the Department for Education and the National Centre for Social Research (ESDS, 2012a). This setting was different from the YCS, where the ministry was commissioning research. Interestingly, NatCen was mentioned in the ministerial researcher interview only in relation to a 'project on vulnerable young people which was conducted by NatCen for us' (Research institute 6, EN). The ESDS website gives further information of NatCen's role in the LSYPE project; beyond depositing data from waves 1-6, they validated the data from those waves (ESDS, 2012a). The 7th wave was deposited and validated by the DfE.

The fieldwork for LSYPE was carried out by a consortium of three organisations: BMRB Social Research, GfK NOP and Ipsos MORI. Ipsos MORI were involved 'previously', not all the way through the research (Collingwood et al., 2010: 15), presumably this means the waves conducted through face-to-face interviewing. BMRB, later TNS-BMRB was the lead contractor for the fieldwork of LSYPE. Their task and relation to the ministry was explained by TNS-BMRB as follows,

We were the lead contractors, so we led [?] all questionnaire design and survey design so we're involved in putting together the questionnaires and then carrying out fieldwork and then producing the data at the end of the project. (Research institute 8, EN)

They [ministry] had ideas of questions they wanted you to use and we [TNS-BMRB] would review them and give them suggestions (...). It was a two way process; and also the other agencies were also involved as well, because they have a lot of experience. (Research institute 8, EN)

One of the advantages of BMRB being involved with the LSYPE was that they were the organisation conducting the fieldwork for the last YCS cohort. The 13th cohort of the YCS was the same age group as the LSYPE and thus the two datasets complement each other. This was enhanced by the fieldwork organisations being the same.

Within further education the data collections have historically been constrained to reporting the destinations of leavers' and the data have been collected by the colleges themselves. There is some confusion about what is called the 'destinations data'. Whereas the colleges interviewed referred to their own data collection on destinations, the ministerial interviewee(s) talked about a survey within this topic (College 1, EN; Ministry 5, EN). This survey mentioned is the Learner Destinations,

carried out by the GfK NOP Social Research. This research has been carried out for the further education sector three times since academic year 2007/2008 (Ivins, 2012).

At the higher education level the Higher Education Statistical Agency (HESA) is responsible for setting the guidelines and validating the DLHE data collected by the universities. The higher education institutions collect their destinations information along the procedures set by HESA. The other main regular research conducted at the higher education level is the DLHE longitudinal survey. The name of it is misleading: it is not built on a longitudinal research design. It is a one-time follow-up of graduates' who have been to university 3.5 years before, 3 years after they were queried in the DLHE. This research is conducted by an organisation called IFF Research (Shury and Vivian, 2013).

8.2.2 Funding scheme – English SLGIS

The English SLGIS at the different educational levels and sectors have diverse funding schemes. Whereas at the secondary level the information systems are entirely policy-led and financed, at the tertiary level institutions contribute or finance their SLGIS entirely.

8.2.2.1 Secondary level

The YCS belonged predominantly to the 'employment department' of the Ministry for the first seven cohorts, with the 'education department' contributing to the funding in some of the waves. (See Appendix 22 for details on the institutional and financial background of the YCS.) From cohort 8 till cohort 13 the financial sponsor of the survey was mainly the 'education department', for the last waves the department acted as the principal investigator as well (ESDS, 1993b, ESDS, 1993c, ESDS, 1993a, ESDS, 1993d, ESDS, 1996b, ESDS, 1996a, ESDS, 1996c, ESDS, 1999a, ESDS, 1999b, ESDS, 2003, ESDS, 2005b, ESDS, 2006, ESDS, 2008a, ESDS, 2008c). Due to failed contact with NatCen researchers involved earlier with the YCS and the ministerial researcher contact(s) not being there long enough to know, this research does not have further information about these changes and why they occurred.

The sponsors of the LSYPE are the Department for Education, the Department for Business, Innovation and Skills and the Department for Work and Pensions (ESDS, 2012a). As the review on the LSYPE explains, funding 'was allocated across financial years rather than waves of the study' and initially the research started with funding from the HM Treasury (Collingwood et al., 2010: 95),

The Longitudinal Surveys Team at DfE applied for funding for the study in the 2002 and 2004 Spending Reviews which covered 2003-08. In addition, DfE

has used funds from their central research budget. DfE has funded all Waves, and these costs cover the data collection, fieldwork and additional data enhancement costs. (Collingwood et al., 2010: 95)

The majority of the funding for the LSYPE was provided by the DfE, however, as ‘the cohort aged, they moved out of DfE target policies into those of BIS and DWP, who became co-funders’ (Collingwood et al., 2010: 95). The problem here was that due to different ministries’ insufficient information on the aims of the LSYPE and that the first cohort was ‘too narrowly defined at the outset’, other departments were less interested to get involved in the funding of LSYPE (Collingwood et al., 2010: 96). As the history of the YCS and LSYPE show, research projects touching on many different policy issues can be of interest for many departments. However, managing the different data-needs and the funding agreements can be problematic. As the ministerial researcher interview suggests,

I might just be mean, but have got lots of different policy areas that we then shared with the Department of Health; we’re also interested in kids’ health. So there is no incentive for them to pay something and we have to do it anyway. So we kind of shoot ourselves in the foot with that. And obviously if it’s a longitudinal study, if you are investing into it up-front, is everything fairly set what’s going to be asked, when? (Research institute 6, EN)

The other major financial issue with this research was the funding cuts due to austerity measures in 2008. The LSYPE was set up to continue from 2004 for 10 years. The DfE was supposed to finance and manage the first seven waves, until ‘the kids have grown up and it’s kind of beyond DfE’s remit, we’d hand it over to the ESRC to take over management (...) with lots of different departments’ contributing to the finances (Research institute 6, EN). The Economic and Social Research Council (ESRC) was supposed to carry out one more data collection in the 10th year; however,

(...) at that point recession hit and funding [was cut], there is a pressure on funding (...). But as it stands, 7 will be the last wave of interviews. Chances are due to funding what we’ll do is, if it goes ahead, it will be funded purely through data linkage, so no more interviews with the kids (...). (Research institute 6, EN)

Beyond terminating the study early, another problem through the funding cut was that in wave 7 the face-to-face element of the mixed-method fieldwork process had to stop,

(...) because we ran out of cash. Which was really frustrating, because we couldn’t interview more young people. You don’t count anymore – really horrendous to tell that to someone. (Research institute 6, EN)

As the ministerial researcher interview and the review of the LSYPE suggests, there are plans to start a new cohort of LSYPE (Collingwood et al., 2010). However, at the time of the interview for this research the plans are not clear yet due to questions around securing the necessary funding,

It's also subject to funding at the moment as you would imagine. (...) we have annual analytical planning round, so the idea being if we do manage to get some funding it would start next year, 2013. On the size of the funding depends the actual design of the study. Whether it would be very similar to LSYPE, whether it would be very similar to YCS or whether it would be something totally different? (Research institute 6, EN)

Launching these sorts of cohort studies irregularly leads to smaller or wider gaps in the data as it is visible in relation to the YCS cohorts as well. (See Appendix 23 for the YCS sweeps and cohorts). The policy making process is primarily about 'now and the next 2-3 years'. Longitudinal data brings the main benefits after a longer period and thus financing and setting up projects has a 'kind of tension of a lot of great stuff we can give you – in several years' time' (Research institute 6, EN).

8.2.2.2 *Post-secondary level – further and higher education*

As mentioned earlier, at the further education level there are two different data collections referred to as 'destinations' data. The first is the information collected by the colleges themselves. This is presumably a part of the information system for colleges, the Individual Learner Record that 'gives the destinations, it's an institutional based information, it shows whether they passed or failed their qualification' (Expert interview 4, EN).

Due to there being less drivers and compulsion for the colleges to collect data compared with the HESA DLHE requirements at HE level, there is much smaller emphasis on gathering this information. The other research on destinations from FE also mentioned in a ministry interview was undertaken by GfK NOP on behalf of the Skills Funding Agency (Ivins, 2012).

The further education ministerial interview suggests that they are looking into combining national registries like taxation, pension datasets to acquire destinations and labour market outcomes data for the colleges; this exercise is financed by the ministry. At the time of the interview for this research the ministry attempted to connect administrative datasets to check the feasibility of gaining destinations data. However, the success of this exercise is not known at the time of the interview for this research (Ministry 5, EN).

At higher education level there seems to be some disagreement on who should be funding the DLHE. At the moment the institutions are responsible for the data collection, including conducting the fieldwork and compiling their institutional data file. HESA's role is to validate these data files and compile the national dataset and a report on the national level outcomes once a year. Although there are two data collections every year for the graduates of different terms – winter graduation and summer graduation – the report pulls the two graduation times together.

The disagreement between the policy and the institutional level stems from the government claiming that finances for the DLHE are provided through the amounts universities receive from the different funding councils. As a university interview suggests, the government could collect their own data through combining datasets for instance, however, 'they are very aware of the cost of that exercise and prefer to leave it with us [universities]' (University 4, EN). This university interview described the government's reasoning behind making universities pay for the costs of the DLHE and the main reason for disputing it,

They [the government] actually say that the exercise costs which are significant for us each year, for the university, is part of our grant from HEFCE [Higher Education Funding Council for England], we're already paid to do it, now that's a nonsense, I mean it's never been costed as a cost within the university bill. (University 4, EN)

After HESA compiles the national data file and the report, it sells those as products to universities, other stakeholders and the press – the destinations data feature in university league tables as well. As for the institutional level spending on the DLHE, the HESA interview suggests,

One of our major customers is the institutions themselves. Probably less so now that they have the HEIDI [Higher Education Information Database for Institutions] system which gives them quite a lot of information. (Research institute 7, EN)

A wide range of other actors use the DLHE data: 'academic research, the press, the university league tables of course which are all produced by the press, commercial companies, anybody, really' (Research institute 7, EN). Whereas for example the YCS or the LSYPE data are available free of charge to researchers, for the DLHE data users have to pay '(...) because we have to recoup the cost of our time to prepare datasets for people' (Research institute 7, EN).

The DLHE longitudinal research is financed centrally by the funding councils (Research institute 7, EN). The main reason for this setup is the research design and the methodology being based on a sample of graduates,

Partly the argument was because for some institutions the numbers are so tiny for the long DLHE; it's not fair to ask all the institutions to gear up. So all we asked the institutions to do is to supply to IFF [IFF Research Ltd.] the most up-to-date contact detail they've got for the sample of graduates in the sample. (Research institute 7, EN)

Due to DLHE longitudinal being based on a relatively small sample, it is not possible to produce institutional level graduates' accounts. However, the graduates' information is more complete for the postgraduate research students, 'because the research councils pay extra into the pot so that we actually do a census for PhD graduates' (Research institute 7, EN).

8.3 Institutional background and funding schemes of the Finnish SLGIS

In the case of Finland the national level school leavers' and graduates' information system provides data on every leaver and graduate, and their school, university and workplace career. As this information is collected through combining different data-registers, there is limited amount of information on the actual outcomes. This was the main reason for the university sector to start their separate data collections regarding graduation. In this section the two main types of data collections conducted by

Statistics Finland and the universities are detailed in terms of their institutional background and their financial scheme.

8.3.1 Institutional background

Statistics Finland (SF) is one of the major organisations to collect, store and process data on Finnish education as well as employment. The start of student flow data based on registers that contain the school leavers' and graduate' outcomes as well, date back to 1980s according to the interview at Statistics Finland,

I think it was 1985, when there was an experiment (...). And I think it was based partly on registers and partly on survey data. Then the result was that it is possible to do statistics based on registers completely. (Research institute 10, FI)

Statistics Finland has a division that deals with educational statistics, they provide the Ministry of Education and Culture with information sets for the policy-making and monitoring context. The Ministry has a yearly agreement on what should be provided in the educational statistics, like 'the student data, degree data, student flow statistics, employment statistics, comprehensive school statistics, statistics on all education sectors' (Research institute 10, FI).

This data collection model involves Statistics Finland combining several registers from educational statistics to labour market information on a yearly basis and providing the dataset to the government and to the individual institutions. This information, however, only gives details about the school leaver or the graduate being employed and earnings, no further details about the employment outcomes or the labour market situation.

The higher education institutions gain their graduate data from the information system described above. However, to close the data gap of more detailed and sophisticated information on their graduates they initiate further research.

First, the so called 'graduate career follow-up' is discussed. This survey is carried out nationally by almost all universities; it was initiated by the guidance organisation Aarresaari Network. This research collects data from former students five years after graduating from university – note that at the moment this survey does not cover the polytechnics or universities of applied sciences. The career follow-up research was started by a number of universities in the beginning of the 2000s to acquire more detailed information on how careers unfold. Under the umbrella of the Aarresaari Network universities carry out the fieldwork. They pay the University of Tampere to input the data and combine it into an institutional and a national dataset. Historically, similar graduate career follow-ups were conducted by different labour unions, social partners, thus creating a diverse picture of the different graduates' path. When the

Aarresaari Network launched their research in the beginning of the 2000, the social partners began to contribute to guidance network's data collection and purchase the data from them for their own reports (Expert interview 6, FI).

The second type of data collection project covers immediate outcomes from the higher education system, either conducted as an 'exit-poll' or as a 'first-destinations' survey. One part of the university sector collects information from their graduates at the point of graduation and this information collection usually forms a part of their wider student-satisfaction survey system. This system is currently under development, and the university interviewed for this research would prefer if their approach to graduates' information would become the national standard (University 6, FI). Beyond this, there are a number of institutions – universities as well as polytechnics or universities of applied sciences – that conduct a first-destinations survey with their former students a year after graduation. This survey is carried out through the Aarresaari Network and the data are processed by the University of Tampere for some of the institutions. The statistics experts at Tampere input and check the data, and compile the institutional and comparative datasets. Note that this research does not cover all institutions, therefore the data cannot be analysed at the national level. According to an UAS interview they use the expertise of Tampere,

(...) some [other institutions] do it themselves, but we decided that one is easier for us. We are so much bigger and there is so much of the data. And

they have done it for us every year, so... It seems that we have a system already. They know what reports to do and so it's easier. And of course we get the data to ourselves and we can... for example [Name] has been doing some extra analysing of the data then. Besides that we get these reports. We can also use them of course ourselves then. (University 8, FI)

When comparing the career follow-up to the first-destinations data collection, and how these two research programmes supplement each other, a research interview suggests,

We find that when you ask things after 5 years of graduation, you get a better look on career path and so, but the feedback from studies are often not so relevant after 5 years. That's the reason we do also survey to those Master's degree holders after 1 year. (Research institute 12, FI)

The main reasons for conducting one or the other type of immediate labour market outcomes research is discussed further in the section on data-needs.

8.3.2 Funding scheme

The research programmes at the different educational levels and sectors have diverse funding schemes in Finland. Whereas the secondary level the research

programme are entirely policy-led and financed, at the tertiary level institutions finance their voluntary surveys fully. This sub-section takes a look at the different types of research providers, as opposed to describing them along the educational levels as for the previous two case study countries.

8.3.2.1 Secondary and tertiary level, Statistics Finland

Statistics Finland is a public authority funded 'from the national budget, income from the agency's charged activities, and with funding received from other government authorities and the EU' (STATISTICS FINLAND, 2011g). The main aim of using data registers and combining them to acquire student flow and employment outcomes information is to save tax payers' money. The more the already existing registers are utilised, the less the data collection costs at the national level. As the Statistics Finland interview suggests,

[After] we get certain data from the schools, or we can talk about providers of education, they can be municipalities for example. Then we can combine other data to this data which we have collected. So we don't have to collect all the data, this is of course a matter of expenditure, because it always costs to collect data. Our policies also add that there must be a very good reason to collect data. Because it's work [for] everybody, for the schools and for us. We try to use existing data as much as possible. (Research institute 10, FI)

There are no actual figures available about the spending on the educational statistics. However, a good example of how the combination of registry data saves vast amounts of tax payers' money is shown in relation to the Finnish census. The census data are combined annually through using different national registers. According to a description of the administrative datasets and especially the census, the savings are enormous,

In 2003 money terms the 1980 population census cost 35 million euros, the latest census in 2000 cost less than one million euros. (STATISTICS FINLAND, 2004: 26)

The regular meetings between the ministry and Statistics Finland concern the financing scheme of the information systems and what work has to be delivered in a certain year (Research institute 10, FI). The funding allows Statistics Finland to compile the statistics at the national level and provide that to the Ministry. If the Ministry has further questions in relation to the education statistics, there are two main ways to provide them with information,

[Either] they want some additional tables or some additional data. We try to serve them as much as possible, but of course if it's causing very much work, then we have to charge a fee. It happens that they find out that they want

some extra information which is not covered at the moment in the annual agreement. So it's very typical. (Research institute 10, FI)

One of the 'charged activities' of Statistics Finland (2011g) is selling SLGIS data to schools and universities for a relatively small contribution: 'that is a package that the university [and school] buys once a year, is about 100 euros (University 7, FI). This 'basic package' details the employment of their recent school leavers' or graduates'. According to the interviewee(s) working in Statistics Finland institutions get access to four subsequent years of outcomes of each previous graduate cohort.

8.3.2.2 *Tertiary level, Aarresaari Network*

The additional research projects conducted within the tertiary sector related to graduation are all financed by the institutions themselves. The 'exit-poll' type of survey is conducted and thus financed by the universities themselves. The two research projects carried out by the guidance network are different in this regard, as along the institutions the guidance network contributes with a general sum towards the data collection as well,

(...) the Aarresaari Network pays a bit and then the universities are paying a bit too. But the amount of fees has been few hundred euros anyway. So

whether a university pays let's say 600 euros, it's nothing compared to hire a person for 2 weeks... (Research institute 11, FI)

However, 'universities get the funding from the Ministry of Education and Culture [so] the main funding is, you could say, taxpayer's money' (Research institute 12, FI). For the 'destinations' research and the 'follow-up' research the institutions themselves pay the University of Tampere for their dataset and their additional modules of the questionnaire.

The reports are mainly provided in Power Points as the funding is not sufficient to deliver national or institutional level reports. However, the Ministry in some years finances detailed research reports especially on the 'follow-up' research data on doctoral education. These research reports are mainly written by experts who are working within the career guidance network and have been involved with the Aarresaari Network for a longer time. As one of the university interviews suggests on the financing scheme of the research,

We all, universities, pay that survey ourselves, but three times the Ministry of Education has paid a great survey [publication] from the results. Twice it has paid this sort of results, two times from this PhD surveys and once from this Master's survey [showing the publication]. (University 6, FI)

As some of the labour unions used to conduct similar research before, to reduce the respondent burden it was agreed that they would be using the Aarresaari Network data (Expert interview 6, FI),

So there was in a way agreed that the Aarresaari Network will send the questionnaires and the labour unions will pay something for the Aarresaari Network to get the data and to produce the kind of information they need.
(University 7, FI)

8.4 Summary and comparison of the cases – institutional background and financial schemes

As the summarising section of the previous chapter suggested (Section 7.4), the Dutch and the Finnish SLGIS provide a comprehensive picture about school leaving and graduation, whereas the English SLGIS has a limited capacity to do so. This structure is reflected in the funding schemes and the institutional set up as well. Whereas in the case of the Netherlands and Finland it is practically one research organisation providing the national level school leavers' and graduates' picture, in England different organisations are responsible for the data collection in different contexts.

A possible explanation for this could relate to the different models of government. In the case of the Netherlands and Finland the SLGIS are conducted by one organisation accountable to central government, suggesting the importance of central planning. In England the secondary level SLGIS are similarly initiated and conducted by the policy level, however, at the further and higher education the government only instructs how the data should be collected. It is the institutions themselves who have to comply with the data collection requirements. This latter suggests the application of a decentralised planning system.

In the case of the Netherlands and Finland the funding scheme allows a national level picture of all levels and sectors so that the outcomes of the different levels and sectors are comparable. In the case of England the institutional setup and funding scheme enables detailed data collections within the educational sectors without allowing comparisons between them. This seems to be partly due to the organisation of government: the compulsory education is strictly divorced from further and higher education at the policy level. Along this two separate ministries employ diverging approaches to school leavers' and graduates' information systems and how and what they finance in this respect.

However, the picture is more complicated for both the Netherlands and Finland as well. The Dutch SLGIS started with institutionally funded separate projects that were drawn together into a national picture. Then both the secondary and higher education

levels have acquired two different funding schemes administered by different research organisations. As more and more secondary level institutions 'opted out' from the ROA research, the approach had to be changed. Currently it is financed solely by the ministry as opposed to former institutional involvement and it is built to provide a national level picture only. Another major change in the Netherlands is the diversification of research providers, due to emerging data-needs and driving forces to gain data on labour market outcomes: a market of school leavers' and graduates' research can be observed in the Netherlands. According to the interview with the research organisation DUO-O,

And it [who they do research for and what the topic is] really changes every year, when we are trying to get a feeling for what the market wants. What themes are 'hot' as to say? (Research institute 5, NL)

Although in Finland there is high quality and robust national level data on all school leavers' and graduates' through combining data-registers, the HE sector deemed this approach insufficient for their purposes and started their own data collection on university and UAS/polytechnics graduates.

The original financial constraints and organisational setup of the SLGIS explain some of the initial differences in the data collections. The alterations over time in how they are funded and who conducts them suggest that there could be changes regarding

the data-needs the SLGIS aim to satisfy and that underpin these information systems. Chapter Ten provides some explanation and further details about whose data-needs the three national SLGIS aim to meet. Before this, the methodological details of the different SLGIS are provided in Chapter Nine.

CHAPTER NINE

HOW ARE THE DATA COLLECTED?

– THREE APPROACHES TO SLGIS

This chapter provides a discussion of how the three national school leavers' and graduates' information systems collect data and a comparison of the methodologies used within these SLGIS. As the sampling section (Section 5.3.1) for this research suggested, the case study countries were chosen to maximise variation with the lowest number of cases from a typology based on the SLGIS research design and population covered. Therefore the cases described here represent three distinct approaches to collecting SLGIS data. The Netherlands exemplifies information systems that collect data cross-sectionally from a sample of the population; England illustrates longitudinal approaches based on a sample; and Finland represents longitudinal census type SLGIS. The case study descriptions in this chapter provide a discussion of the three national systems along a number of methodological aspects. This chapter describes the research design, the data collection methods, the space and time frame of the SLGIS, the sampling of the information systems and how the information is disseminated.

As described in the previous two chapters introducing the national SLGIS cases and their institutional and financial background, the picture is more complex than suggested in the initial typologies created at the start of this research. Although the

particular research programme that the sampling typology was based on play an important role, in each case study country further SLGIS are in place. This chapter therefore provides a discussion of more information systems than initially anticipated, 'filling in' the research design and population typology with further examples of SLGIS.

This chapter has two summarising sections. One covers the above mentioned list of methodological aspects and draws comparisons between the cases (Section 9.4); the other section provides documentary analysis of the research instruments of the national SLGIS (Section 9.5).

9.1 *Methodology of the Dutch SLGIS*

This section details the research design and the methods of the school leavers' and graduates' information system that exists in the Netherlands along with the sampling of the different projects, and the geographical and time frame of the research.

9.1.1 Research design of the Dutch SLGIS

The Dutch SLGIS builds on cross-sectional accounts at the secondary and post-compulsory levels of the educational system combined into a national level description of leaving education. The idea of starting a longitudinal panel of school leavers' or graduates' at the national level 'comes once in a while [up in] the

discussion (...) but generally speaking they also die again, because so far not many financing institutions have jumped on that train' (Research institute 1, NL). A couple of WOs follow their graduates for a longer time period, thus accumulating vast amounts of longitudinal or repeated cross-sectional data. However, according to an interview, they do not seem to use this data extensively (Research institute 1, NL).

The on-going collection of cross-sectional accounts of school leaving and graduation allows comparison over time and thus analysing the change in transitions experienced by the subsequent cohorts. This design makes it possible to describe and analyse the experiences of former students' from a retrospective viewpoint. Due to using some of the same survey questions at the different levels of secondary and tertiary education, the research design also allows for comparison across the educational system. The cross-sectional design does not, however, allow causal claims or the analysis of individual's biographies (de Vaus, 2001).

9.1.2 Methods and data collection of the Dutch SLGIS

The SLGIS in the Netherlands is based on sample surveys at all levels of the educational system. The questionnaires can either emphasize the subsequent educational experiences or the employment situation, in accordance with the status of the respondent. The surveys are conducted using either mixed-mode data collection or web-only surveys.

Regarding the research instruments, the surveys for the different educational levels and sectors are similar, as comparison across the system is an important aim. According to ROA this is one of the major advantages of the system,

(...) there is a part of the questionnaire, a core part of the questionnaire, which is precisely identical for all the different questionnaires. (...) So that you can compare higher vocational education, secondary vocational education, measured at the same period, measured the same group in the sense how long that they are in the labour market and measured precisely by the same questions. That gives you tremendous possibilities to compare it. (Research institute 1, NL)

This possibility exists since the questionnaires were harmonised in 1996, before that comparability across the education system was less feasible. This principle was perceived to be in danger when VSNU and the universities decided to make changes to the WO-Monitor as there were plans to change the focus and the content of the research completely. Finally due to the advantages of comparing over time and across the educational system, the change was not that significant. As VSNU suggests,

There was much debate about the questionnaire that we have to change it completely. And then ROA said: please don't! Because if you do, we cannot

make our monitor on student drop-outs. We backed out on that, you know. I think 80-90% is still the same as the ROA [questionnaire]. I think the ROA used to be even longer than it is now. We skipped a lot of questions.
(Research institute 3, NL)

The procedure of data collection defers between educational levels due to the available population and contact information, and the funding structure of the SLGIS. At the secondary and post-secondary vocational level (VWO, HAVO, VMBO and MBO) the sample and thus the contact details are gained from the national registry of students. Due to data protection issues, it is only the organisation DUO who is allowed to contact the former students on behalf of ROA. Only physical address details are available, the former students are contacted through postal questionnaires with a link to the online version and a further reminder sent by DUO (Research institute 2, NL).

Regarding the reliability of the SLGIS at the secondary level, the sampling process and the available contact information makes the researchers have some doubts about the process. The interview with DESAN highlighted the problem,

I have my doubts about sampling, I have my doubts about the quality of the data – not that... The data as such do not have enough quality, but it's more like... I think sometimes throughout lacking those that you would like to

include, more of the people who do not respond to just a paper questionnaire. But we don't have the means to follow-up, because we don't have the information. (...) we can draw another sample (...) but it doesn't help, because we get the same kind of response. But it's a matter of money: choosing between optimal quality and/or not doing it at all. (Research institute 2, NL)

The interview at ROA suggests that they have checked reliability and validity. Although these concerns exist, with the constraints of available funding and the way the sample has to be drawn, the quality is good enough to give a national level picture at the secondary school level,

So far in any non-response research we have done we have found in particularly the major reason for not participating is that they just forgot it, they didn't have time, we didn't really find shocking figures that there is a particular group that doesn't respond. I would say that my idea would be that our figures are perhaps – if you look at the labour market – they are slightly more positive than the reality is, considering that certain [groups], particularly the unemployed who might be of a little bit [low?]. So what I would argue is that they are valid, they are robust, but much more, the validity is highest if you look over time. The trends which you see are very valid. If you look at individual years and if you look at very small study fields, then it becomes less robust. (Research institute 1, NL)

At tertiary level the mode of data collection is mixed as well, with combining postal and online questionnaires, and telephone interviewing. For both the HBO and WO-level the aim primarily is to capture an institutional level picture, therefore in principle all graduates are asked in the survey.

The HBO-level graduate survey has been conducted by ROA for more than twenty years. ROA and DESAN have said they ‘experimented’ with the mode of data collection over the years. The usual procedure in the early years of the survey was of course using postal questionnaires. That was later complemented with online methods. ROA and DESAN tried web-only methods as well, but as the response rates fell, they decided to use both offline and online data collection modes again (Research institute 2, NL).

The process of collecting the data is described as ‘chasing’ the HBO graduates to fill in the survey through many reminders,

It’s quite a [long process] ... email, email reminder; letter for everybody who didn’t respond or for whom we didn’t have a valid email address; letter plus paper questionnaire, to the parental address if we have that, otherwise to the initial address; letter again as a kind of last resort; and start calling for those

institutes where we didn't reach the target and then finally to boost the response a little bit send out an email to those who agreed to participate. So it's seven stages. (Research institute 2, NL)

The reliability and validity of the data at the HBO-level is said to be '100% reliable' due to aiming to ask the whole population and the long process of reaching a higher response rate (Research institute 2, NL).

At the academic university level the procedure used to be the same as the HBO-level when ROA conducted the survey. One of the crucial changes in the process of data collection in the current IVA-VSNU approach is using online questionnaires only. The other important change after 2007 is applying questionnaire modules – a core, compulsory part that is the same for everyone and an optional, institutional section compiled by the universities themselves. The data collection mode can be mixed as well depending on the contact information held by the university, sending either emails or postal letters with a domain link to the questionnaire (Research institute 5, NL).

The IVA-VSNU approach aims to adapt to different institutional data-needs. Whereas the 'basic package' contains the initial contact-email and two reminders after two and four weeks into fieldwork respectively, universities can chose to opt for additional procedures to drive up response rates. Some universities commission IVA to send a

third reminder or send both postal and electronic reminders; others conduct telephone interviews with their former students before the end of the data collection period (Research institute 5, NL). The reliability of the data collection according to VSNU is good, as 'even though you have 25% of your population, on what we looked at, a few variables, like ethnicity, age, gender, background before coming to the university, the survey does match the whole population' (Research institute 3, NL).

IVA does not apply any weighing procedure; they provide the universities with the raw data. To avoid making claims that cannot be backed up with the data, VSNU suggests the universities to be careful with the WO-Monitor data and making it clear that 'it's a view on part of the group; when you get that in mind, you don't burn your hands with those explanations' (Research institute 3, NL).

9.1.3 'Space' and 'Time' frame of the Dutch SLGIS

Although the SLGIS in the Netherlands have started as regional follow-ups, currently they capture school leavers' and graduates' path in the whole country. ROA does not provide regional level analysis in their regular reports, but there are examples of one-off studies examining this level. Regional authorities are offered to purchase their own analysis, however, according to ROA this rarely happens.

The HBOs gain the data on their own institution and their different study programmes from ROA, and they get the overall national outcomes and outcomes of similar study

programmes for comparison. The IVA-VSNU data on WOs are provided at the level of universities and at the level of study programmes. Due to there being 14 universities in the Netherlands, they do not provide regional breakdown of the data. WOs gain all the core-module data from other institutions as well.

Regarding the time frame of the SLGIS, in principle all the cross-sectional studies are conducted 1.5 years after the school leaver or the graduate has left education. In reality it is on average 1.5 years, the former students are interviewed between 1 and 2 years after school leaving or graduation. The ROA interview explains the decision taken twenty years ago regarding the timing of the research as follows,

The reason for that [1.5 years] is that if you want to know something about the transition from school to the labour market, or school to further education, you have to give the people a little bit [of] time to make that transition. And we know from a lot of research that the first half-year to a year is a period of searching and finding and leaving and finding, etc. (Research institute 1, NL)

ROA conducts surveys closer to graduation occasionally; especially when there is some 'actuality' they want to measure. For instance, recently they carried out a survey with MBO students half a year after leaving because they 'wanted to know if the [policy] initiatives which they took at school to keep people at school worked or

not. And then you can't wait 1.5 years (...), [because] the actuality has gone (Research institute 1, NL).

9.1.4 Sampling frame and response rate of the Dutch SLGIS

The sampling frame of the different surveys varies along whether they provide a national level picture or they give institutional accounts in addition. For the three secondary (VMBO, HAVO, VWO) schools and the senior vocational education school (MBO) a national sample is drawn through the national registry office for student finances, DUO (Research institute 1, NL; Research institute 2, NL). For the tertiary levels HBO and WO the sampling frame is a 'census' of all students who graduated in the observed academic year. The limitation here is whether the address of the former student is valid and this problem emerges both in terms of online and offline survey methods.

The response rate, the sample size and the sample and population ratio for the Dutch SLGIS programmes for years 2007-2011 are shown in Appendix 19. For the secondary levels a sample of around or below 10% used to be drawn. In the recent years this is only true for the VMBO-level, the HAVO and VWO-levels have a 5% sample/population ratio. For the MBO-level, the sample size varies between a fifth and a third of the leavers' population in this period. For the tertiary level the sample size is around 90%; in this period ROA only conducted the survey for 2007. 2008 being a transition year between ROA and IVA there was no national WO survey

conducted, only a partial survey by ROA covering fewer universities. The ROA and DESAN interviews found it problematic that VSNU did not initiate a survey to capture the graduates of 2008: that was the cohort probably most affected by the economic crisis (Research institute 1, NL, Research institute 2, NL).

According to VSNU, ROA claims that they have problems using the IVA-VSNU data for their national school leavers' monitor due to some changes to the questionnaire and that the response rate is low. In fact, the last year ROA conducted the survey was 2007, when the response rate for HBOs was 38% in total, for WO it was 40%. The first year (2009) IVA carried out the survey, the total response rate was 28% for the WOs, the second time in 2011 it was 24.7% (ROA, 2010, ROA, 2012, ROA, 2008, IVA, 2009, IVA, 2011). Table 9-1 shows that although the WO and the HBO monitors are built on similar approaches regarding the methodology, in the most recent year the difference between the response rates is considerable.

Table 9-1: Response rates for the last three WO Monitors and HBO Monitors

	2007	2009	2011
ROA – HBO	38%	37%	40%
ROA – WO	40%	-	-
IVA – WO	-	28%	24.7%

(ROA, 2010, ROA, 2012, ROA, 2008, IVA, 2009, IVA, 2011)

9.1.5 Reporting of the Dutch SLGIS

The format of the Dutch SLGIS data provided to different stakeholders has changed over time as well. Whereas in the early years one report covered the national level, and institutions received their results separately, due to new technologies the data are currently provided online for the institutions along with the national report.

The school leavers' and graduates' information is published in a report covering the whole educational system. The structure of this report developed by ROA is similar over the last 10-15 years,

(...) the first chapters are always on the most recent survey. Then after you get 2 to 3 chapters which cover a particular thing more in-depth. And you have a statistical book with a lot of tables. (Research institute 1, NL)

At the HBO-level, the data are presented in the recently developed online system. Using this, institutions can benchmark themselves to others having similar study programmes. As DESAN explained it, in previous years HBOs would get their own data in static formats, thus it was not possible to 'play around with the variables' (Research institute 2, NL). As this new system is used in 2011 first, the HBO-interview mentions plenty of separate reports they receive from ROA for their study programmes, not the online system.

The format of reporting the data was mentioned in the VSNU interview as a catalyst for change from ROA to IVA. According to them the separate reports in earlier years were of little use and universities wanted to have their own data to analyse the results themselves,

[Universities] did hardly anything with the result of this study. So they wanted the data, ROA also wrote almost an essay on certain topics and universities had no influence on this essay. (...) Do we have to pay for this? The board members were quite focused on cutting down on expenses and they wanted to have more influence on the report. They didn't even want a report, they want the results. (Research institute 3, NL)

Therefore when VSNU and the universities decided to tender, one of the key points of the agreement was that there would be no research reports written on the data collected. IVA therefore only provides the universities with the data file of the core module of the questionnaire on every university and a separate data file containing their additional modules. They also compile a word-file with the most important results in crosstabs at the level of study areas. IVA also provides help to several universities that do not have the expertise to make use of the data. This approach might change in the future, as VSNU seems to be willing to discuss the possibility of IVA's involvement in some national level analysis.

9.2 Methodology of the English SLGIS

This section details the methodology of the English SLGIS along a) the research design, b) the details of the data collections, c) the time frame and geographical coverage of the information systems, d) the sampling of the SLGIS and e) how the results are reported for the different data collections. Each sub-section deals first with the differences between the YCS and the LSYPE; then the national Learner Destinations data collection and the college level destinations data are described; finally, the HESA DLHE and DLHE longitudinal data collections are detailed.

9.2.1 Research design of the English SLGIS

The sampling section for this research placed England into the category of longitudinal designs based on samples of young people due to only considering the YCS and the LSYPE. However, the data collection in the second phase of this research revealed a more complex picture. Table 9-2 shows in what category the different data collections are currently in terms of research design and sampling. It also points out the main concerns about the SLGIS as well as the future plans to change their methodology.

Table 9-2: Research design and Sampling of the English SLGIS

Research design / Sampling	Cross-sectional (repeated)	Longitudinal
Sample survey	FE, Learner Destinations College destinations data (is DLHE a census?) ↓ (DLHE 'longitudinal' is a follow-up)	(ENGLAND within the typology) LSYPE & YCS (terminated; new cohort?) ← - - - - - DLHE longitudinal
Census	DLHE	<div> <div>(FE data in future)</div> <div>-----></div> <div>((FE data in future))</div> </div> <div> <div>(HE data in future)</div> <div>-----></div> <div>((HE data in future))</div> </div>

The data collections that deal with learning and labour market outcomes after compulsory education are the YCS and the LSYPE. Both being terminated in 2010, there is currently no data on the age group leaving compulsory education. At the time of the interview for this research there are plans within the DfE to have a second LSYPE cohort.

The current national data collection on further education can be categorised as a cross-sectional account based on a sample survey. The future plans of combining different datasets to acquire leavers' information would change the design of the data collection: that would mean acquiring census-based data cross-sectionally. According to the ministerial plans for further education, they aim to link data from the last 7 years on outcomes: 1 or 2 years after finishing the FE course on the one hand, and linking the results longitudinally on the other (Ministry 5, EN). The institutional data collections on leavers from colleges can be categorised as cross-sectional sample surveys. In this case the sample is most often a convenience sample, questioning the validity of the data.

The HESA DLHE data are considered a census of all graduates by the majority of the interviewees. The response rate is indeed high, as the requirement for the universities is to reach 80% of home undergraduate full-time graduates. However, there is a substantial proportion from whom no data are gathered. The longitudinal DLHE is not an actual 'longitudinal' study. It is a follow-up cross-sectional sample survey of a selected cohort of those who answered to the DLHE 3 years earlier, thus 3.5 years after they graduated. However misleading the name of this research project is, this is how the majority of the interviewees refer to it. The reasons behind this study date back to the change from the First Destinations Survey (FDS) to the DLHE in the beginning of the 2000s when the appropriateness of the timing of the DLHE was debated. The solution of HESA was to set up a two-stage research design,

We introduced the 'early' DLHE and we started to develop a longitudinal to complement it really. And it is complementary, it is only a sample survey, it doesn't produce any institutional level data (...). But it provides us with more context about career patterns, so if this is what you were doing at 6 months, this is how you're likely to move on, this is how particular subjects develop over time. (Research institute 7, EN)

Regarding the future plans within HE, the ministerial interview suggests that they are looking into combining administrative datasets as well,

(...) there are quite big discussions going on about this at the moment, about linking up information from the tax system, from the unemployment benefit system, so you know about the labour market status of people, with the student administrative record, student loan information as well (...). I suppose ultimately the best one would be if you could link up tax and employment records with school and university information. (Ministry 4, EN)

9.2.2 Methods and data collection of the English SLGIS

This section details how the SLGIS collect data within the different types of systems. The YCS is based on a survey, using questionnaires sent to a panel of young people. The YCS is built on 13 subsequent cohorts from 1985 and a new cohort is started every 2-3 years. The cohorts from 1 to cohort 7 use only postal surveying. From cohort 8 the postal survey is supplemented with phone surveying (cohorts 8-13), computer assisted phone surveying (cohorts 9 and 11-12), providing web-based questionnaires (cohorts 11-12) and emailing the young person (cohort 13). In cohort 13 face-to-face interviewing is applied as well (ESDS, 1993b, ESDS, 1993c, ESDS, 1993a, ESDS, 1993d, ESDS, 1996b, ESDS, 1996a, ESDS, 1996c, ESDS, 1999a, ESDS, 1999b, ESDS, 2003, ESDS, 2006, ESDS, 2008a, ESDS, 2008c). The LSYPE is a panel survey of one cohort. In the first four waves of LSYPE the young person and their parents are interviewed face-to-face. In the remaining three waves only the young person is interviewed and the data are collected through web-based questionnaires, telephone interviews and face-to-face approach.

The national level Learner Destination data at FE level is joined up from different datasets, for instance the Individual Student Record, National Pupil Database, HESA records on learners, to gather information about continuation at different educational levels (Ivins, 2012). All other information is obtained through telephone interviewing the former students. The destinations information held by the colleges is most often collected through distributing questionnaires at graduation, updating the details of internal continuation and also trying to track down the missing leavers more informally,

A lot of students have very good relationships with their tutors and quite regularly they will pop in perhaps in August and say, I've got a job at so and so. It's anecdotal as such, but a lot of data comes in that way as well. (College 2, EN)

Regarding the research methods within higher education, HESA sets guidelines for the DLHE data collection process. It provides the questionnaires to the universities and it validates the data after collection. The predecessor of DLHE, the FDS was, however, a 'lot less structured and organised'. The FDS depended on the individual institutions and how they captured the data along with HESA's specifications (Research institute 6, EN). According to University 3 the changes after the latest

revision of DLHE will make the process easier, as the methods of data collection, their timing and sequence can be decided by the institution,

(...) we can do whatever we want, whichever method we want, so from April forwards it's most likely that we'll spend about a month sending out reminder emails to do the survey, and then we'll do the telephone survey and just do the postal survey to those who don't respond. (University 3, EN)

9.2.3 'Space' and 'Time' frame of the English SLGIS

This sub-section describes first the geographical and then the timing differences between the English data collections. There are substantial differences amongst the English datasets analysed in this research in terms of their geographical coverage. Whereas the LSYPE draws only on an English sample, its predecessor, the YCS had England and Wales in the sample for the first 12 cohorts, but not the 13th cohort (ESDS, 1993b, ESDS, 1993c, ESDS, 1993a, ESDS, 1993d, ESDS, 1996b, ESDS, 1996a, ESDS, 1996c, ESDS, 1999a, ESDS, 1999b, ESDS, 2003, ESDS, 2006, ESDS, 2008a, ESDS, 2008c). Within further education, the data collected by colleges stays with the institutions and they are not connected into national level datasets. The Learners Destinations survey provides a picture of English college leavers.

The DLHE data and the DLHE longitudinal datasets collect information from the whole of the UK, England, Northern-Ireland, Scotland and Wales as well. HESA was

established as an organisation for all higher education statistics in the beginning of the 1990s. Although the home countries devolved at the end of the 1990s, HESA's role has not changed, as it was 'argued at the time that there were some things, sub functions of higher education which means that it is a UK wide sector' (Research institute 7, EN).

The DLHE presents data on the full-time undergraduates who are UK-domiciled. For a few years data are collected on EU students, and through the recent changes of the DLHE, international graduates will be tracked as well.

In relation to the timing of the SLGIS there are a number of issues to consider. For instance how often a new cohort is launched, how many times a cohort is queried, how old the former students are or how long after leaving or graduation the research collects data from them.

The different cohorts and sweeps of the YCS and how the last, 13th cohort connected with the LSYPE cohort are shown in Appendix 23. The YCS sampled school leavers after compulsory schooling and contacted respondents at least once (Cohort 7), but usually three or four times. Therefore the age group covered ranged in the early years of the survey from 16 to 18 and later on from 16 to 19. Two cohorts were contacted later in their twenties as well. There is no consistency in how often a new sample was started and how many times a cohort was followed up. One

plausible explanation for this is the volatility of research funding, as the example of the LSYPE showed as well,

It's a pity we can't take that grid [Appendix 23] and show ministers, look at the [data] gap! (Research institute 6, EN)

The LSYPE was planned to cover a decade of one cohort's life. The youngsters were aged between 13 and 14 when the sample was issued in 2004. The research was planned to follow these young people for 10 years but the survey was terminated after the seventh sweep, when the youngsters were aged 19 (Baker et al., 2012).

The FE Learner Destinations gathers information on leavers from colleges; it is not connected to any particular age group. This survey was conducted three times so far, starting in the academic year 2007/2008 asking students a year after they left college (Ivins, 2012). The ministerial interview within the further education sector suggests that a longer perspective on 'leaving' would be important to see the 'gains' of FE,

Rather than sticking with 1 year, when quite a lot of FE learners don't see much gain, because the (...) nature of the beast, (...) people gaining skills that go on to put them into stronger positions, it may take 1 or 2 years to further their employment status. (Ministry 5, EN)

The further education leavers' information available for most of the FE colleges is their own data collection on their leavers. This data collection is usually presented separately for the 16-18 leavers, and for the 19+ or adult leavers.

The DLHE collects information annually approximately half a year after graduation from HE and the survey is conducted twice a year. The census dates of DLHE for the winter and summer graduations in the academic year 2007/2008 were 14th of April 2008 and 12th of January 2009 respectively (HESA, 2007). The predecessors of the DLHE can be traced back to the 1960s at some universities, however, HESA started to collect destinations information nationally in the academic year 1994/1995 (Research institute 7, EN). The survey before the DLHE, the First Destinations Survey (FDS) covered the years between 1994/1995 to 2002/2003. In relation to the timing of the DLHE, interviewees who claim that it is a good dataset about the initial destinations of graduates say that the 6 months data point makes it possible to gather information from an exceptionally high proportion of graduates, thus allowing analysis at the institutional, and even programme level. Keeping the data collection point at 6 months makes it possible to compare initial outcomes over time as well, as the current DLHE dates back to 2002/2003, and FDS also used the 6 months' time-point dating back to 1994/1995 (Research institute 7, EN). Furthermore, according to an expert interview, the longitudinal DLHE data suggests that the DLHE after 6 months is a good predictor of longer term outcomes,

[The DLHE longitudinal data] was giving more evidence that the 6 months data survey isn't actually that bad in terms of future predictors. Obviously it overestimates graduate unemployment, most graduates get jobs. (...) But the very broad trends, graduates are going into this area, or the economy was good for this cohort – the broad trends actually pretty much hold. (Expert interview 3, EN)

Interviews with career guidance professionals from universities suggest that they oppose the 6 months' time-point. As summarised,

It's a trade-off, really: 6 months is long enough for people to have gone and got a job and still the contact details held by the institution are good enough to get into contact with these people, but 6 months isn't long enough for them to have necessarily got the job that recognises the job that they were capable of getting following the qualification that they've got... (University 3, EN)

Through the revision process of DLHE the sector of career guidance experts have argued for a 12 months data collection according to one of the interviews (University 4, EN). The DLHE longitudinal is set 3 years after the first DLHE contact; therefore it collects data from graduates 3.5 years after they left their first degree course. This,

however, is deemed to be a period too long in one of the university interviews (University 5, EN).

9.2.4 Sampling frame and response rate of the English SLGIS

The previous sections already pointed out some of the main questions around sampling in the English SLGIS. Here the target and achieved response rates are discussed for the English school leavers' and graduates' information system.

The YCS is based on samples of young people finishing compulsory education and follows up the same youngsters one, two or three times. The first cohorts of the surveys are representative of attainment, through which the low attainers who tend to drop out from surveys in a higher proportion are underrepresented in the subsequent sweeps; therefore the next cohorts over-sample low attainers (Howieson and Croxford, 2008). The sample sizes in the first few surveys are unknown; the latest six are listed in Appendix 24. Before Cohort 13 the initial issued sample sizes are around 25,000, this more recently is reduced to 10,000 (ESDS, 2008d, Howieson and Croxford, 2008). The last cohort of the YCS started in 2006 is used along with the sample of the LSYPE the two cohorts being the same age to produce analysis on a larger dataset (Baker et al., 2012).

The Longitudinal Study of Young People in England is based on a multi-stage stratified random sample (ESDS, 2012a). Schools are the primary, individual

students are the secondary stage of the sampling process. At both stages 'probability proportional to size (PPS) sampling procedure with disproportionate stratification' is used, in the first stage deprived schools, in the second stage pupils from ethnic groups are over-sampled (DfE, 2011: 6). Furthermore, at wave four the LSYPE had 'an ethnic minority boost' to balance the sampling problems at the start of the cohort,

(...) we found that the schools in the typical high density urban areas were the ones who didn't want to take part or just didn't respond. Which meant that we lost a lot of the ethnic minorities, so yeah, we had to boost, which was a bit of a shame, because it really screws your data. But that at wave four... it wasn't many of them at the end, it was only about 300 [young people]. (Research institute 6, EN)

The LSYPE sample is drawn from pupils in Year 9 'attending maintained schools, independent schools and pupil referral units' in England in February 2004 (DfE, 2011: 6). Appendix 25 shows the final number of households contacted in the different waves (ESDS, 2012a). The LSYPE cohort has a high response rate throughout the different waves,

(...) year and year we had a really-really successful response rates, it was round about 90%. (...) There were lots of different mechanisms that we put in

place to make sure that we got that high of a response rate. But we just had a very nice cohort to be honest. (Research institute 6, EN)

One of the measures to enhance response rates is that the first four waves are completed through face-to-face interviewing and only the last three waves are conducted through mixed-mode data collection. TNS-BMRB, the organiser of the fieldwork lists a few more reasons why the response rates could be relatively high throughout the seven sweeps of the project,

Probably interviewing parents at a household helped, so we weren't just interviewing one person. And (...) the parents were a good place to start and trace the young person. Maybe the young person had gone to university but the parent could pass on details to them. We offered an incentive, a [?] voucher. (...) The amount (...) for the early waves (...) was 5 pound (...) and later it went up to 8 pounds. [Furthermore] for all the face-to-face waves we would try to interview with the same interviewer where it was possible. (Research institute 8, EN)

The quality of the further education data collection on college leavers' conducted by the colleges themselves shows substantial differences across the sector. According to an expert interview within further education, colleges aim to collect information from those 40% to 70% who finished their course (Expert interview 4, EN).

Regarding the Learner Destinations survey, the leavers who continue on another course are well covered, but 'the employment bit is where the problems are' (Ministry 5, EN). The learners who are in other educational types are matched up using different datasets. As Appendix 26 shows, the completed ratio of interviews is 12.9% of all in-scope learners, and this accounts for the 55.2% of the known or eligible sample of the further education learners for this study in 2012 (Ivins, 2012: 47). Although this study has been conducted four times so far for the further education sector (2009, 2011, 2012 and 2013), the first two technical reports are not possible to find, they are not linked to the Skills Funding Agency's website. The fourth data collection is in progress at the time of the datacollection for this research (SFA, 2012, SFA, 2013)

One of the colleges interviewed for this research provides separate destinations information for the 16-18 age group and the adult leavers. In College 1 the 'unknown category' accounted for 10% in the 16-18 learner destinations and 4% in the adult destinations. For College 2 there are no actual figures of response rates available. The main problems with gaining information are summarised as follows,

It's very difficult with FE to get a complete picture; they're not like HE you see. As much as we try to contact them, the response is poor. But I think one of the

things that we've got as an advantage to us that a lot of students come back [to do other study programmes] (...). (College 2, EN)

In relation to the HESA DLHE, the target response rate for full-time UK-domiciled undergraduates is as high as 80%. It is 70% for part-timers, 50% for EU-students, and 80% for research council funded post-graduate students (HESA, 2007). The 80% response target for full-time home-students graduating from an undergraduate degree makes it possible to analyse the data at the institutional, departmental and to some extent the programme level. The 80% response rate 'allows us to produce subject adjusted institutional figures, anything less than that, you can't [make such inferences]' (Research institute 7, EN). All the interviewees agreed that the 80% response rate that is achieved by the majority of the institutions is exceptionally high for a survey. According to one of the university interviews, this takes a lot of effort and resources,

The effort put into that process [reaching the 80% response rate] is immense. It takes 5 months to capture that information down to the last telephone call made by student phoners in February. (University 4, EN)

The crucial problem encountered in the process of reaching graduates is the lack of good quality contact information,

Students, as they graduate, do not update their contact information. So we start out with corrupt and faulty information. We phone numbers that are dead, we send letters to postal addresses where they're not known or they've moved on, we are increasingly not allowed to capture data from third parties, so before you could have parents telling you – now you're not supposed to accept that, it should come from the graduate. (University 4, EN)

There was no analysis about the non-response group yet, however, according to the HESA interview,

I suspect that there well might be some residual response bias. Although interestingly different people will give you different reasons why it might be biased into two directions. Some people will say that the people who got good jobs and are doing all sorts of stuff, they are just too busy to fill it in and then there are the other people who say it's the people who haven't, who don't want to tell you that they actually haven't got a job that won't fill it in. (Research institute 7, EN)

As the HESA interview suggests, for the last 10 years due to low response rates there has been no data collected from international students, but following the recent

technology change there will be renewed attempts to gain information from them (Research institute 7, EN). According to the ministerial interview from the higher education sector the pilot on international students concludes that it is feasible to conduct the research: 'we've found certain proportion of students who're still in the UK, about 25%; the majority moved back to, well moved out of the UK, generally to their home countries' (Ministry 4, EN).

The response rate targets, however, do not seem to be scientifically grounded. For example setting the target response rate at 50% for the EU students is set along the following thought-process: 'we'll probably won't do quite as well as you would with the UK, so let's set it at 50% and see how we get on' (Research institute 7, EN).

The difference in the coverage of the college and the university level institutional destinations measures can be explained by the obligations stemming from the funding bodies. Whereas institutions in the higher education sector are required to collect data with high target response rates so the data collection can be thought of as census data, the further education sector does not have that sort of demand.

9.2.5 Reporting of the English SLGIS

The format of reporting the data at the different levels and sectors is diverse as well. The YCS and the LSYPE are available as research reports as well as datasets if ordered from the DfE. The FE destinations data collected by the colleges features in

their institutional documentation. The national survey data on colleges is made available through the FE Choices website. The national DLHE analysis and the data are available for a fee. Individual HE institutions have different approaches to whether they provide their data on their website or not. This latter approach changes due to the introduction of the Key Information Sets (KIS) that have to be published on each university's website, including the institutional DLHE outcomes.

9.3 Methodology of the Finnish SLGIS

This section details the research design, the research methods and the sampling structures of the different Finnish information systems, along with the timing and the geographical frames of the SLGIS.

9.3.1 Research design of the Finnish SLGIS

The data collected and combined into the national school leavers' and graduates' information system by Statistics Finland is based on a longitudinal design. The two main information sets produced are the 'Transition from school to further education and work' and the 'Employment of students'. Both provide information from a cross-sectional viewpoint on former students' and graduates' employment one year after leaving (Statistics Finland, 2012a, Statistics Finland, 2012b). Although the data are presented yearly from a cross-sectional viewpoint on the website, institutions and policy makers have data of the different cohorts from a longitudinal aspect as well (Research institute 10, FI). As these student flow statistics are described,

Statistics usually provide cross-sectional information on a variable at a given point in time, such as population number or the number of people in gainful employment; on this basis we can see to what extent these figures have changed. (...) Changes can be monitored by linking unit data from consecutive years. (STATISTICS FINLAND, 2004: 53)

(...) data for one and the same individual are chained together from consecutive years with a view to following statistical units over time. An example of typical flow statistics is the placement statistics describing transition from education to working life. (STATISTICS FINLAND, 2004: 20)

This design of statistical data allows causal claims on the outcomes of school leavers' and graduates'. Moreover, this design allows comparing from several different aspects, a) within cohorts of leavers certain time after leaving; b) between cohorts and their outcomes at a given time-point and over time; and c) to make comparisons of educational levels and sectors for each year and over time.

Whereas the Aarresaari Network's career follow-up and the first-destinations surveys provide a retrospective view on the individual's career a certain time after leaving, the exit-poll collects retrospective data on the perception of the quality of education and

some prospective information about the future plans after graduation. The cross-sectional view on the different cohorts makes it possible to compare the changes of outcomes over time, but does not permit causal claims on how change happens or the individual biographies.

9.3.2 Methods and data collection of the Finnish SLGIS

The Statistics Finland student flow data on educational transitions is the compilation of registry data collected by different national organisations. The individual ID numbers make it possible to combine several different datasets to acquire information on the further education and labour market outcomes. The main datasets combined to gain employment data are the population data, the job-seekers register, the business register and the register on education and degrees (STATISTICS FINLAND, 2012e). According to a manuscript from Statistics Finland,

(...) employment statistics are produced by using administrative register data. Data are produced by combining data from circa 40 data register[s] (e.g. from Population Register Centre, taxation data, data from National Pensions Institute). (STATISTICS FINLAND, 2012e: 44)

The data are updated regularly with adding or removing those entering or leaving the target population (STATISTICS FINLAND, 2004: 12). Statistics Finland then chooses

a time-point based on which the data are combined. In case of the transition data this is generally one year after school leaving or graduation.

The Aarresaari Network's career follow-up and the first-destinations survey are built on survey methods. The questionnaires in both surveys are sent through post to the former student by the university itself. The respondent can choose whether they answer the paper questionnaire or they fill it in online. All respondents are sent one reminder letter. The questionnaire has at least 80% of the same questions for all universities, beyond that institutions can add specialised questionnaire modules. The data are collected by the universities, and the University of Tampere is responsible for the coding and cleaning the dataset and they are in charge of the national reports as well.

The university interviewed conducting an exit-poll instead of the first-destinations research has started their data collection only recently. The exit-poll is a part of the wider data collection scheme on students' satisfaction data,

[The university students] do this survey after year 1, year 2, year 3 and then year 5, and year 5 is kind of the exit-poll when we include also the career questions. But this is really now a new thing and it is being developed. We are using a part of these old questions and until now it hasn't been mandatory to

answer but now we will try to get it somehow more mandatory, so that the [response] rates would be higher. (University 6, FI)

The questionnaire referred to is most probably the first-destinations survey as it was conducted by this institution for a number of years beforehand.

All three voluntary survey programmes are using the graduates' ID number to gain contact information from the national population register. This also means that the institutions can combine the former students' background information and their education history to the career outcomes after graduation.

9.3.3 'Space' and 'Time' frame of the Finnish SLGIS

The Statistics Finland data contains information on virtually every school leaver and graduate. Therefore the SLGIS provides data on all institutions and it can be broken down to regional and municipality level as well. Taking the timing into account, these data are collected yearly after leaving or graduation. Due to the nature of combining registers the data point could be any: it would be possible to follow the different cohorts throughout their careers and see their outcomes at different ages. These datasets give information on the whole of the educational system, and all former students and graduates are covered regardless of age as the basis of the data collection is the fact of leaving the given institution.

The voluntary graduate surveys are diverse in terms of the geographical area and the time frame they cover. The Aarresaari Network's career follow-up provides information on the national and perhaps the regional level. In principle all the academic universities participate, therefore it is possible to compare the results across the university system. The career follow-up is conducted separately and with different time frames for the Master's and PhD leavers. A difference is that whereas the Master's graduates are asked 5 years after they left the institution, the doctoral graduates are queried 2-3 years later. As the doctoral graduates are small in number, the research conducted biannually asks two subsequent cohorts. A researcher-interview revealed the history of this research,

[The start] That must have been 2004. Yes, that was 2004. So the first ones who answered graduated 1999. So we did that maybe 4 or 5 years in a row, and then it was decided, that it was sufficient to do it every second year.
(Research institute 11, FI)

According to a manuscript of researcher(s) involved in setting up the career follow-up survey, the first national research was conducted in 2005. Since then some of the universities have carried out the research annually, but the majority are conducting it biannually asking the Master's-students in rotation with PhD-students. However,

there are limitations regarding comparability due to the 'hop on-hop off' nature of the research project,

(...) let's say there are 5 universities who do it every year, and there is another 5-6 universities who do it every second year. And there might be other 2 or 3 universities who do it irregularly, just to collect the data and then publish the results and then maybe wait another 4-5 years to do it again. It's easy 'hop on-hop off' thing to do, you have the basic questions already waiting for the survey to be done and you just decide at your university whether you will do it or not. (Research institute 11, FI)

The exit-poll and the first-destinations survey are not conducted by all tertiary level institutions, thus it is not possible to compare outcomes at the national level, nor between all institutions. According to this university of applied sciences interview,

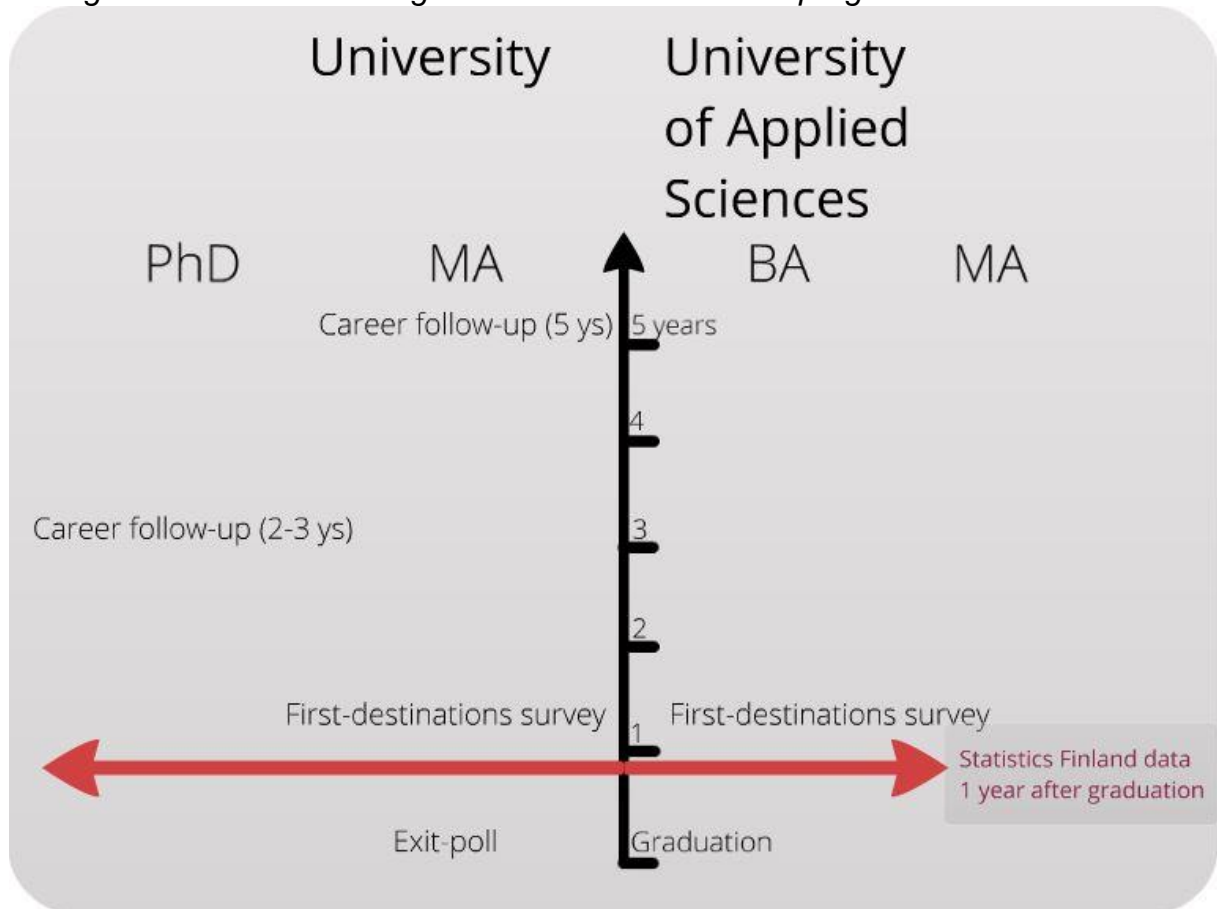
And we've been also thinking about for example the University of Applied Sciences in [name of city] that they participated in it, maybe we could ask them if we could use their information and they could get ours and we could make more... We would like to use [...?] and [name of city 2], but they are not participating. The ones that aren't in this one, they do their own. (University 8, FI)

Whereas universities conducting the exit-poll ask students at the time of graduation, the first-destinations survey gathers data approximately a year after graduation. The exit-polls are conducted at the time when the former student is about to leave the institution and it seems to be a fairly new piece of research. The first-destinations survey has been conducted for a number of years in some of the universities and this is a yearly data collection. As a researcher interview suggests,

We started our survey in year 2002 and we did it for the students who have graduated a year before. We were sending them a questionnaire in the April of the following year that they have graduated, so that's approximately from 4 to 15 months after they have graduated. (Research institute 11, FI)

As the universities of applied sciences are usually educating students to the Bachelor's level, the data they gain from the Aarresaari Network's first-destinations survey is on their BA graduates. Although the adaptation of the Bologna process transformed the Finnish educational system into a two-cycle system, the majority of the students at universities still study for a Master's level. As Figure 9-1 shows, both the Statistics Finland and the Aarresaari Network's data collection have different timeframes for the universities and the universities of applied sciences.

Figure 9-1: Timeline of higher education information programmes in Finland



9.3.4 Sampling frame and response rate of the Finnish SLGIS

The Statistics Finland student-flow statistics on the labour market outcomes gather information on everyone having studied and/or working in Finland. The ratio of school leavers' or graduates' who are not in the statistics is 1-2% according to the interview at Statistics Finland. The missing information usually derives from not having the ID numbers for the record,

Very often they are foreign people, because very often they don't have the Finnish identity numbers or they get it later. (Research institute 10, FI)

The voluntary information systems are aimed at all graduates of a given cohort. The career follow-up research is conducted every second year sampling Master's students and the next year asking PhD students, two cohorts of whom are sampled together. The first-destinations data collection samples graduates every year. The contact data and updated mailing addresses for the career follow-up and the first-destinations survey are acquired from the registry office by the universities using the ID numbers of their former students (University 8, FI). Through sending the questionnaire to all former students of the university the response rate achieved is around 50%,

[For the first-destinations survey it was] About 55%; first it has been 75%. (...) But it varies quite a lot in [study] fields. (...) Now we are talking about this career follow-up. The response rate was quite high, also nearly 70%, the record was 70-something. 65-70% was... now it has reduced a bit, I would say it's 52-50-something. (University 7, FI)

There is little information about the response rates of the exit-poll type of survey. According to one of the universities interviewed, the research has started recently and this is why the response rates are low, not specified further (University 6, FI).

9.3.5 Reporting of the Finnish SLGIS

Whereas the Statistics Finland information at the national level is available online, the institutional information has to be purchased by all parties. The Aarresaari Network data are available as raw data and the University of Tampere provides short analysis of the basic results for all institutions. In a number of years the government has financed research reports based on the career follow-up data.

9.4 Summary and comparison of the cases – three methodological frameworks of the SLGIS

The three previous sections review the methodologies of the SLGIS in the case study countries and provide an overview of the complex nature of the research conducted within the area of school leaving and graduation. All three SLGIS have undergone some change moving away from homogeneity and diversifying their SLGIS in the recent decade. The drivers behind this in terms of the diverging and changing data-needs are analysed in Chapter Ten.

Both the Dutch school leavers' surveys and the Finnish registry-data systems started as comprehensive, overarching information systems and in both countries there has been change either within these (as in the Dutch case), or adding further information systems to them (as in the Finnish case). The English information systems are a diverse palette of different data collections at the time of this research. The two main

trends in England are conducting various longitudinal studies with a broader aim to uncover young people's life after leaving compulsory school, and gathering data cross-sectionally from all young people leaving a specific type of institution. The following sub-sections compare the main methodological aspects of the three national SLGIS.

9.4.1 How is the SLGIS conducted? – Comparison between cases

This sub-section summarises the information gathered in relation to the research design, the data collection methods and the sampling of the different information systems. Table 9-3 provides a categorisation of all the SLGIS analysed in this research. Note that Table 9-3 is based on the same dimensions as Table 5-5 in Sub-section 5.3.1, on which sampling for the second phase of this research is built. The original sampling for this project only took three of these separate data collections as its basis to cover both dimensions of Table 9-3. Table 9-3 has more entries for the three case study countries than Table 5-5 as more SLGIS became known throughout this research. Due to uncovering more data collections in all three national settings, all the categories of the table could be 'filled in'.

Table 9-3: Research design and population

Design and population	Cross-sectional design (regular)	Longitudinal design
Sample survey	Netherlands: the whole SLS England: FE Learner Destinations Finland: Aarresaari Network	England: YCS and LSYPE England: DLHE 'longitudinal'
'Census'	United Kingdom: DLHE England: college destinations data	Finland: Statistics Finland data

Both the Netherlands and Finland have comprehensive SLGIS covering all levels of the education system. However, in the case of Finland the data collection built on a longitudinal census of all school leavers' and graduates' is complemented by several smaller cross-sectional sample surveys at the tertiary level. These comprehensive data collections provide an overall picture of the Dutch and the Finnish educational systems, but as recent change in both of these cases indicates, there could be data-needs that are not met through them. In the English case all the different educational levels and sectors have their own separate data collections with distinct methodologies, thus there are limited possibilities to draw a picture of the whole educational system using these sorts of data collections. It is currently only the LSYPE survey that gives an overall picture of England's school leavers. This also means, however, that the other information systems could be built around the data-needs of the sector they deal with. The data-needs regarding school leaving and graduation of the different educational levels are discussed in Chapter Ten.

The sample sizes of the different national approaches differ substantially depending on the level of education and data collection method. In the Finnish case for instance, the combination of registry data allows for a census of virtually all school leavers' and graduates' both at secondary and tertiary level. In contrast, the secondary level information available for the Netherlands and England are based on smaller national samples of school leavers. At the tertiary level the English graduate 'census' reaches high numbers of UK domiciled undergraduate students due to the 80% target response rate, whereas the Finnish Aarresaari Network's response rates range between 50-70% of the target-population. Within both of these countries the respondents suggest that 'their' response rate is needed to make claims about the institutional and the programme level. According to a Finnish university interview, response rates for the Aarresaari Network's research programmes 'should be more than 50% in order to be reliable' (University 7, FI). These reflections are interesting considering that both of the Dutch tertiary-level information systems reach less than half of the target population – at HBO-level the response rate is around 40%, at WO-level it is between 25-30%.

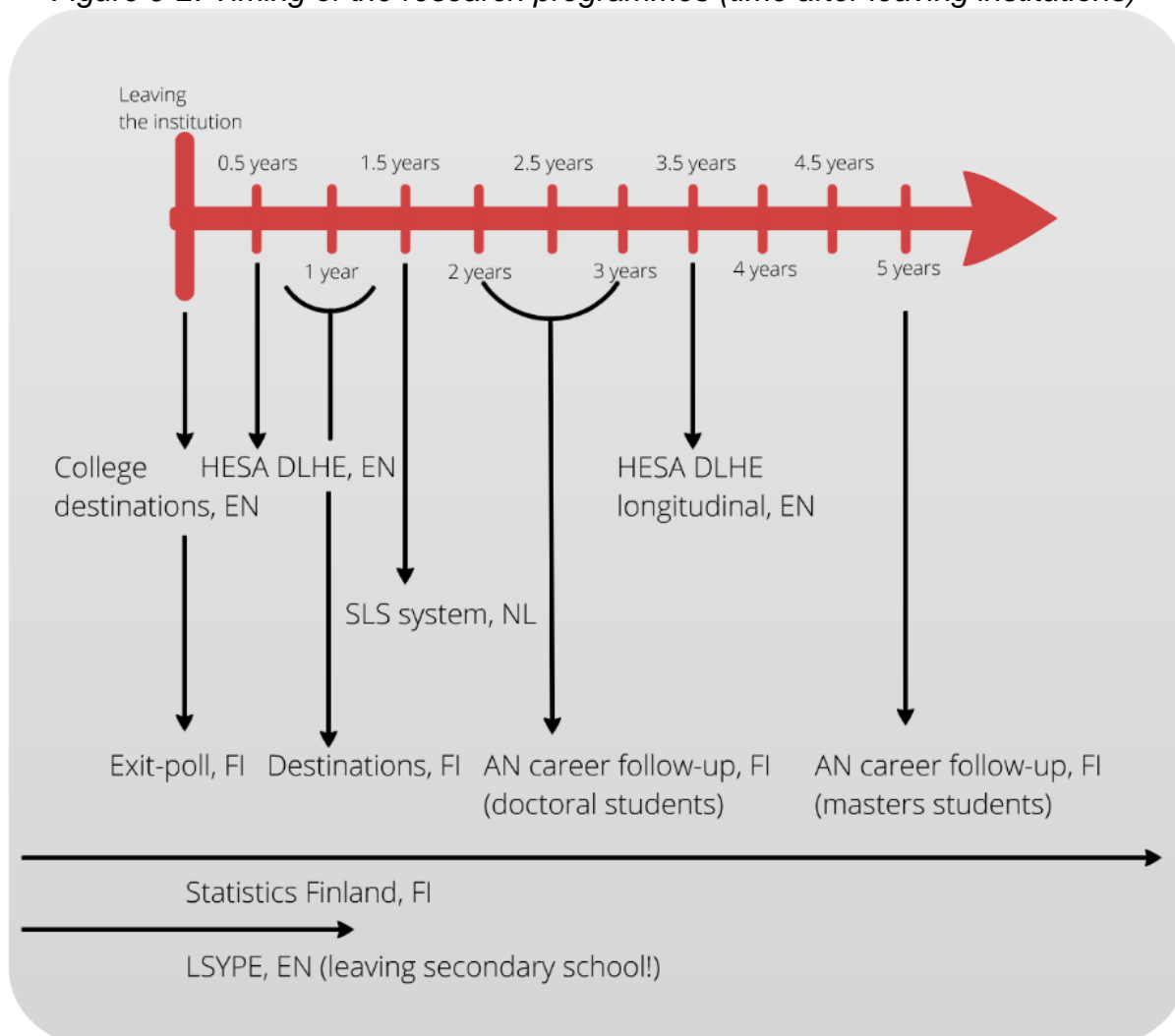
9.4.2 'Space' and 'time' of the research – reflections on the three SLGIS

Regarding the 'space' covered in the SLGIS, the Netherlands and England resemble each other having only a national picture for their secondary institutional level, and having national, regional and institutional level information for their tertiary level. In the case of Finland, national, regional and institutional data are available through

Statistics Finland for secondary and tertiary education and the voluntary datasets provide national and institutional figures of higher education.

Summarising the different interviewees' reflections on the time-frame of their SLGIS provides a good outline of how time relates to the purpose of the SLGIS. Figure 9-2 summarises how long after leaving the respondents are contacted in the different national SLGIS. Figure 9-2 does not make a difference between the levels of the educational system.

Figure 9-2: Timing of the research programmes (time after leaving institutions)



Whereas in the English case the different data systems of the separate institutional sectors operate with a shorter time-frame, and they take time points around the first few years after leaving or graduation, the Finnish SLGIS at the tertiary level take a wider range of time-points beyond having the Statistics Finland longitudinal data. In the Netherlands all the information systems have the very same timing to enhance comparability across the educational system. A researcher interview from the Netherlands explained their choice of 1.5 years with wanting to capture former

students in more stable positions either in their subsequent educational institution or at the labour market,

(...) generally, internationally it seems 1.5 years is normal and it's the period where you can say for instance that all the people who started with 1 year contract, their contract has expired. So they are in a more stable water in the labour market. Also if you go to further education after 1.5 years, you have at least the first year finished or not. If you do it a half year after graduation [or] leaving, the problem is that might be very interesting sometimes, just to get a vast idea of how they did first. But you're getting into trouble for instance with higher education, people after they have finished education perhaps they also go for 3 months travelling and things like that or they have a very temporary job. If you want to know if the education fits at least to a rather stable job, I think you have to wait at least one year. (Research institute 1, NL)

SLGIS conducted within a year after the former student has left the institution (0-1 years after leaving) cover more the perceptions the school leaver or graduate has about their schooling or university years. These datasets can give an indication of the initial destinations as well. The research programmes conducted after the first year the individual has left the institution (1-2 years after leaving) are thought to capture a more stable position at the next level of schooling or at the labour market. These SLGIS are geared towards both evaluating former education and giving details about

the former students' labour market position and in most of the cases they provide information about the process of transition. The information systems asking leavers or graduates 3 years after or beyond school leaving or graduation (3+ years after leaving) are setting out to grasp individual careers, detailed information about labour market situations and only general points regarding former education. This suggests that in relation to the SLGIS there seems to be a further category to those employed by van der Velden and Wolbers (2003a), recent graduates and less recent graduates.

9.4.3 The question of dissemination – comparison between cases

The procedures of disseminating research results have changed substantially in all case study countries partly along technical change that opened up new possibilities and also due to changing information needs of the different stakeholders. The general utilisation of paper-based reports seems to have been replaced by online reports more accessible to a wider audience. Most recently, there are two further trends in dissemination. First, research organisations might provide institutions with the actual dataset, either as separate data-files or within their data warehouses. Second, some research organisations or other actors invented interactive reporting tools and formats to present the data.

Data warehousing provides access to historical data but they do not provide up-to-date information due to the nature of the topic and the methodologies of data

collection (Wayman and Stringfield, 2006). Data warehousing also presupposes some level of expertise in understanding and using datasets. However, data warehouses seem to be more democratically available than providing institutions with their school leavers' and graduates' data separately, not integrated with other institutional data.

Both in the Netherlands and in England there are examples of using self-developed software to present the school leavers' and graduates' information, mainly at the institutional level. However, for the Dutch professional higher education sector some level of institutional reporting is still retained beyond using a new interactive tool. Using these types of software seems to overcome the biggest obstacle that providing stakeholders with the actual dataset poses: it gives aid in case of limited expertise to make sense of the data. A university interview in England suggests that they use the newly purchased software in career guidance as well as to inform different departments. They are also keen to disseminate the results of the DLHE to the wider public through the university website. Their software is described as follows,

[It] is a piece of software which was developed by the University of Huddersfield and that has been great, because we've got our trend-data and all of it is a touch of a button openly accessible to all the students and all the staff across the university. (University 5, EN)

The dissemination of data at the institutional level seems to depend on two crucial points: first, the availability of expertise to make sense of the data (whether it is the actual expertise or the availability and time of experts) and second, whether there is a person or a group of people who find it important to share the school leavers' and graduates' information. In several institutions interviewed, the data experts or advocates are providing the different operative sections of the institution with their SLGIS data to enhance utilisation, as in the case of this Finnish university,

And we're thinking about going to these different departments. Because they have their meetings, so we're going to invite ourselves to go there and present some results. Because every time anyone hears about it, they are really interested, it's just the fact that they didn't even know that this information is available. (University 8, FI)

Within the institutional networks data-experts seem to have a crucial role in advocating the SLGIS results. This happens usually through pre-digesting the data to promote it and then provide further aid in using the actual datasets in the data-warehouses, or the self-developed interactive reporting tools, or other dataset formats. At the policy level the data-experts or the researchers provide a variety of dissemination formats in which they turn the 'data' into 'information'. These range from the actual data in simple cross-tabs through short summaries of the overall results with explanatory graphs to detailed analysis of the results of the SLGIS.

Beyond disseminating the data for stakeholders within the policy-making structure or the educational institutions, a further actor to consider is the citizen. How do individuals know about school leaving and graduation and what type of data are provided to them? In this respect, England seems to do the most to inform citizens, especially future students. In England the DLHE data are planned to feature in the Key Information Sets on all university websites, whereas the college data will be available on the FE Choices and the individual colleges' website – both of these tell the institutional level picture. The LSYPE and YCS data are disseminated through multiple policy and research programmes to the wider public.

'Informing choice' became ever more important in England as the current government sees its role in 'providing information', rather than being a 'provider' or 'purchaser' of services (Davies, 2012). As opposed to this, in the Finnish case only national level information is disseminated from the Statistics Finland data. Institutions can use their AN graduates' data for marketing – they tend to do so if it tells a positive picture. The Netherlands is somewhere between these two approaches. There are extensive research reports available about the national level picture of school leaving and graduation through the research institute ROA, and the institutions quite often provide information about their results to the wider public. There have been recent attempts to set up national websites to inform students' choice in the Netherlands using the graduates' data.

9.5 *What topics are covered in the SLGIS questionnaires in the three cases?*

This section details how the different research instruments are divided between the topics they aim to cover. This analysis provides different type of information on the scope of the SLGIS. For the purposes of this section all the questionnaires of the different SLGIS are coded along a number of broader topics and then along more specific subjects. The number of different codes is then added up thus creating an account of the most important topics covered by the questionnaires. This section aims to complement the information provided in the previous sections on SLGIS methodology, pinpointing what the questionnaires actually gather data about. Are they more concerned with the school or university education respondents received recently or are they more about labour market situations? Furthermore, this section details the extent to which the questionnaires cover any other topic beyond the education experiences and the labour market outcome.

There are a number of limitations in this section. The counting of the actual questions in the research instrument has the error of 'counting twice': here all the questions are coded regardless of whether they are to be skipped for certain groups of the respondents. Furthermore, the two data collections that are either based on combining registry-data like the Finnish SF information set, or asking the leavers only about their destinations like the FE destinations data collected by English colleges are problematic to compare to data collections that operate with extensive questionnaires. The questionnaires not included in this analysis are the Dutch

secondary-level questionnaires, as due to the harmonised modules they are similar to the tertiary-level questionnaires. Also, the English FE destinations follow-up is left out as there is no information gained in the case study regarding this research.

The longest one is clearly the LSYPE questionnaire; the last sweep research instrument contains nearly four hundred questions. The last sweep is chosen for this analysis as it contacted the respondents at the age of 19, either in employment, in further studies, or in neither. A second group concerning the length of the questionnaires are the Dutch WO-Monitor and HBO-Monitor research instruments, for both devices the 2011 versions are analysed in this section. Further questionnaires that belong to this second group consisting of 60-80 questions are the DLHE longitudinal research and the English and Welsh Youth Cohort Study. For this latter the last sweep of cohort 11 of the YCS is chosen. This is the last cohort that is administered outside the Department for Education. The questionnaires of cohort 12 are not possible to trace on the ESDS website and cohort 13 is administered together with the LSYPE. A third group of questionnaires is the shorter ones, like the Finnish Aarresaari Network's first destinations and career follow-up questionnaires; for the first the year 2011 year is used, for the latter 2012 asking graduates of 2007. To this group belongs the FE Learners Destinations questionnaire for which year 2010 is used and the DLHE, for which the 2012 questionnaire is analysed here. The least questions and topics concern obviously the data collections that gather information through combining different data registers or ask leavers about their actual destinations only. These are the Finnish Statistics Finland dataset and the English

FE leavers' dataset. (Table 14-15 in Appendix 29 summarises which questionnaires are analysed in this section.)

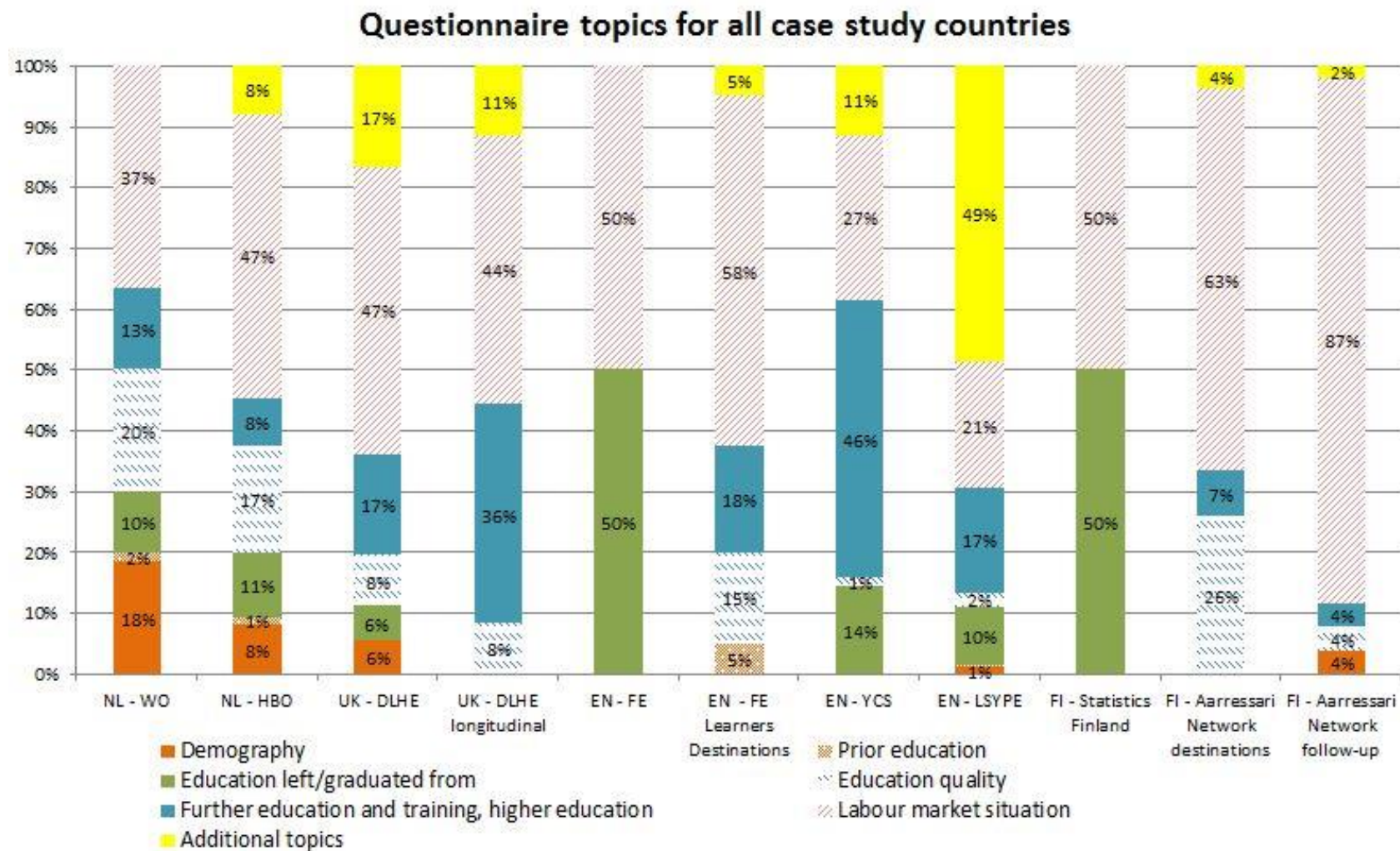
The majority of the questionnaires concern mainly educational or training situation or the current labour market position of the respondent; however, there are slight differences between them in scope. The Dutch surveys for instance deal with the labour market or educational position of the current time and ask few retrospective questions related to training or unemployment since the individual has left school or university. The FE Learners Destinations for England and the DLHE for the UK on the other hand concern a future time-point regarding the situation of the respondent. The FE Learners Destinations asks the respondents about their employment or study status since they have finished the college course. The DLHE asks former university students to consider a near date and whether they will be employed or not. As opposed to this, the DLHE longitudinal concerns a near past date. The Finnish Aarresaari Network's career follow-up takes a longer time-period of five years; it asks the respondents to recall their first job after they graduated and also gathers substantial details about their current position. It also 'bridges' these two instances by gathering some information about the quantity of employment and unemployment the individual experienced in between. The other Finnish questionnaire on the first-destinations is concerned with the labour market position of the graduate as well, but a substantial part of the research instrument deals with the opinion about education and its correspondence to the labour market situation of the graduate. This questionnaire also refers to the future career plans of the graduate. The research

instruments that provide data on the position of the individual have different time-scopes as well. Whereas the UK FE destinations information-set concerns the 'near future', the Statistics Finland data gathers information about the current situation at a given cut-off date.

In terms of the geographical scope of the questionnaires, it is possible to track international as well as national mobility through the majority of these research instruments. Especially the two Dutch questionnaires and the DLHE put an emphasis on the movements of the individual for and after university. Some level of information about mobility is gathered within the Dutch instruments and the English graduates' information system seems to attach higher importance to querying international students. The Finnish questionnaires follow up those students who are internationals and still live in Finland. However, due to the sampling procedure, they do not obtain information on graduates living outside of Finland.

Figure 9-3 shows how the different research instruments compare to each other regarding what topic they cover. Appendix 29 contains the table version of Figure 9-3.

Figure 9-3: Comparing questionnaires regarding their main topic



The majority of the research instruments do not have a specific 'demographics' section. The two Dutch questionnaires have a few questions related to this; the WO-Monitor contains more, the HBO-Monitor less questions on the background of the individual. The WO-Monitor contains some level of parental background information; it asks the respondent about their and their parents' country of origin. The reason for there to be little information collected on the demographics in other questionnaires is that they either sample through the student register and thus they can be connected to the already available information, or they use a stratified sample with given characteristics, or, in the case of the YCS and the LSYPE they follow the same individuals thus not collecting the same information more times. Example for data-matching is the UK DLHE and the UK DLHE longitudinal, where the data obtained is connected up with the degree classifications.

Education prior to the one under scrutiny is a topic only in the Dutch questionnaires concerning the route the individual has taken to the HBO or the WO institution, and in the English FE Learners Destinations regarding what schooling or activity the respondent had prior the college course. However, in theory this is a further piece of information that could be connected to the questionnaire outcomes using student registers or preceding longitudinal data.

Further education and training as a topic is crucial in the English and UK questionnaires, as the DLHE, the DLHE longitudinal, the FE Learners Destinations,

the YCS and the LSYPE. There are a few questions that regard this topic within the Dutch and the Finnish questionnaires as well taking up a maximum of ninth or tenth of the research instrument.

There are two broader topics that concern the educational qualification and experiences of former student. One is about the actual education obtained and the outcomes gained; the other is the quality of that education.

As for the first issue, the two Dutch, the UK YCS and the LSYPE questionnaires contain more questions related to the actual course finished than the other questionnaires analysed here. For the two data collections that provide only basic distributions of employment situations and how it relates to the education obtained, this topic is one of the dimensions of the analysis.

The educational quality as a broader topic has several sub-codes in this analysis. For instance the opinion on the education obtained; skills gained in school and skills required on the job; and whether they would chose the same education again or whether they would suggest it to others. As for the first area, the questionnaires ask whether the graduate is satisfied with their education and typically use Likert-scales to obtain ratings. Another approach is used in the English FE Learners Destinations study, asking the respondent whether the 'learning' at the college made a difference to their employment. The second area relating to skills takes a similar shape in the

four questionnaires that use it; these are the two Dutch research instruments and the two Finnish questionnaires. These types of questions first ask the graduate how important the listed skills are for their current labour market position. Then they ask the former student whether they have obtained or whether they are equipped with these skills. A third way of gaining information about the perceived quality of education is asking the graduate or former student whether they would choose the same course and university again. These questions are crucial in the Dutch questionnaires and also feature in the Aarresaari Network's first destinations data collection and the UK DLHE longitudinal research.

The topic of educational quality is crucial in the two Dutch questionnaires, as well as in the English FE Learners Destinations research and the first destinations Finnish research project. Opinion about the education acquired has a lesser importance in the English questionnaires and the Finnish career follow-up instrument. In the case of the UK DLHE the questionnaire is a short instrument concentrating on 'factual' information and the only three opinion-type questions were added to the questionnaire recently. The two longitudinal studies concern further education and training, and labour market outcomes after school. Presumably they have collected information on the previous educational career in earlier sweeps of the research. The Finnish career follow-up questionnaire concerns the career and the labour market outcomes over time rather than the opinion about education obtained more than five years before.

Unsurprisingly, the actual labour market situation, details about the previous, current and possible future employment take up a substantial part of all questionnaires. This topic seems to be dominant in the two Finnish questionnaires, the first-destinations and the career follow-up; and the English FE Learners Destinations survey. In these two-thirds and five-sixth respectively of the Finnish, and nearly two-thirds of the English research instrument detail former and current job characteristics and plans for the future in this respect. In another group of research programmes, in the two Dutch survey programmes and the two UK DLHEs the questions related to employment take up from a third to less than the half of the instrument. Similarly, the ‘half’ of the questions of the Statistics Finland questions and that of the English FE destinations is coded as labour market outcome. The least questions within this topic are covered by the YCS and the LSYPE, 27% and 20% respectively. These latter research programmes cover a wider range of the young people’s lives, as their title indicates as well.

In terms of the ‘additional’ topics in the questionnaires a crucial one is asking for contact details and permission from the respondent for the purposes of further research as well as for university alumni correspondence. The UK longitudinal questionnaires (YCS and LSYPE) concern issues around the household and health. The LSYPE covers many further topics as well, like details on the gap year, volunteering positions, general attitudes to work, and risk behaviours. These topics take up half of the LSYPE questionnaire.

The English questionnaires contain direct links to educational or labour market policies. For instance the English DLHE queries about newly qualified teachers, the YCS and the LYSPE about what educational and labour market schemes they participate in or whether they had contact with the guidance services and so on.

Although the questionnaires are seemingly quite different in terms of how they approach the notion of school leaving and graduation, there are interesting similarities regarding the topics covered, the ratio of different topics, and the ways of approaching these areas. This discussion also pinpoints the main differences in the scope of the different research programmes: whereas the longitudinal studies conducted concern the young peoples' lives, the cross-sectional research programmes mainly detail the link between education and the labour market.

CHAPTER TEN

WHY ARE DATA COLLECTED?

This chapter analyses the data-needs of the different actors within the three case studies along with how they seem to utilise the SLGIS outcomes. First, the data utilisation of educational policy-making is analysed: what information is needed about school leaving and graduation in the different nation states and what are the processes in which the policy level utilises the information gained? Second, the level of the institutions is analysed: how does their data-need feed into the SLGIS process, what information is essential about school leavers and graduates for them? This section also analyses what procedures the SLGIS feed into at the institutional level. The first two sections are organised along discussing the case studies and then providing a summarising section of the policy and the institutional level data utilisation. In these two sections the summary provides a longer discussion of the commonalities and differences between the case studies than in previous chapters. The third section of this chapter provides a brief discussion of the data-needs of other stakeholders, drawing on all case studies. Section 10.4 provides a discussion of the potential tensions between the data-needs of the different levels and to what extent the available SLGIS satisfy the possibly diverging data-needs.

10.1 The data-needs of the policy level

This section details what the policy level within the different case study countries thinks of their SLGIS and to what extent the outcomes feed into the policy-making process. This section is built on three separate accounts of the case study countries and a longer summary of the similarities in the processes they seemed to apply the data in. The case-descriptions detail the specific characteristics of the utilisation of the SLGIS and what the policy level sees as their main purpose, as well as to what extent they seem to be satisfied with the SLGIS. The summarising section details the processes in which the SLGIS are used and compares these across countries.

10.1.1 Policy level – the Netherlands

The Dutch SLGIS is a comprehensive data collection, accounting for all the separate levels and sectors of the educational system and combining the separate accounts into a national level picture. Beyond the national level view of school leaving and graduation, the Dutch SLGIS used to describe the institutional level as well. Currently the institutional level picture is available only for the two tertiary sectors; the secondary educational institutions do not gain school leavers' information from the national SLGIS.

The SLGIS in the Netherlands have been initiated within the frame of making education more labour market relevant in the 1980s. As ROA understands their role in providing national level information,

They [the ministry and the HBO-Raad] are in particular interested in national results on labour market and on the transition. How well does the education fit to what is required, so do they [get] jobs that are really related to the education, in which fields do they not find jobs? So for them, it's always labour market, transition to it and comparing to with what education has provided in this sense. (Research institute 1, NL)

The three ministerial interviews more or less confirm this description. However, the importance of the national, macro-level picture on school leavers' and graduates' depends on whether the interviewee(s) work in general education or in VET. For the vocational policy sector where from students go into workplaces, the ROA data are perceived important. As an interview pointed out, it is their 'specialised research institute [called ROA] who are following children after they left school' providing a 'general, macro level' picture (Ministry 1, NL). Despite the national survey giving some information about the situation of leavers' in the academic tracks of education as well, this is perceived less important according to the interview conducted at the general secondary level.

The SLGIS outcomes are used in a number of policy processes listed and detailed in the sub-section comparing the case studies (Sub-section 10.1.4). Here some information sets other than SLGIS are outlined to contextualise and compare the

application of the SLGIS data. All three information sets listed here provide some data about institutional quality and are used to judge how well schools are doing. These information sets are thought to be important either accompanying or instead of to the SLGIS. This latter depends on which educational sector or level the ministerial interview covered.

The first such dataset mentioned in all ministerial interviews is the *administrative data based on pupil identification numbers*, through which the ‘complete school career of every student’ can be observed (Ministry 3, NL). Therefore, the VWO and HAVO monitors by ROA for the ministry’s general secondary level are ‘not a very important source of information (...); the identification number is much more important than this information’ (Ministry 2, NL). The identification numbers or registry numbers are gradually introduced to the Dutch educational system since 2004. The main reason for starting to use the identification number is the on-going national policy described as the ‘attack’ on the drop-out rates (Ministry 2, NL). By using this number, the ministry says they know ‘every child rather good’ and that they will have a full picture on the student careers once the application of identification numbers has finished at all institutional levels (Ministry 3, NL).

A second dataset perceived important in the ministerial interview is the *student satisfaction surveys*. According to a ministerial interview these are used in their policy evaluation and they aim to use them in school inspections as well, ‘because when

you want to fund the institutions you have to know what's the difference between institution A and institution B' (Ministry 2, NL). At the time of the interview this biannual monitor is revised as the current 'methodology of research is not quite sufficient to make... to benchmark the institutions' (Ministry 3, NL). The ministerial interview from the HAVO and VWO sectors compared the ministry's student satisfaction survey to the information collected by ROA. It is important to note again that ROA does not provide secondary school level data, let alone the individual cases,

(...) we also can use them [the ROA questions on satisfaction] – we don't really do – we could compare over the years, whether pupils are more pleased with the quality of the schools they had. But we also ask that to pupils directly, who are already in the schools, so not school leavers' surveys (...) and that way we use more for such kind of quality statement about schools. (...) They fill in this [web-based] questionnaire and they fill in the information, the response is not very good but it's much better than the school leaver survey. (Ministry 2, NL)

The third dataset mentioned within the interviews is under planning. The ministry is trying to acquire labour market outcomes information through *combining the education outcomes with the employment figures* at the regional level. At the time of

the fieldwork for this research the data matching process is only at an experimental level. These attempts are related to labour market planning procedures,

(...) what we're trying to do now is making a map of the whole country and then focus into one of the regions and make it clear: how many children are now leaving the vocational education system, what kind of profession are they allowed to do and what is the demand in this region from the employers, and does it fit? Are there too much [sic!] children on certain profession or are too low and can we steer a little bit on that or not? (Ministry 1, NL)

[We] are doing rather good already but can we better? That's why we are trying to make these maps and we don't think we should go so far that we tell child 'you must do that, because that's good for the labour market' – we don't believe in that. Little bit for little bit. (Ministry 1, NL)

This dataset is aimed to accompany the current SLGIS; the new data would provide the 'numbers', the SLGIS gives the context of school leaving and graduation.

Two further topics on which the available SLGIS does not provide sufficient information are why students are choosing certain study programmes and a picture of the individual level school leaving patterns (Ministry 1, NL).

Note that this section is fragmented as there was no interview conducted with Dutch policy makers working at the tertiary educational level.

10.1.2 Policy level – England

This section details the data-needs and possible utilisation of the SLGIS within the three different sectors of policy making: general education, further education and higher education. This is due to the English SLGIS comprising of several diverging data collections. Whereas the secondary education level is covered through multiple longitudinal sample projects, the FE and the HE levels are collected in a cross-sectional manner aiming to reach a census of all former students.

10.1.2.1 General education (England)

First the two main longitudinal sample surveys covering school leaving, the YCS and the LSYPE are detailed along with discussing why the YCS is set up originally and to what extent the LSYPE has a similar scope to it.

The YCS starts in the 1980s with the aim of monitoring initial transitions to inform the policy making process (ESDS, 2008d, Howieson and Croxford, 2008). The YCS aims to 'identify and explain the factors which influence post-16 transitions, for example,

educational attainment, training opportunities, experiences at school' (ESDS, 1993b).

As the researcher interview suggests,

[The YCS aimed] to keep track of [...? young people] for 3-4 years after people have left school as to what happens with them. So we can better understand actually, what were the impacts that we've had upon [their lives with] the policies. (Research institute 6, EN)

There is little information about how the YCS has been used over the years within policy making due to the lack of informants within this area. The YCS is terminated after the 13th cohort. Although it might have been a useful information source from its inception in the 1980s and the 1990s, due to later initial transitions as well as the compulsory school age raising in 2013 to 17 and in 2015 to 18 in England 'it didn't really make sense anymore' (Research institute 6, EN).

The 'successor' of the YCS tradition is the LSYPE, which is said to be more strategic than the YCS and being built on a 'much bigger sample size, [so that] we're covering in terms of the actual content of the survey a lot more' (Research institute 6, EN). Along the last cohort of the YCS, the LSYPE is launched in 2004 (ESDS, 2012a). As the researcher interview suggests, the YCS can be seen as the 'smaller but older brother of LSYPE' (Research institute 6, EN). A further difference between the two

successive research projects regarding the aim is pointed out by the DfE interview as well,

The YCS ones tend to look at the fact bit – what you did and why and how you did it. Whereas LSYPE also [...] the soft side more of the attitudinal study [?].

(Research institute 6, EN)

The LSYPE is said to replace several smaller evaluative research programmes (Research institute 6, EN). As the LSYPE is a longitudinal research project planned well ahead, it is not geared towards any specific policy initiative or evaluating a specific policy. The LSYPE sets out to combine many separate research aims into one project,

[Before the LSYPE] we tended to have a policy, evaluate that policy and so we'd have the whole pot of money and a whole study on evaluating that policy. (...) So actually there was lots of different pots of money being spent on research, when actually we didn't have the overall picture of what was going on. So LSYPE was set up to be a bit more strategic to look across all of them.

(Research institute 6, EN)

That was the real driver behind it [the LSYPE] to actually cut down on the number of cross-sectional studies that we have to do and rather kind of [have] an overall picture that was fairly robust and useful for department and beyond.
(Research institute 6, EN)

Regarding the data-gaps filled, the LSYPE dataset is said to be the only current research project that provides information about the transitioning of young people from compulsory education to further education and the world of work. Additionally, the LSYPE is the only dataset enabling the comparison of private and public school pathways (Collingwood et al., 2010: 114).

Another key feature of the LSYPE is that it provides subtle information of young peoples' life, in a way other available national datasets might not do,

[The LSYPE will] be used to fill gaps. The National Pupil Database has data on every pupil in England, it's got all the qualifications, but it hasn't got any of the softer things, how they found school – we could do analysis how well people do by whether they like school or not at age 13 and things like that.
(Research institute 6, EN)

Both the LSYPE and the YCS provide national level pictures. It is not possible to analyse the data beyond the regional level due to the sampling of these research projects.

10.1.2.2 Further and higher education (England)

Within both the further and the higher educational sector the aim is to gather data close to the leaving or graduation and query former students on their initial destinations. In both sectors there is some level of discontent about this approach especially at the institutional level, but also at the ministerial levels.

There are substantial differences in the approach to data collection between the FE and the HE sectors. Within FE there are a number of initiatives in place and the policy level seems to let these 'thousand flowers bloom'. The ministry is currently trying to gain college leavers' information through administrative data-matching. On the contrary, within the higher education sector the policy level gradually took more control over what data are collected. Initially, the DLHE and its predecessor, the FDS are set up to satisfy the data-needs of career guidance professionals within HE and this data are gradually used for more and more processes at the national policy level.

A commonality of future data-plans within both sectors is the utilisation of more administrative data. One reason to aim for information on virtually every college

leaver and graduate can be linked to the agenda of informing choice. To provide future learners with reliable information on programme level, there has to be information collected about almost everyone who participated formerly. This latter is discussed in the summarising sub-section 10.1.4.

10.1.2.3 Further education level (England)

Here first the currently available English information systems within further education are outlined, and then the plans of the policy level to gain a different type of leavers' data in the future are described. Second, a list of some plausible explanations is provided regarding why there is little comprehensive information available on leavers' of the FE sector.

One set of destinations data available within FE is that of the colleges, where there seems to be no prescribed way of collecting leavers' data. Section 10.2.2 on the institutional data-needs shows two examples of institutional destinations information that are not entirely comparable. The colleges' own destinations data are not mentioned in the ministerial interview. An expert interview from within FE expresses concerns regarding the destinations data from FE,

The ILR [Individual Learner Record] gives the destinations... it's an institutional based information, it shows whether they passed or failed their qualification.

There has been quite a strong push to get better destinations data, but that's actually quite difficult, because quite often when people leave they have left before you know where they've gone, as they didn't say. (Expert interview 4, EN)

According to the ministerial interview the other major dataset, the FE Learner Destinations survey conducted by GfK NOP Social Research on behalf of the Skills Funding Agency is said to have reliable measures on 500 FE providers out of the 1200 in total (Ministry 5, EN). The results are published on the FE choices website as well (Ivins, 2012, SFA, 2012). The main area where the FE Learner Destinations survey seems to be applied in is informing choice. A possible explanation for no further policy processes being mentioned could be that this is a new research project, gathering data since the end of the 2000s.

A further research project, called the FE Learners Longitudinal Survey had two waves and it seemed to be a one-off project in the mid-2000s (Coleman et al., 2006, Coleman et al., 2007). This research is not mentioned by any of the interviewees. It seems to be a similar model to the DLHE longitudinal: following-up a group of college leavers a longer time after they left the institution. This survey is described as follows,

The Further Education (FE) Learners Longitudinal Survey examines the destinations of FE learners over a period of 18-21 months. These findings are

from the Wave 1 survey, in which learners taking an FE course in 2003/4 were interviewed around one year after completing their course. (Coleman et al., 2006: 1)

The ministry is looking into gaining data on the longer term outcomes of FE. Combining administrative data at different stages of the careers would provide information on the 'gains' of this type of education,

It takes a long time before you can identify whether these people have recruited [?] any gain over other people and you can never really have the true counterfactual of a utopian dream, what would have happened if you wouldn't have gone to FE? (Ministry 5, EN)

Regarding the further education sector the data collected on college leavers' is less structured and less widely known and used than the DLHE within HE. There are a number of possible explanations why there is no sector-wide, reliable data within further education. Most of the possible reasons listed here are suggested in the expert interview conducted in the field of FE.

This situation could partly stem from the status of further education: there seems to be an on-going lack of policy interest in the issues of FE beyond the sector (Finegold

and Soskice, 1988). Another reason for the lack of data can lie in the history of policy making within the FE sector. According to the expert(s) working in the sector, the system is partly governed on the basis of anecdotes, rather than on contemporary evidence-base,

We're using data, we're working with the people who themselves use the data. What inevitably happens is that because all this data are collected in ways that aren't necessarily usable, quite often policy makers are making decisions on the basis of anecdotes, rather than on [data]... (Expert interview 4, EN)

The ministerial interview gave a different angle explaining this phenomenon and how the evidence-base builds into sector-wide knowledge,

The thing for FE is I think that it has got a lot of history, there is a lot of knowledge about what does and what doesn't work and a lot of analysis about certain things. So you're building on something, it's not completely green field really. Even when it sounds like it might be. (Ministry 5, EN)

A more specific explanation why there are no sector-wide, institutionally comparable datasets lies in the competition between schools and colleges as the providers of

post-16 education. There seems to be no political will to integrate the different systems, nor their datasets,

The system is divided into a school system, a university system and the college and training system in the middle I guess. And I think what's happened is that there were improvement made in each of those areas but they're often only within [the sector]. So what's happened over the last 10 years is with data in the college and training system that it's become more consistent and high quality within itself. (...) the problem is that each of those systems has their own numbering for students and the way in which transfers happen aren't good enough. (Expert interview 4, EN)

As collecting data also means respondent burden, a further reason for not gathering college leavers' information is that the central administration does not want to increase bureaucracy at the institutional level (Ministry 5, EN).

The last crucial reason is that the college leavers' information seems to be of lesser importance compared to other information sets within FE. The attention of policy makers has been geared towards retention rates and exam outcomes,

There is a genuinely strong push about improving retention rate. So once people are actually in college, and that's been a really strong push over 10 years, with some success actually. Once colleges actually got students they'll make sure they keeping them on, attendance systems or whatever. (...) Investigating which courses have lower retention rate in general. (Expert interview 4, EN)

(...) results have been seen as more important than destinations. It's funny, really, isn't it? You could more easily performance manage the institution through results then you can through destinations. (...) There has been awful lot of work and effort spent on that [managing institutional accountability], but actually we are measuring people over whether they get... colleges get measured over whether they get people through hairdressing qualifications. (Expert interview 4, EN)

10.1.2.4 Higher education level (England)

Here details are provided how the ministerial level uses the DLHE and the DLHE longitudinal data. The interviewee(s) in the higher education department of the ministry mentioned what are the areas they use the DLHE in,

(...) we're [at BIS] more interested in what happens afterwards [graduating from university] and the main one we use for that is the Destinations of Leavers from Higher Education, the DLHE survey. That shows outcomes at 6 months and there is also a longitudinal survey at 3.5 years as well, which is a sample – the 6 months one is a census. (Ministry 4, EN)

The main advantages of the DLHE according to the ministry interview are the data being collected at the institutional level, and through the high response rate a possibility to compare the different universities even at subject level. A disadvantage of the DLHE is that it does not provide a longer term perspective and by being based on the higher education sector, it is not possible to compare the outcomes to other educational levels and sectors (Ministry 4, EN).

The DLHE is a contentious research project; universities are debating the validity of the data due to its time-frame mainly as detailed in the section on institutional data-needs. An expert interview from within HE, however, claims that the DLHE is a good data source about initial graduate destinations, as 'it gives us a good view of the jobs that good qualified young people were getting' (Expert interview 3, EN). The government seems to be insistent on this form of data collection (Research institute 7, EN).

The ministerial interview suggests that the DLHE data are used a lot within the work of the department to look at 'the immediate destinations, what happens to them just 6 months after they've graduated' (Ministry 4, EN). They acknowledged the general criticism of DLHE that 6 months are not enough to look at the labour market progression from a longer-term viewpoint. Regarding the DLHE longitudinal, the ministerial interview suggests that it is a useful collection of data. Due to there being three cohorts that have been followed up 3.5 years after graduation, the DLHE longitudinal results can be compared over time as well,

(...) certainly in the 3.5-year-one they ask a few more question about satisfaction with their job and whether they needed to do a degree to do their job. So the satisfaction one is a quite useful one after 3.5 years – we use that for our analysis to say, they ask a few questions along the lines of if you're going back to, would you still go to university now, would you do the same subject, would you go to the same institution. So that's quite useful. (Ministry 4, EN)

The main issue arising in the ministerial interview with the DLHE longitudinal is that it is not possible to break it down at the university level, only at mission group level.

The ministerial expert(s) interviewed do not possess the DLHE data. It is the statistical team of the department who perform the analysis of the datasets. The main

reason for this arrangement is said to be historical. The interviewee(s) are thinking about requesting the data for themselves, but there might be problems with the software that the DLHE data are stored in. However,

(...) at the moment that [arrangement] works quite well, because they [the data team of the ministry] understand the data source, the technicalities better and also there is a risk we might do silly things with it. But a lot of the basic questions we can ask just from the general excel tables that are produced every year (...). Certainly if we want something a bit more... a different cross-tabulation, a different variable broken down, we can... and the same goes for the longitudinal DLHE datasets as well, which is a smaller sample but its longer term information. (Ministry 4, EN)

Beyond using the DLHE data on university graduates, the ministerial interview emphasized the importance of the Labour Force Survey (LFS) data as well. Two key areas in which the LFS data supplements the DLHE are the longer-term returns to HE, and the possibility of comparing across the different educational sectors. However, currently the LFS does not permit institutional level comparisons. As opposed to the DLHE, the LFS data are available directly to the expert(s) interviewed and they can perform analysis on it. Appendix 21 details how the LFS is used in the Ministry's work along with some further datasets on graduates.

The interviewee(s) from the Ministry provided some example documents entitled 'briefs' that are used to inform the policy makers and other civil servants on the datasets like the DLHE or the LFS. These briefs are usually six-ten pages long and they summarise the key findings accompanied with diagrams and contextual information, as comparing the UK figures to the OECD countries regarding graduate unemployment rates for example.

10.1.3 Policy level – Finland

This sub-section details what data and why is important to the interviewees queried within the Finnish government. Statistics Finland seems to be a crucial institution to provide data for any type of policy-making due to a) the census-type information at the individual level, b) the reliable data on a broad range of topics, c) the possibility to compile other sorts of information sets, and d) it providing data comparable over time. The recent policy on the achievement gap between boys and girls is underpinned by the OECD PISA 2009 data, other than this, the educational policies are built on the Statistics Finland data (Ministry 10, FI). The ministerial interview at the vocational strand of the upper-secondary education outlined the amount and depth of the information, as well as the broad areas in which Statistics Finland provides them information,

(...) we know how many people go in and how many go out and what they do after that and how long time it takes and what they are studying. What is that

field, how long time. We have got so much information from the [SF]. (...)

There is very deep information. (Ministry 9, FI)

The same interview pointed out the importance of longer term data,

We're making trends different times, because the economic situation [effects it?] so much. Especially with vocational education, because they work a little bit lower and it is difficult to find work. (Ministry 9, FI)

Although most of the Ministry's data-needs are satisfied by the Statistics Finland datasets, there are three main concerns that emerged from the interviews. First, individual level information cannot be passed on to the ministry due to data protection reasons, thus the ministry's scope of data utilisation is limited to the main tables, not the actual data (Ministry 8, FI). Second, as the process of checking the information in the data registers and then combining the different datasets is rather lengthy, it always lags behind a minimum of two years. Third, as SF provides census-type data through combining the different registers, the datasets lack more subtle information on the motivation and the perception of the individuals. Therefore the ministry sometimes orders external research to gain more in-depth information. The interview from the upper-secondary section of the ministry gives an example,

There is not a lot of research that we actually order. Sometimes if there is a specific project, we order. For example when we do the distribution of lesson hours for general upper-secondary education, there is a lot of development work done ahead. We wanted to know how well the students feel: are they thriving in schools. (Ministry 10, FI)

The interview with the higher education sector of the ministry raises another crucial point in relation to the available data on graduation and the quality of employment,

Of course the Statistics Finland figures are important and we follow them, but they don't give us information on what kind of jobs the graduates will find. (...) So we have done some research work also ordered some research from the universities about this kind of quality of employment after graduation. But it's not as systematic as this Statistics Finland information. (Ministry 8, FI)

This research mentioned is carried out by the Finnish Institute for Educational Research 'especially concerning some fields of education, they did a sort of comparison of the polytechnic graduates and the university graduates in the field of economics and technology' (Ministry 8, FI).

These reasons seem to be beyond the government's attempt to conduct some of the data collection themselves, although this approach is at an early stage (Research institute 10, FI). Statistics Finland is also looking into providing more information to the ministry, for instance some of the datasets without the actual ID numbers (Research institute 10, FI). These plans might be also connected to the capacity problems of Statistics Finland as well. The interviewee(s) from this organisation admit that there would be much more possibilities to analyse the data, but their resources are limited. If the government gains the dataset instead of the produced tables, they can perform further analysis themselves.

Beyond the data provided by Statistics Finland there are other datasets to be used within the higher education section of the Ministry,

That's also [Labour Force Survey] and the forecast of population. And also we have used some indicators that provide information on how well does the education function? How many drop-outs are there, and also how many applicants there are for every opening place and we can see how attractive the places are? (Ministry 8, FI)

Further datasets available on Finland's graduates are collected by the Aarresaari Network or the institutions themselves. The ministry is not involved directly in this but it provides occasional extra funding to AN to produce research reports. The

ministerial leaders are aware of the Aarresaari Network data. According to a ministry interview, the data are not for the policy level, they serve the needs of the specific institutions,

(...) the universities and polytechnics they use these kind of surveys for their own development and their own purposes. There are at least the university sector has this network of guidance and career services that they collect I suppose every five years or something like that (...). There are other questions, like how well did your education respond to the needs of the labour market and so on. (Ministry 8, FI)

10.1.4 Summary on the policy level

This sub-section lists and compares the processes which the school leavers' and graduates' information systems seem to feature in using a cross-case comparison of the different SLGIS. The majority of the processes that are found to be crucial comply with a problem-solving or an interactive model of data utilisation, as set out by Weiss and detailed in Sub-section 3.2 (1979).

One of the most important procedures that the SLGIS seem to feature in is *general system-monitoring*. Policy-makers want to know what is going on within education and beyond. The policy problems mentioned regarding school leaving and graduation are identified both through system-monitoring and from listening to stakeholders. The

data seems to be one of the 'actors' within this process, as suggested in an interview, 'you have to look at the [SF] data, that's the proof there, but [you have to consult] stakeholders as well' (Ministry 10, FI).

Both the Finnish and the Dutch school leavers' and graduates' information systems seem to have been set up by government mainly with this purpose. According to a ministerial interview regarding the Dutch SLGIS, this 'information is very useful for our policy', the survey outcomes are mainly used in monitoring the system, knowing what is happening (Ministry 3, NL).

The Statistics Finland data are used by central government to 'try to find where there is a problem' (Ministry 9, FI). According to this ministerial interview, their main task is to produce the necessary tables every year when the statistics data are published and also answer questions from policy-makers or the minister,

And every year when it's ready, then I have to do the table [on VET leavers] and I have to give everywhere. And sometimes they ask something special. They wanted something deeper, the field of education, gender, area or different things. (Ministry 9, FI)

One specific area of the educational monitoring mentioned in a Finnish interview is related to drop-out rates at the different levels and types of education (Ministry 10, FI). Reducing the drop-out rates is an important policy agenda within the upper-secondary sector. The main information set used to inform this policy is the continuation figures provided by Statistics Finland. Similarly, the Dutch early school leaving policy uses a specialised information system that is part of the national SLGIS, detailed in Appendix 18.

It seems like that both in the Netherlands and in Finland the main national SLGIS provides enough information base for central government for the monitoring purposes. As the Finnish example shows, although the ministerial interviewee(s) are aware of the graduate surveys conducted by the institutions themselves, and they find it 'quite interesting that they have followed how many jobs after the graduation the students have and what happens and also what they feel that is needed, what kind of competencies and skills' (Ministry 8, FI), they do not necessarily use it to any deeper extent,

We have the publications. And we can sort of study them. And look if there are some factors that we can use in the political decision making process also.
(Ministry 8, FI)

The case of the English SLGIS is slightly different. Whereas the YCS and the LSYPE covering the secondary educational level have been set up with the intention of general monitoring purposes, this is not true in the other two sectors. Regarding the YCS and the LSYPE the interviewee(s) suggest that their importance lay partly in allowing for system-level monitoring. They suggest that despite the initial problems with getting government departments outside DfE on board to join in for the funding of the project, there are several government units using these datasets for monitoring purposes (Research institute 6, EN).

The English FE level data collected by the colleges serves mainly institutional purposes as it is not combined into a national dataset. The national survey on FE destinations is said to be more geared towards informing choice of future students reflecting lower importance for central government (Ministry 5, EN). The future plans of the policy-makers within the FE level relate to gaining a longitudinal view on college outcomes. The benefits and the drawbacks of their plans of combining administrative datasets to gain SLGIS information are explained in the ministerial interview as follows,

And from doing that you're getting a longitudinal view of FE. (...) It's a much more robust quantitative measure. You lose some of the subtlety because you can only measure, you can get some sense of gain in salary etc., but the

administrative data isn't as good as a survey, where at least you understand about schools [...] and about responsibilities at work. (Ministry 5, EN)

The English DLHE surveying graduates is originally aimed at career guidance professionals and it recently became an important dataset within policy making as well. This raises the problem of whether and to what extent this dataset can satisfy the newly emerging data-needs, detailed in Sub-section 10.4.1. A more specific monitoring process mentioned regarding the DLHE is the calculation of loan re-payment predictions, which might become a crucial area of using the DLHE in future years due to the recent rise in university fees and loans.

A second important process mentioned in relation to all national SLGIS is using the data for *educational and labour market policy-planning*. There are only a limited number of specific policies mentioned that are built on the SLGIS data. This is said to be due to the complex policy making procedure, because of which 'you cannot translate the data directly to a new policy but it is only monitoring and trying to understand what is happening in our sector and what can we do to change' (Ministry 3, NL). Specific policy procedures are mentioned regarding the Dutch SLGIS and the English LSYPE. In the Netherlands using the SLGIS in planning concerns 'extreme situations',

(...) in this time of crisis when we see that there are many unemployment coming up in some sectors, this is a very good instrument to do an intervention. (Ministry 3, NL)

In the case of England the DfE interview relating to the LSYPE lists three policy initiatives in which the data are used. One example of policy planning in which the LSYPE plays an important role is a report on vocational qualifications (Wolf, 2011),

Professor Alison Wolf has very recently reviewed vocational qualifications and they're actually making some changes to the educational system as a whole based on that. (...) she based quite a lot of her evidence on LSYPE data, because due to the age of the cohort we know about their qualifications, we know about people who've got vocational qualifications what they then went on to do at 19. (Research institute 6, EN)

A second English education policy mentioned is the planning and creating of the new youth services under the localising government agenda where they 'used LSYPE quite a lot leading up to the consultation period' (Research institute 6, EN). A third current policy project mentioned is the planning of policies to target vulnerable young people,

I was quite surprised to be honest when the consultation paper came out and it had all the references and there was that many in LSYPE, so it has featured heavily in that. (Research institute 6, EN)

In all the case studies the *planning of the educational provision along the labour market needs* emerges in some form. In the case of the Netherlands and Finland this seems to be of higher importance than in the case of England. Regarding the Netherlands, the need for planning education along the future labour market prospects is explained through the problems of labour market mismatches – unemployment on the one hand, labour market shortages on the other (Ministry 1, NL). Within this area, its ROA's labour market forecast built partly on the school leavers' and graduates' data that is used as explained in the interview with ROA,

[The SLGIS] is used in the system of the forecast, but not so much on the forecasting system but rather what the actual situation is on the labour market. The forecasting system depends on a very different external data where you more or less look at how many people are going to have a degree in a particular field of study in the next 4 years and how many people are retiring in that field and how is this kind of economic sector evolving in the next time, so you make growth scenarios. (Research institute 1, NL)

As for Finland, a recent example of using the SF data for educational planning is provided. The university of applied sciences provision is reduced by 2000 opening places 'mostly from the [geographical] areas where the population of young people is getting smaller and also in the fields that we see that are perhaps not needed in the labour force' (Ministry 8, FI). The information used for this decision is partly the Statistics Finland graduates' data, and partly the employment forecasts. As the ministerial interview from the higher education sector suggests,

(...) we have a system of forecasting of future labour force needs, and it's quite complicated system. It doesn't only use this kind of current or past employment figures, but other factors about forecasting the structure. (Ministry 8, FI)

As opposed to these relatively managed systems, in England, educational planning along the labour market needs exists only in 'some of the more managed professions, like medicine and teaching, obviously this [DLHE] will feed into the planning for future training numbers' (Research institute 7, EN).

A specific example of planning in Finland is related to how higher education institutions are financed. The new funding structure of the universities and the universities of applied sciences is planned to make 1% of the institution's funding dependent on the labour market outcomes, namely on the number of employed

graduates starting from 2015. This financial quota will depend on the Statistics Finland graduate employment figures and is the same for universities and polytechnics/UAS as well (Ministry 8, FI). These plans and their potential impact are debated within the sector. The ministerial interviewee(s) pointed out that there might be issues around the extent to which a university or a university of applied sciences can have impact on employability. Also, labour market outcomes depend 'on the current time and also the area, is it fair that in Helsinki area it is much easier to find a job?' (Ministry 8, FI). Both the ministerial and the institutional interviewees pointed out that it is only 1% of the total funding that depends on the previous years' employment outcomes. Substantially less than the amount that will be dependent on the planned student satisfaction survey results, that is 3%.

This Finnish example points towards a further process that the SLGIS are often used in: *evaluating and auditing educational institutions*. This process initiated by central government to hold institutions accountable has gained importance recently in all case study countries. This raises the question whether and to what extent the SLGIS planned with different purposes in mind can be applied in newly emerging processes, discussed in detail in Sub-section 10.4.1.

It is usually the tertiary level institutions that are evaluated and audited along their SLGIS results. Such processes are not possible in the secondary sector as the SLGIS do not usually depict institutional level school leavers' information. In the case

of the Netherlands the schools that 'produce' to the labour market rather than to further education use their SLGIS in the audit process. Within the Dutch senior vocational education some references suggest the school leavers' data being used in their audits, but this is certainly true for the HBO and the WO-level graduates' data. A similar trend is true for the English higher education level, as the DLHE feeds into some performance indicators of higher education institutions. One of these 'is called employment performance indicator and it shows for every individual university for 6 months what proportion of their students are either in work or in further study' (Ministry 4, EN). In the case of England the importance of the DLHE is 'multiplied' by the press creating university league tables using indicators derived from the DLHE data as well,

Every year when the DLHE comes out there is a volume of statistical first releases, it gets quite a lot of attention on what proportion of students are employed and how that varies by subject, how that varies by individual university (...). (Ministry 4, EN)

An interesting contrast regarding the use of league tables is provided in the Finnish case. League tables and rankings of higher education institutions are almost entirely absent from the Finnish education system. There are no rankings produced from the Statistics Finland data, and stakeholders using the Aarresaari Network data are not allowed to compile them either. However, some of the institutions interviewed for this

research envisaged a more fierce competition in the future within the higher education sector, where the SLGIS datasets might be used in a league-table format.

A detailed account is provided in the next section on the institutional audits and what other information is used in the different countries on labour market relevance (Sub-section 10.2.4.)

Evaluation can relate to national policies as well, as in the Dutch and English cases. In the Netherlands the school leavers' and graduates' data are used for instance in evaluating the quality of the career guidance acquired at school. Beyond the policy planning, therefore: the data are used 'to evaluate policy' (Ministry 3, NL). The evaluation process also refers to the ministry's work in general,

The data of this report [of comprehensive leavers' data of the education system] is published at the same time as the evaluation thing for this ministry. So every... then the parliament can see the data and they can put questions, or send questions to this ministry. (Ministry 3, NL)

In the English case the LSYPE is mentioned as a tool to evaluate national educational policies as it provides a longer view on school transitions.

The last process that seems to bear emerging importance within the English and to some extent in the Dutch system as well, is *informing choice of future students*. This agenda seems to be important in England due to the government agenda on sufficient data for informing student choice (Ministry 5, EN). According to a ministerial interview, through this a 'more perfect' market of educational possibilities can be achieved, because if 'people are sufficiently well informed about the importance of filling that schools gap and they know where best to get that education, then they will go there' (Ministry 5, EN). This agenda exists in both the college and the university sectors in England. However, there is a difference in who displays the information that is supposed to inform choice. Within the college sector, the FE choices website is currently presenting the Learner Destinations data. Within the university sector on the other hand, due to a recent policy change all UK universities have to provide their Key Information Sets (KIS) on their own website. The key topics to be displayed are: Student Satisfaction Survey; Graduate Employment; Financial; Learning Assessment; Students' Union (HEFCE, 2012). Regarding the Netherlands, the VSNU interview referred to a website called Studie Keuze in relation to informing choice within education. This website aims to provide information on different educational sectors, thus for example the IVA-VSNU graduates' data are sent to this webpage on all institutions.

There are substantial problems with the informing choice agenda, especially regarding the timeframe it involves. For example, the HESA interview showed concerns about how the DLHE data will feature in the KIS,

(...) some of the destination data are going to the KIS and it's about saying to 16-17 year olds, 'if you do this course, these are the sorts of things you will go onto next' worries me slightly, because of course these are people who did this course 6 years before you... (Research institute 7, EN)

The above mentioned processes are broadly similar to the findings of the TRACKIT study. For instance, that study suggests that the 'graduate tracking data' features in policy planning and development and in some cases financial planning, which are covered as the second main process in this sub-section. Further processes mentioned in the TRACKIT study are quality assurance measures which relate to institutional audits and evaluations detailed above and are touched on more regarding the institutions in the next section (Gaebel et al., 2012).

10.2 The data-needs of the institutional level

This section details the views of the institutional level within the different case study countries about their SLGIS and to what extent it fits their data-needs. This section takes a similar structure to Section 10.1 on the policy level data-needs. It starts with detailing the specific characteristics of the three cases before outlining the processes in which the SLGIS are used. The Dutch, English and Finnish cases in the first three sub-sections detail the specific characteristics of the national SLGIS and what the institutional level sees as their main purpose and to what extent they seem to be

satisfied with the data. Section 10.2.4 summarises the processes in which the SLGIS are used at the institutional level and compares these across countries.

The majority of this section depicts the opinion of the tertiary level institutions and vocational institutions of the secondary level, there are no interviews conducted at the general secondary level. Although the author attempted to reach schools within the general educational sector both in Finland and in the Netherlands, there were no successful contacts achieved. This might suggest a relevance problem regarding the SLGIS for the general secondary level and is further debated within the summarising sections of this chapter.

10.2.1 Institutional level – the Netherlands

This section details what the SLGIS data bear for the different educational institutions, along the limitations and problems with the information systems within the Dutch setting. The potential of the SLGIS for schools and universities relates to the quality of education according to the ROA interview, for instance,

(...) do our graduates find jobs, does it match the education. But it's much more a quality instrument, to match the quality in this sense and it's also used in higher vocational education for the accreditation. (Research institute 1, NL)

I think that the data provides tremendously a lot of information for potential students, for marketing. It should definitely be used also to look at the fields and studies: do they actually have labour market? Do they actually match to something? (Research institute 1, NL)

However, there are substantial differences in what information the educational levels gain through the Dutch SLGIS. Providing an institutional level picture is not possible through the secondary school leavers' surveys due to the current methodology: the SLGIS for VWO, HAVO, VMBO and MBO are based on national samples of students. The sample size and the final response rate are not suited to provide institutional level information. However, due to increased competition between research organisations, there are others providing the secondary level with their institutional school leavers' information. An example for this is DUO-O gathering data from half of the MBOs, and providing some comparison across the schools taking part in their research (DUO-O, 2012). Although the research of DUO-O has limited possibilities in comparing due to the partial population of MBOs, their MBO-Kaart report of a school compares the results to the 'national' level – it is unclear to what extent institutional users are aware of this limitation.

As opposed to the secondary level, within higher education the sampling is based on university-level lists of graduates. Therefore institutional level reports and datasets are produced both for HBOs by ROA, and for WO's by IVA-VSNU. There are two

main concerns raised regarding the graduate surveys, they should be ‘little bit more long term, little bit more strategic’ (University 1, NL). The issues of research methodology, especially concerning the cross-sectional design and reliability are discussed in the Methodology section of the Dutch SLGIS, Section 9.1.

In relation to having to be more strategic, another dataset mentioned by the interviews helps to frame the problem. Both at the HBO and the WO-level the satisfaction-surveys seem to be of high importance within the institutional decision-making. According to a HBO institution interviewed the satisfaction-survey results are taken into account more than the SLGIS outcomes,

Normally what we see in practice is that the programmes are not using it [the ROA data] that much if you compare it to the other information that we have. So the satisfaction surveys for example are, the results of that, being used much more extensively than the ROA data. (University 1, NL)

To tackle the issue of relevance and newly emerging institutional data-needs, ROA seems to put more emphasis on the ‘satisfaction’ aspect. This future possible change in the questionnaire involves some level of harmonisation to ‘ask similar questions [to those of the satisfaction surveys] from students and graduates that you ask them in the same way’ (Research institute 1, NL).

The recent changes of research organisations regarding the WO-Monitor seems to be partly due to ROA being more focused on the labour market situation of the students, and less on what role the universities played in educating and training the graduate (Research institute 3, NL). In initiating change within the institution along the data, the universities seem to be more concerned with what former students say about the quality of education, rather than their actual labour market outcomes. According to the VSNU interview,

University says (...) we have to do something more about the quality of our education and we have more questions surrounding that topic. So is there a good focus on labour market while you're studying, or is labour market asking you about your qualification you acquired at university? (Research institute 3, NL)

Comparability with other institutions and what information is available for the different organisational parts of an institution is a further important question regarding how the data are used. In a WO institution interviewed, three levels of access have been mapped out of who has access to the digested data or the actual dataset itself,

First of all, I will write a two page 'memo' for the executive boards and the deans of the faculties. I will also write what our department calls a 'fact', it's a four page long news-letter that we issue from our institute to research departments. (...) The other thing is that the data will be imported to the data warehouse and we have the data in the data warehouse for the last one as well (...). (University 2, NL)

The aspects of the WO-Monitor that feature in their data warehouse are agreed by the different departments of the university. Whereas the labour market outcomes are more important in the facts and memos so for the decision making and leadership level, the 'satisfaction' component is the crucial information used more widely by all levels of university administration (University 2, NL). The importance of having the actual data in the data warehouse lies in the accessibility. Instead of static documents and research reports 'the data warehouse makes it more appealing to do some real analysis' by a wider range of university personnel (University 2, NL).

There is an interesting difference between the HBO and the WO-levels in relation to what SLGIS data can be compared. At both levels the graduates' data are used for benchmarking against other institutions. However, the HBO-level only gains a few indicators to compare themselves to others, at the WO-level all universities get all the data of other institutions so they can perform more in-depth analysis with the data. As explained by DESAN regarding the HBO-sector,

(...) this information (...) by the institutes is looked upon as being confidential, private, like business information. There is a competition between one and the other. (...) So they say, I don't want the others to see my results on... for the individual institute but together with the HBO Council they've agreed on five variables that are publicly available but all the other variables are only available on the institute level and can only be seen at an aggregated level. (Research institute 2, NL)

The WO-institutions agreed that they circulate all the data collected in the WO-Monitor within the core module of the survey. The arrangement that universities can use the data to compare their outcomes is thought to be 'quite exceptional'. The agreement also contains that they cannot publish league-table type lists of the SLGIS outcomes (Research institute 3, NL).

10.2.2 Institutional level – England

This section outlines the data-needs and the issues around using the available information on school leavers' and graduates' at the level of the English colleges and the universities. As there is no interview conducted at the general educational level within this research, only a short remark is provided on this level.

10.2.2.1 General education (England)

Due to the design and the sampling of the LSYPE and the YCS, they do not provide institutional level SLGIS outcomes for general education. Regarding the destinations after compulsory schooling the individual schools gain information on their leavers through the Destination Measures as a part of the Statistical First Release. Publishing the Destination Measures is a new project. It is tested with the 2008/2009 Key Stage 4 cohort in terms of what they are doing in 2009/2010 and this data is first published in 2012 on England. The data are obtained through matching up the National Pupil Dataset with several administrative datasets, like the Higher Education Statistics Agency data on students enrolled to HE, the Individualised Learner Record on students enrolled to FE, and the School Census (DfE, 2012a, DfE, 2010).

10.2.2.2 Further education level (England)

Within the further education sector the data collection performed by the colleges themselves is referred to as 'destinations'. This provides data on whether former students are in employment, further studies, training, unemployment or in other destinations. This SLGIS is conducted by the institutions themselves, gathering information directly from their leavers. The main problem with this data is that it lacks standards and therefore it is not comparable across institutions. To illustrate this point, two sets of data categories are provided in Table 10-1 from the two colleges interviewed for this research. Whereas College 1 gathers basic information on the destinations of their leavers, College 2 has a more detailed categorisation.

Table 10-1: 'Destinations' data collected by the colleges

College 1 – Learner Destinations	College 2 – FE Known Destinations
Employment	New course at College 2
Further education	New course elsewhere
Higher education	Continuing Existing Course
Unemployed	Employment, Full-time
Other	Employment, Part-time
Unknown	Self-Employed
	Voluntary Work
	Start a Job Shortly
	Temporarily Unable to Work
	Searching for Work
	Taking time out to travel

Within College 1 the data collection tells the story of intended destinations and whether the former student avoids being not in education, employment or training (NEET),

The destination one is when they finished the course, pass or fail, what is their intended destination. (College 1, EN)

The main thing is that we don't lose sight of our learners, we're trying to make sure that they've completed the course, they move on to something. That means one terms of economic wellbeing: they find a job, they further their education, that's a positive impact. We do work quite hard on this as a college. (College 1, EN)

The destinations information has always been limited according to this interview, as the data requirement is a few options of destinations. According the interview at this college, their future plans include changing the depth of information collected from the basic destinations to a more detailed account,

Now the only problem with that [destinations information] is, it's quite limited, it's quite vague, it's only certain options. What we're trying to do in the future is to get a better idea where they've gone. For example if they say employment, we'll say what employer, and trying to get more information. (College 1, EN)

The leavers' data collected can be found in the internal data system of College 1 and it can be used by anyone having access. Beyond internal utilisation the data are applied as contextual information for inspection. As Ofsted compares the colleges to a national average performance, this college would at best 'get good, we'll never get outstanding' due to the mission of the institution and a diverse student background (College 1, EN). Therefore this college tries to come up with alternative ways of showing their success, beyond collecting the destinations data,

(...) it's important that we capture other evidence to support the argument that we feel that we are a very good, outstanding college, the learners come to this college and they progress, that they find jobs, long term jobs as well. (...) It's

important that we collect that information to be able to measure that. (College 1, EN)

College 2, as shown in Table 10-1 has a more detailed categorisation to capture the destinations of their leavers'. This might be due to the fact that this college has considerable amount of HE provision that is covered in the DLHE, and therefore the idea of collecting destinations data could be more widespread within the institution. According to the interview, they distribute blank forms at graduation and collect them afterwards. After inputting the data gathered, the records of students who are progressing internally are updated and then the data are analysed (College 2, EN).

If the categories of FE destinations in Table 10-1 are compared with those of the DLHE questionnaire, some similarities are apparent. The list of possible destinations has a few more options for College 2 than the DLHE. When compared to the DLHE, the college's data collections are less structured as there are fewer rules,

(...) the HE system is quite sophisticated in the way we collect destinations data. (...) Because we have a requirement from the Higher Education Funding Council to hit about 80-85% response rate. We don't have that specific requirement on FE – we'd like to know what's happening. We do do the best we can, but the infrastructure needed in order to track these students is quite an expensive process. (College 2, EN)

The interviewee(s) at College 2 mentioned some recent attempts of the ministry to conduct research on leavers from colleges. It is not entirely clear, but this might be the already mentioned GfK NOP FE Learner Destinations data collection.

The funding bodies and the government rely partly on the institutions to provide them with the data,

We use it for internal bodies and produce data to the staff but also produce for performance measurements which all staff have access to, so they can have a look at what's going on. (College 2, EN)

As the section regarding data-needs of the English policy level suggests, one of the possible explanations of not having sector-wide comparable data within FE could be that there is greater emphasis on other issues like internal progression, keeping students on the course and enrolling them to the next level, as well as attention to the exam results. In both college interviews it seems to be an important point that they enrol their students to higher levels of education. One plausible explanation of there being little attention on leavers' destinations is that the institutional funding is mainly dependent on the internal progression and exam results, not the college leavers' outcomes.

Possibly connected to internal progression and retaining students, the opinion of current students seems to be important within the management of colleges. The satisfaction survey for College 1 is conducted by a company called QDP Services and it seems to be an important source for benchmarking the institution,

We do a student survey twice a year. Not for every student though, it's targeted, it's random of the course-file and then the CLM [collaborative learning manager] manages all the take-off in a particular area, the particular one to scrutinise. (...) it is asking them about all sorts of... the facilities, the tutors, the curriculum, and that's twice a year. It's very extensive then, reports come out of that and we know what the national benchmark is and we know how we perform against the national benchmark. (College 1, EN)

The interview in College 2 suggests similar reasons as the expert interview regarding why the destinations information seems to have a smaller importance within FE compared to HE, and why this will be even more true in the future,

A lot of FE students are generally doing A-levels or qualifications which would academically allow them to transfer into a degree type of programme. So it's not that easy to put a value to the economy. HEIs for a number of years have

been very keen on and exacting on being able to sell to the government the value to the economy that they've managed to give by putting through these students, achieve these degrees, different levels, and showing the value to the economy and therefore matching up. Well, I know you paid 5 grand towards it but each one of these is throwing 7.500 pounds back to the economy. To try and justify the reason to their grant. Because a lot of FE was almost regarded and certainly will be within a couple of years' time as compulsory education, it doesn't matter as such. We've got to do it, the students have got to study there until the age of 18, so there isn't any real added value as such, because the students are still [stuck?]. (College 2, EN)

10.2.2.3 Higher education level (England)

Within the higher education sector the DLHE is the prominent, well-known information system about the destinations of graduates'. Historically, the DLHE was set up to inform career guidance and it has become gradually a measurement for institutional performance. The main problem around the DLHE seems to be that 'people keep trying to use it for all sorts of things that it's not designed for' (Expert interview 3, EN). As explained in the HESA interview,

(...) when it started it was very much designed by the careers people as a tool for in a sense evaluating their own work, and also to provide them with information for the next cohort through, so this is what people who finished

your course last year are doing, so this is the type of things you might want to look at. Whereas these days, and I think the big switch was round about 2000 to be honest, there is much more of an emphasis on... or there was that stage what became the new emphasis was performance measurement. It suddenly became about measuring the performance of the universities. And we suddenly had performance indicators based on the data. The new thing now, or the current story is about information for perspective students and you've heard of the KIS. (Research institute 7, EN)

The DLHE seems to be a contentious research project especially from the institutional point of view. As the validity of the data is constantly questioned, the utilisation is rather scarce and limited. One of the first crucial questions is: who should be doing the DLHE? According to a university interview this is a long standing debate and can be characterised as follows,

It's bit like a Mexican stand-off between the universities and the government, who should really do it. At the moment we've lost, we've always blinked and looked away first, so the government insist that we do it. (University 4, EN)

According to this interview the government should collect graduates' information as it would be easier for them to combine different administrative datasets. As the previous sections on the opinion of the English policy level pointed out, the

government's opinion is that the DLHE is paid for within the university's funding from the HEFCE. However, there are attempts to combine administrative datasets within HE as well.

Although the DLHE data does not seem to satisfy the needs of institutional users entirely, there are no attempts to conduct other types of surveys beyond it. The DLHE being the only compulsory information system requiring substantial resources from the university budget, there are no drivers to start other institutional initiatives,

(...) it eats up enough of our resource doing this. I don't think there has been much appetite for doing something alongside it as well. (University 3, EN)

(...) I don't think it would be that beneficial to do something else as well, because it might harm our response rates for this. Although I do think that careers are looking into that one of the schools and they might do their own survey for people who have left 3 years down the line. (University 3, EN)

The DLHE longitudinal has been partly started to give a picture on longer term employment. However, as it is built on a sample rather than a census, it is not possible to use the results as a monitoring or a planning tool. All the university interviewees acknowledged that they do not really look at that data source,

(...) the dataset is so small and so poor that actually drawing any conclusions that you can use in the same way, as a kind of spur for action, it's too dangerous, we wouldn't want to use it. If I'm forced to use it at all, I'll be very circumspect. (University 5, EN)

According to the interview at University 4 there are limited opportunities to use the DLHE longitudinal data,

It provides case studies, that's about it. It doesn't provide sufficient data to say, this is the long term career path for somebody from history. (University 4, EN)

10.2.3 Institutional level – Finland

This section details the institutional opinion of the Statistics Finland school leavers' data within the vocational upper-secondary level, and the attitudes towards the SF and the institutional voluntary SLGIS within the higher education level.

10.2.3.1 Secondary school level (Finland)

At the two vocational upper-secondary institutions the interviewee(s) are aware of the data collected and provided by Statistics Finland. However, this information does not seem to play a crucial role in the institutional processes. In the school involved in business education the interview suggests how the data might be used,

Maybe we can develop our school by knowing in which sectors students or graduates go. For example we have this finance programme, banking, bank and finance sector, that's the one example [to know where students go].

(School 3, FI)

According to them, the data from Statistics Finland makes it possible to compare their leavers' outcomes to the national average. The information is handled by the head of quality within the institution. The interviewee(s) work mainly in career guidance. For them the important information on how to change the school's programmes derives from a good cooperation with 'entrepreneurs, (...) representatives of enterprises who are interested in our college or our graduates' and their feedback is used on future skills needs, rather than the leavers' data (School 3, FI). The interview in this school mentioned that more longitudinal type information would be needed on what their former students do,

I'm happy with the information that we got, this [leavers' data] is not the only one [on students in general]. But I think we know rather good what they are doing. Of course it would be interesting to know the period of 10 years what they're doing then. (School 3, FI)

At another vocational upper-secondary school teaching mainly service-type professions the interviewee(s) know about the data, but do not consider it important for their work,

We could have, there is this place called Tilastokeskus [Statistics Finland], who has all data in Finland (...). But I have not seen... I know we have the passwords in the school somewhere, maybe the principal has them, but that always goes like 4 years, the statistics are 4 years behind, so I never had any interest in looking so old facts... (School 4, FI)

In relation to career guidance the information might be used to inform students, but a more general student counselling model seems to be in place in both institutions. Through the relations with the employers and especially that 'professional teachers in Finland they have always been workers in the field themselves', there are strong relations to the working life in both schools (School 4, FI).

Reducing the ratio of drop-outs seems to be a more important central policy, than the destinations of the leavers'. Both schools interviewed are aiming to drive down the number of 'negative drop-outs', the number of students leaving without a final qualification into no other education or training, and no employment either. They acquire these figures from a separate Statistics Finland data collection (School 3, FI, School 4, FI).

10.2.3.2 Higher education level (Finland)

The Statistics Finland SLGIS provides a common set of data for both the universities and the universities of applied sciences on their graduates. They have information on virtually all their former students and whether they are employed, in further studies, other activities or unemployed. The other datasets within the university sector are the 'career follow-up' data on graduates five years after graduation and the datasets on initial labour market outcomes of graduates conducted either as a 'first-destinations' survey or as an 'exit-poll'.

According to a university interview, the data gained from Statistics Finland is a large dataset with information on everyone providing a basic picture of outcomes 'whether people are working or not, whether they are studying, the salary, where they live and where they work' (University 7, FI). However, although Statistics Finland provides a robust dataset, the university interviewee(s) believe it has two main problems. First, it

does not provide any information on the graduates' activity beyond the fact of being employed or not,

It's a very comprehensive and large data; almost everybody is in there, so that's a good point of it. (...) But it's quantitative only, so we don't... What we can have a look is how many of our graduates are working, or not, universities are more interested to know about how they do, (...) what skills they need.
(University 7, FI)

Second, as the data lags behind, the information is less useful for the institution, as 'the figure we get is what the situation is one year after graduation, but still we get it two years later' (University 6, FI). The main reason for this according to Statistics Finland is a long process of data validation and improving the quality of the data gained from the registers,

(...) in practice we know that when we collect the data from the institutions, it's not always very good quality. A lot of work is put into that our experts check the collected data (...). We have to phone them [institutions], email them (...).
(Research institute 10, FI)

It seems that the national SLGIS from SF does not provide enough in-depth and current information for universities, thus institutions conduct their own data collections more suited to their needs. The career follow-up survey, the first-destinations research as well as the exit-poll survey aim to complement the picture of the career path of graduates'. These information systems are voluntary and it is 'an easy hop on-hop-off thing to do, you have the basic questions already waiting for the survey to be done and you just decide at your university whether you will do it or not' (Research institute 11, FI).

The voluntary nature, however, also means that although the career follow-up started as a research project of few, then all universities joined it for a few years, in the recent years it is less structured when the different institutions do it. Universities who conduct the career follow-up, do it every second year for the Master's students and in other years for the doctoral students. Due to these differences in whether institutions do the data collection, the data are not comparative across the system for all years.

The first-destinations data collection gathers information a short time after graduation to gain feedback on the education and the study programmes, in this research '3-4 universities and about 5-7 polytechnics take part' (University 7, FI). The universities not involved in this are often conducting exit-polls, asking their former students right after graduation as a part of the student feedback system. Each of these information systems are accounting for a number of institutions, thus comparability between

institutions is hindered, it is not possible to draw conclusions at the national level but only on a limited circle of institution.

Three further problems are raised in relation to both the national SF data collection and the voluntary information systems. The institutions a) might not have suitable expertise to make good use of the data, b) there might be only limited financial resources to analyse them, and c) there are no clear measures in place to channel information into the institutional decision making process (Research institute 11, FI; Research institute 12, FI). According to the interviews at two universities,

While I was working in careers office, I had the feeling that we really have data, the problem is that to scramble it and use it more efficiently and deliver it to the right persons. To get the educational planners to use it... This national data and the universities own data and this data from the Statistics Finland and also the data of the local employment office – we do have a lot of data. The problem is that we should have more people to use it, or digging it more, or to studying it more. (University 7, FI)

We have lots of data but somebody would have to really analyse it. We don't have enough money for that. (...) And you need to be a good investigator also. (University 6, FI)

10.2.4 Summary on the institutional level

The four main purposes of using SLGIS data at the institutional level are *monitoring progress, institutional planning, complying with accreditation and audit requirements, and informing students and the wider public*. The first three processes are concerned with quality assurance measures: is the education provided to students relevant to the labour market or further studies? 'Informing' has relations to past, present and future students: keeping in touch with former students, helping current students in making career choices, and attracting prospective students as well as the informing wider public.

Regarding *institutional monitoring*, the most important aspect is gaining information about the quality of the study programmes through the SLGIS. The questions mainly ask the school leavers' or graduates' opinion on their former education from several aspects, as suggested in Section 9.5. What do former students think about their previous school or university? How successful are they in gaining employment? Are their skills gained through education sufficient at the labour market?

For instance, in the Finnish case the voluntary information systems are used to contextualise the national level SF data. The data are disseminated within the institution,

We use the data [from the Aarresaari Network research] to feedback the departments how their students have been employed. We used to publish their results by [departments?] and slideshows and they were quite openly [available?] for anyone who wanted to have them. (Research institute 11, FI)

Similarly, in the English case the DLHE data are used for monitoring purposes. All institutional levels have their data available on the internal websites and this is an important resource for the annual programme review (University 3, EN). At University 4 the career guidance person(s) suggest that the DLHE is part of their 'traffic-light system' in place to monitor the university's student flows and any emerging problems related to initial labour market outcomes (University 4, EN).

The opinion of the former students about their previous school is pointed out as crucial information gathered through the Dutch SLGIS. The Dutch information system asks former students whether they would choose the same school and programme again. This is mainly used in institutional level monitoring, rather than at the programme level. According to a HBO interview,

[The SLGIS data are used] on more macro level, on the [...] level of the university itself but it's used on micro level, on the programmes as well. If students say, well... evaluate back that the quality of the knowledge I was receiving was not up to standards if I consider it to my current job (...) they

could just try increase it, or try to adapt it better to the expected [traits?] that the labour market has for example. (University 1, NL)

If the national level SLGIS does not provide institutional level information, schools and universities might take initiative to gather their school leavers' and graduates' information. As the Dutch national SLGIS for MBOs does not provide an institutional level picture, some schools gather their own leavers' data. This is partly related to monitoring institutional outcomes and partly to comply with governmental information requirements on labour-market relevance. A document from one of the MBO-schools provides information on the 2008-2009 year leavers' who are asked in 2010 about their progress. This information collection is most probably conducted by the school itself (School 2, NL). The main areas used in monitoring are the following,

What are they going to do? Have they found a job that meets their training needs? How quickly did they find a job? What further training do they do and where do they go to college? How do they look back at their school? Do they find that they have been given sufficient skills? (ROC-1, 2010; translated from Dutch)

Similarly, at the Finnish university level the Aarresaari Network data can complement the Statistics Finland information in terms of gaining graduate satisfaction information and contribute to institutional monitoring,

Basic aim is in a way get a little bit more information on how satisfied they are; are they employed in a right kind of work as well and so on. (...) How satisfied you are with your degree from the employment point of view? (University 7, FI)

The application of the SLGIS data within *institutional decision making* is described more tentatively, only a few direct examples are provided. This might be due to the SLGIS a) not having direct relevance for the institutional policies, b) them being thought to be low quality, or c) due to the limitations of this research. SLGIS are conducted either by the central government or due to the requirements of central government; the only exception here is the Finnish voluntary datasets. This could suggest that institutions themselves would not be inclined to gather evidence about their leavers and graduates and that they would only employ information about their current students. Concerning the quality of the SLGIS, several institutional interviews suggested that although they might satisfy the data-needs of central government, the institutional samples are regarded too small or the time-frames are thought to be invalid. The third plausible explanation why SLGIS seem to play little role in institutional planning could be the sampling bias of this investigation. The SLGIS-researchers interviewed for this research are in touch with data-experts of the schools and universities rather than with decision-makers. The interviewee(s) from the institutional side are similarly from the data expert-group and not necessarily involved in institutional policy making.

Some of the possibilities the SLGIS could provide for planning are mentioned relating to Dutch school leavers' and graduates' monitors. The VSNU-interview suggests that using the outcomes, institutions could ask, 'what can I do to make a better match [of the education to the labour market]', however, the interviewee(s) also suggest that this is not yet happening (Research institute 3, NL). A still tentative, but clearer relation is pointed out in the HBO interview, especially at the time of positioning their institution the data 'can help us find edges we could use in order to make decision' (University 1, NL).

One of the English universities provides an example where the SLGIS data prompts institutional change. University 5 takes an active role in promoting the DLHE data,

I quite unashamedly use it [the DLHE] within the institution, look, this is the trend-data, over this period the last 3 years this is happening in department X, I don't know what's going on, everybody else is doing really well, what's going on here? So I use it a bit of a 'pull your finger out' and get yourself sorted out. But it's an influencer, but it's a very useful influencer. (University 5, EN)

As for Finland, the SF data is suggested to be important in the planning of university provision. The voluntary data collections on graduates seem to have less relevance in this respect,

Our university heads, they used this one [SF data] year after, they want to know that figure. (...) It's more like an indicator of the performance and also for planning as well. (University 6, FI)

In relation to the voluntary Finnish SLGIS datasets the planning aspect is less clear. These SLGIS are set up for career guidance utilisation, thus the central planning or the departments do not have clear links to the data collection (University 6, FI). According to a university interview, however, the first-destinations survey is applied in course planning, 'developing the educational structure and contents' (University 7, FI). The AN careers follow-up gathers information on what generic skills are desirable within the graduate's work and how the university provides them with those skills. This dataset should be applied more widely according to the guidance personnel at one of the universities,

(...) we hope that in the teaching they would use them [datasets] more and try to develop teaching and education in those ways that the students would learn more generic skills also. (University 6, FI)

A more specific area is using the SLGIS data in planning funding and different provisions, as for instance the DLHE in an English university is used 'to help us target resource' for guidance (University 4, EN). In the Finnish case the SF data will become more important through the planned higher education funding model,

The departments use it [the SF data], because they have to report when applying for money. They have to show how well their students have found work and so on. (University 6, FI)

None of the Finnish universities interviewed expressed fears over funding cuts due to problematic employment levels within the future funding model. In fact, the interviewees seem to be sceptical about the impact of this planned change due to the incentive being small and their outcomes being quite good anyway,

I'm a little bit sceptical on how much that alone will motivate the faculties. If they take more of this qualitative survey, maybe also this 5 years after graduation – that would maybe motivate them more. But only this? The incentive is quite small actually... Because the employment rates are pretty good. (University 6, FI)

A further issue with using the SF data is that they do not provide details about the level of employment,

(...) funding it's gonna be based on what is the situation in the December the year after you have graduated. (...) Somebody might be working as a Santa Claus for December, but he will bring funding for the university. (Research institute 11, FI)

Where the national SLGIS does not depict an institutional level picture, the schools have to gain their own information about their leavers. Within the English FE system reports are produced for the different levels of college management 'in order they can make an informed decision and evaluate their programmes and see whether they're effective or not and whether they need to change in the course structure' (College 2, EN).

At the Dutch MBO-level the national SLGIS does not provide institutional data and therefore some MBOs set up their own research or they order school leavers' information from selected research organisations. The main reason behind this is the government requiring schools to have evidence of labour market relevance of their education. The interview with the research organisation DUO-O conducting research for MBOs suggests that institutions use the data within their internal decision making process,

[They] use it for themselves sometimes [to] change a special programme, or they see that their students have difficulty finding a job with that education. Then they'll try to change the programmes, so that the answers help them with that. (Research institute 4, NL)

According to an MBO-interview,

We ask them [students] where you work now, and how they look back on their period being a student of our school. (...) Because it is quite important for us to hear from them if their skills are fit with the skills they need for the jobs, so whether they are well educated in our school, whether we should change our programmes. (School 2, NL)

In all case study countries the SLGIS outcomes are used in some format within *accreditation and auditing*. These processes as opposed to the previous two – monitoring and institutional planning – constitute some sort of external obligation, towards the national educational policy level and the general public. The SLGIS data are generally used as one indicator in the accreditation or audit and institutions are compared to each other or the national average. In some cases beyond the actual SLGIS data some contextual, in-depth information is collected as well about how the

institutions connect to the labour market. This echoes well with the TRACKIT study, suggesting that graduate tracking procedures are either nationally prescribed activities or the procedure of the information collection is left to the institutions themselves (Gaebel et al., 2012).

This latter can be seen in the Dutch example. There are no strict rules on what data is provided on former students and their success at the labour market within the auditing or accreditation process. The important question is how the institutions 'connect to the labour market' (University 1, NL). According to all the research organisations ROA, VSNU and DUO-O respectively,

Not that the accreditation institute says, you have to provide with that information, but they can use the results for their own evaluation which they then provide to the accreditation. (Research institute 1, NL)

Nowadays it is self-evaluation provided to the national board of accreditation. And you have to be accredited to even get your finances from the government. But within this kind of self-evaluation and within the review procedure information about alumni are mandatory. (Research institute 3, NL)

(...) [MBOs] are using it to give stats to the government, the amount of students that find a job or find another education. (Research institute 4, NL)

In all Dutch educational levels and sectors there seems to be a continuity of the SLGIS, with changing emphasis on what exactly is collected and by whom. However, according to a HBO-interview, there are other methods used to gather information on the labour market relevance of education for the accreditation process. For instance programme areas 'gather a representative from a particular field that they are working for and [put up] some kind of an advisory board (...) as input for the accreditation bodies' (University 1, NL). Using the employers' feedback on the programmes is not without problems, because 'from the perspective from an employer, making a statement about a particular program is very difficult' as it depends on the actual person working for the company (University 1, NL).

As suggested in a Dutch school interview, they used the SLGIS in arguing against government plans to close one of their study programmes deemed not relevant at the labour market. Their MBO-Kaart research conducted by DUO-O has helped to 'rescue' this study programmes,

(...) schools have the duty to provide to the labour market, they must be labour market relevant. And then they [government] had a research... how do schools do that? And one of their assumptions was that care, level 2 is not

labour market relevant. And we have I think about 1200 girls who do that course and then it was suggested that they could cut your budget if you have students that are no labour market relevant. Then we could use our research: nonsense! I think 80% is working in care and 10% is going to level 3 and 10% is having a baby. So don't be silly! (School 1, NL)

In the English case beyond benchmarking with the DLHE data, there is some information gathered regarding the labour market relevance of the university education. There are national benchmarks for 'graduate level' employment and the universities set their own targets for their DLHE outcomes. An interview at University 4 suggests that their 70% target on graduate employment is measured through the DLHE data (University 4, EN). The university audit is carried out every 5 years by the Quality Assurance Agency for Higher Education (QAA). As the interview at University 3 suggests, the QAA wants to know about 'practices that go on in [university] schools, they want to know how you're teaching people, quality of the teaching that goes on, but we would just supplement that review [with data partly from DLHE]' (University 3, EN).

The Finnish system on the other hand provides an example where there is no contextualisation of the SLGIS data. As the Finnish higher education financing system is currently built on separate institutional agreements and not comparable advantages and disadvantages, this does not seem to be an issue. It is the Statistics

Finland data on graduates that is used by the national policy level to set targets for institutions.

Utilising SLGIS *to inform future, present and previous students, and the general public* seems to be another important area. Especially the English DLHE and the Finnish voluntary datasets have been set up with the aim to *inform career guidance* and thus to enhance the labour market outcomes of graduates. The SLGIS outcomes are presented to the current students as possible routes on labour market choices and suggestions on how to start their careers. The other datasets not being set up with this aim can have some relevance in this respect.

There is little information how the Dutch SLGIS are used in informing career guidance. The national level website 'Studie Keuze' is a recent attempt of the government to inform choice, as suggested in sub-section 10.1.4. However, according to the VSNU-interview, there are crucial problems with this procedure regarding timing,

(...) it's a bit fake image, because by the time... we ask graduates 1.5 years after they graduated, so they started 4.5 years before. And when you... You have the data on a cohort that started 6 years before the new cohort starts, so why? The government doesn't really seem to get that. (Research institute 3, NL)

As suggested in the policy-level description, labour market planning in the Dutch case seems to be crucial. Within one of the MBO institutions for example, the interview refers to the national ROA data collection regarding career guidance and that along the labour market planning initiatives ‘between now and let’s say 2020, we need more from these, more from that’ (School 2 - guidance, NL). A policy level interview suggests that career guidance and informing students is neither sufficient nor appropriate in the Netherlands and this results in ‘lots of switching and we think that’s not good for their school career at the end’ (Ministry 1, NL). The problems around career guidance might be part of the reason why little sign of the SLGIS utilisation emerged within this area. Another possible explanation is of course that further interviews for this research with career guidance experts could have revealed more about this topic.

The Finnish Statistics Finland dataset has some relevance in career guidance as well, being used ‘for guidance purposes in the department, or in careers offices and career administrative purposes of faculties’ (University 6, FI). The three voluntary information sets that are set up mainly to inform the career guidance process provide information about what destinations current students could consider, ‘what kind of prospects the previous students had in the labour market and so on’ (University 6, FI). One of the university interviews provides several examples of what information is used from the career follow-up research to inform current students,

(...) what kind of average wage they can get, have example of employers, how satisfied people were with the studies 5 years after graduation, when they know a little bit how they can use it in the work (University 6, FI)

What they need, do they need some language skills more, what kind of skills they need. (University 6, FI)

The types of information used to develop contents for career guidance from the Finnish first-destinations are the following,

(...) how did you get your first job and what do you do, how much time did you need to get your first job, how was it related to your studies. It's more like surveying the turbulence after the graduation. What are the problems getting a job and how did you get a job, really. (University 7, FI)

A university interview conducted in a smaller Finnish town outside the Helsinki region suggests that the AN data are used to show graduates where – geographically – they should be looking for jobs,

[Some departments] know that there isn't any work for them [graduates] here that they have to move elsewhere if they want work. So they can say, there is no work here, you have to go, so while you are studying here, start to orient at the same time that you won't be living and working in (...) [this] region. You come to here to study and then leave for Helsinki or somewhere else. (...) Or then you do something else. (University 7, FI)

In the English case, where the DLHE has been originally set up to satisfy the data-needs of the career guidance community at higher education level, the data are generally used as a prompt for discussion within the guidance process. One university interview questions the quality of the data suggesting that 'the HESA survey point at 6 months is completely barmy', as the majority of the young people will not 'have got themselves sorted out at 6 months to kind of where they want to be' (University 5, EN). However, the data can still be used as a source in career guidance,

We can say, look, this is type of... this is where students in your department... this is what they've done. This is the kind of stuff they've gone into (...). We use that as a prompt for a conversation. There are some national statistics available (...) like *What Do Graduates Do* produced by HECSU. Anything we've got our hands on, quite frankly that enables us to talk about: these are the kind of options. Because the place we start from [in career guidance] isn't

‘this is how to pass the interview’, the place we start from is ‘who are you then’? What’s important to you, what’re your ideas at the moment. (University 5, EN)

The above mentioned organisation called Higher Education Careers Services Unit (HECSU) is one of the major users of the DLHE. Their publication series entitled ‘What do graduates do?’ is a widely used analysis of the data (Redman et al., 2011). This university uses a software called Graduate Employment-Market Statistics (GEMS) they purchased from the University of Huddersfield to display their DLHE data. According to this university interview, the GEMS makes utilising the data easier as it gives a chance to break down the information to produce school or departmental level analysis. The software GEMS has a public and a private interface as well, thus University 5’s website gives information for prospective students and the wider public beyond providing information internally (University 5, EN).

Beyond advising current students, the SLGIS can be used to provide information to possible future students – either through the already mentioned national initiatives or through *marketing the school or the university* itself. It seems to be true for all cases that the SLGIS outcomes are publicised only in case they show a better result than the national outcomes or when compared to similar institutions. For example in the case of a Finnish universities of applied sciences, the interview suggests that they ‘noticed that students from [University 8] they receive the best salary of all, and that

we announced that in our website and it went through a couple of newspapers as well' (University 8, FI). A similar remark is given by another Finnish researcher interview suggesting that the research is sometimes criticised at their university as 'some departments are saying that we are asking the wrong questions when we get bad results' (Research institute 10, FI).

This approach to some extent might hinder informing the general public. As a Finnish researcher interview suggests, the voluntary SLGIS outcomes for their university are openly available on their website. However, some other institutions choose to use the data only on internal sites, thus not providing labour market information for their future students, or the general public. This is seen to be problematic, as 'someone who is thinking about choosing a university who has no access to the intranet cannot compare whether the odds for employment were good or bad' (Research institute 11, FI).

The English universities interviewed take two different approaches to publishing their DLHE data and using it to inform future students. University 3 suggests that the data only appears if the central university marketing uses the DLHE figures of one or the other department. On the contrary, University 5 publishes their figures through the already mentioned GEMS software on their website. These approaches are set to change with the compulsion of providing the Key Information Sets on the university websites.

There are two further issues mentioned regarding using the SLGIS for marketing purposes in the two other cases. In the Finnish case, marketing seems to have a limited scope as there is no 'real' competition within the tertiary sector. Higher education is free, thus,

(...) there is not that much incentive to make that kind of marketing, because it's [university education] free, there is not real competition between the universities. We can't compete with price. (University 8, FI)

In the Dutch case the sampling and the response rates of the SLGIS make it problematic to use it in marketing according to the HBO interview,

If a programme would look at data like that, you could use the ROA data. But as I said before, it's not that representative that you could use it as 'so many % of students go there'... (University 1, NL)

In the Dutch and Finnish case the SLGIS are mentioned regarding keeping in touch with the institution, providing some kind of *alumni services*. The main reasons behind setting up alumni services are gaining contacts to the labour market and additional funding for the institution. The potential of keeping in touch with alumni is not yet

realised in most of the Dutch HBO institutions despite them having data from graduates through the ROA research suggesting: 'you can approach me [your former student] if you want me to be your contact person on the job' (Research institute 1, NL). At the WO-level there are no references how the data are used in alumni relations, this might be due to the type of interviewee(s) asked in this research. The alumni system seems to be a new phenomenon within the Finnish higher education as well. It is not an important issue currently as graduates are said to identify less with a specific institution, but rather see 'themselves with graduating from a field, to being like what they are: engineers' (University 8, FI). At one of the Finnish institutions the interviewee(s) are about to set up their alumni networks, it is in embryonic form at the moment. Their future goal is to keep in touch with their former students and to invite them back to talk about their work, or participate in the decision making of the department as a business life representative (University 8, FI).

The above mentioned processes in which the SLGIS are employed at the institutional level seem to echo with the TRACKIT study on graduates tracking systems. As they summarise the utilisation processes of graduate information systems,

Compared to their use of student tracking data, graduate tracking data is more often associated with promotional activity, as graduate success in the labour market may boost the prestige or the national ranking of institutions. Several experts also reported that the results of graduate tracking were useful in

counselling students, especially for career guidance purposes. Finally, graduate tracking instruments are reportedly used by institutions to gain funding [from central government] (...). (Gaebel et al., 2012: 27-28)

A further general point that emerges both from this research and the TRACKIT study as well, is the problem of having vast amounts of student as well as school leavers' and graduates' data without the appropriate expertise or human resources to analyse them (Gaebel et al., 2012).

Comparing the above listed processes with Schildkamp and Visscher's (2010) taxonomy, it is clear that the school leavers' and graduates' information is more utilised in the overall institutional policy-making and in processes oriented externally it has less direct impact on instruction, than student achievement data (Schildkamp et al., 2012, Schildkamp and Visscher, 2010). This research did not find clear references to using the SLGIS in instructional and curricular decision, professional development, or in reflecting on one's own functioning (Schildkamp et al., 2012).

10.3 The data-needs of other stakeholders

This section details the opinion of some other actors beyond the policy and the institutional level whose data-needs emerged regarding the SLGIS. This section analyses the three cases all at once. It mainly deals with how the SLGIS outcomes

are available for further analysis for academics, and it provides the views of other stakeholders as well.

There are two different approaches regarding how the data are available for further analysis. Researchers and other actors either have to purchase the datasets or they can request the data free of charge. The data are available for free in the case of the Dutch information systems and the English LSYPE. The school leavers' and graduates' information that have to be purchased are the English DLHE and the Finnish SLGIS, both the Statistics Finland data and the voluntary datasets.

Regarding the datasets that are available for free in the Dutch case, it is possible to use both the ROA and the VSNU national data for academic research. ROA are keen to draw in more data users, as this means 'that "things" are happening to the data' and that they are more widely disseminated (Research institute 1, NL). Following a different approach, VSNU are stricter on whom and under what conditions can use their data. The data belong to the universities, therefore without a contract with VSNU no one can publish about them (Research institute 3, NL).

In the English case the LSYPE is available as a secondary source for researchers to pursue their own analysis and the DfE data-team is keen on disseminating the data. About the LSYPE-users the DfE interviewee(s) suggest the majority have been using their data throughout the course of the project,

Our iLSYPE website has around a 100 registered users, it's not so much quantity but the diverse background of the users [that is really interesting]. We've got people in this department, other analysts, user and policy user, other departments, students, PhD students; [and] professors might be interested in it. (Research institute 6, EN)

The users of the LSYPE are regularly contacted by the DfE team to give them further information on the newer LSYPE sweeps, and they are asked to provide their analysis on the data to the DfE,

Lots of hard core users, who are more expert than you and you can do. (...) Certainly if they've requested data that is more sensitive stuff, we can turn around and say: 'you've requested our data, you said you're ready by now, can we check that you have for data protection reasons'. But also, can we have all your analysis that you've done. (Research institute 6, EN)

An LSYPE-user interview for this research suggests that when using it in a research project, the LSYPE data enables to locate their work in the national context. The research project they work on is mainly dealing with young people's expectations for the future. Therefore the secondary data source is thought to be useful,

[The LSYPE data] was very helpful, because of obvious reasons it gives a handle on some of the processes that I was interested in researching. (...) But it was kind of situating my own... increasing my confidence of what I got looked sensible and didn't look strange in relation to general evidence. And I suppose the benefits were indirect, helping with that work across qualitative and quantitative data. (Expert interview 5, EN)

In their own research project they use some of the LSYPE questions to enable comparability across the national and the local dataset and to complement the local information with the national results (Expert interview 5, EN). Their recollection of using this secondary source is mainly about the issues of getting to know a longitudinal dataset that has several different topics and both the young persons' and the parents' results,

It was a massive dataset, even then [using it in the early years], massive amounts of documentation of which I (...) [had in] box files, printing off the whole load and trying get to grips with it. I think what I discovered that pleased me, was that the sort of immediate kind background information that I needed or wanted about parents' about class background all that higher education background (...). (Expert interview 5, EN)

The other SLGIS have to be purchased from the research organisations. The DLHE for instance is used for analysing the graduate labour market by several organisations and it is purchased by the press to create league tables of universities. According to an expert interview within the English higher education, only few researchers are actually drawing on the DLHE as a data source,

There are research projects to be done here [with the DLHE], which could tell us a great deal about changing patterns of employment in different regions, different parts of the economic sectors. A very rich dataset people can draw from, time-series over a number of years and nobody is using it. (...) They're not using it because they are not aware of the data because some of the misconceptions about the quality of the data. It's far better for looking at graduate employment than any other dataset available. (Expert interview 3, EN)

According to the expert interview at higher education the DLHE longitudinal could be used more by the stakeholders as well, especially academic researchers. However, the sample size and the possibilities of breaking it down no further than mission groups 'cuts down the utility quite significantly' (Expert interview 3, EN).

Regarding the Statistics Finland data the main problems of utilisation are pointed out as well. The basic SF dataset available for a smaller fee only includes very limited

information and a more detailed datasets on employment would cost substantially more (Research institute 1, FI). A researcher interview suggests that conducting one's own survey costs a lot of money as well, but it might suit the research purpose better,

Many of the important and interesting questions in the relationship between education and work in general, I think they require more information that is included in the statistical data. So if you could plan your own research from the point of view of labour market studies, theoretical questions and so on, you would need the survey of course. (Expert 8, FI)

Another interview at a Finnish university suggests similar things,

I had these big dreams of getting this huge pile of data and they [SF] do have it, they have the data, it would be quite easy to give it to us. But because of these strict privacy policies, I decided that it wasn't worth the money and the effort. We would have gotten information on which cities, how many people we have in which cities and average salaries and that kind of stuff. But the information you would have gotten after the privacy checks, it would have been that broad, that it wouldn't have been that much better than the thing that we already get from Statistics Finland. One very difficult thing is strict privacy policies. And they are 'harming' our work every day. (University 8, FI)

A university interview suggests further possible reasons behind the expensive nature of the Statistics Finland's data,

(...) we used register data from Statistics Finland, and they are not very eager to give it. Not even to research purposes. First of all our legislation is quite tight and the [barriers?] in our legislation is even tighter. Because they also earn their own money, they want to make their own studies. (University 7, FI)

According to this researcher, however, the government and especially the education ministry are looking into how the data could be more available for research purposes.

In the case of Finland social partners emerged as further important stakeholders. Social partners such as labour unions or professional associations have been collecting data on specific educational fields for a longer time. One particular organisation interviewed for this research has conducted their data collection within their field of interest since the mid-90s. Currently, the HE guidance network provides this organisation with graduates' information as well. As the expert from this major professional organisation described the nature of collaboration in the early years,

(...) in the very early stage those that have been doing this Aarresaari cooperation they have contacted us and asked us if we are interested in building a cooperation. And actually in the early stages they had some problems getting all the universities in there then we tried to contact some key persons in the universities and then we got all the universities to be in this network together. I was very satisfied to get all the universities to get to join from our own field to join this cooperation. It's very good actually, its high volume also (...). (Expert interview 6, FI)

This organisation purchases the data from the Aarresaari Network and produces reports about graduates' within their field to disseminate the information further. To do so, they 'give it to the universities and try to have some press releases and something for the media as well' (Expert interview 6, FI). This specific organisation does not collect further graduate data. However, they still collect information from their members on other topics. Their longstanding survey asks professionals about their salary levels and other specific characteristics of their career and employment (Expert interview 6, FI).

As for England, one of the expert interviews within further education suggests that the YCS has been used as one of the information sources in their work beyond the student records and the qualification records,

A third source of information that are around are the government surveys. The Youth Cohort Study and the Labour Force Survey, which are both used to [inform our work]... (Expert interview 4, EN)

10.4 Summary and comparison of the cases – what data-needs emerge in the different cases regarding the SLGIS?

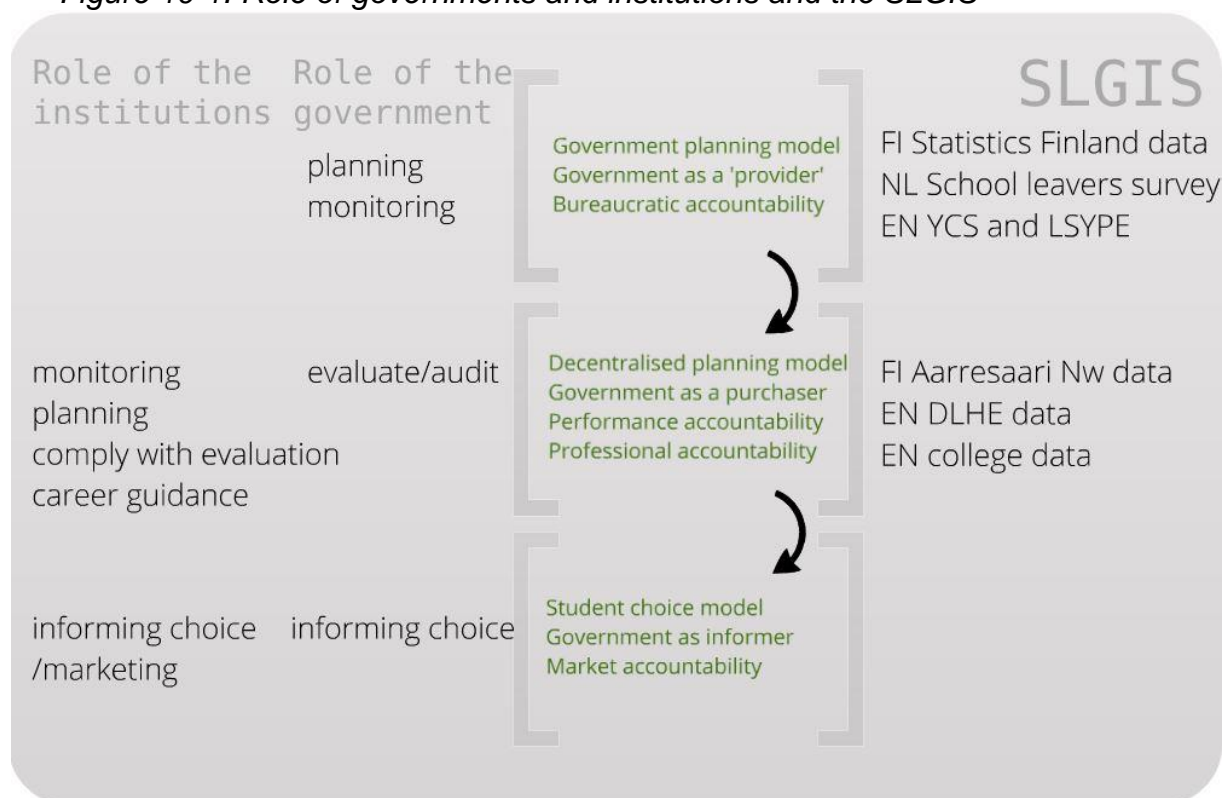
These four sub-sections detail the interrelated data-needs of the policy and the institutional levels. The first sub-section compares the processes in which the SLGIS are used at the policy and the institutional level. The second sub-section provides a discussion about ownership of the school leavers' or graduates' data and how the different levels involved have a say in what information should be collected. The third sub-section details what view of education the SLGIS convey. The fourth sub-section discusses the relevance of the school leavers' and graduates' data in terms of providing to the labour market.

10.4.1 Processes that the data are used in

This section connects change in the SLGIS to the change in the processes they are used in and to the change in the model of government. Figure 10-1 provides an overview of Garn's (2001) and Davies' (2012) typologies of the different models of government. Davies (2012) suggests that there is a general shift from the government as a 'provider', where planning is the crucial role; to a 'purchaser', where the duties are decentralised; and then to an 'informer', where the student choice

drives change. Along this suggested change the policy and institutional responsibilities regarding school leavers' and graduates' could be expected to change along with how they are measured.

Figure 10-1: Role of governments and institutions and the SLGIS



(Davies, 2012, Garn, 2001)

Figure 10-1 first, relates the processes the SLGIS are used in with the models of government and second, it connects the existing SLGIS to the models. As Figure 10-1 shows, in a governmental planning model it is the role of the policy level to monitor the system and plan according to the SLGIS outcomes. In a decentralised planning model the policy level evaluates and audits the institutional level that has to comply with these requirements. To comply with the requirements, the institutions

have to monitor their outcomes, plan according to them and help their current students to gain better labour market outcomes. In a student-choice model both the policy and the institutional levels are aiming to inform students.

The history of the SLGIS seems to fit the idea of change in the models of government. The 'older' SLGIS as the Finnish Statistics Finland data, the Dutch school leavers' surveys and the English YCS and LSYPE are mainly delivering data for central government and serve their purposes. All of these information systems gather evidence about the education system as a whole and provide a comprehensive picture of it. As these information systems have been set up mainly to serve central government, there are relevance problems currently with them in terms of institutional application. The Finnish SF data has been deemed insufficient due to the range of information it provides, the English YCS and LSYPE have never been planned for schools or universities. Regarding the Dutch SLGIS, the secondary level cannot apply it, and there are some relevance problems emerging at the higher education level as well.

The newer information systems seem to comply with the model in which the responsibilities are with the institutions. All of the SLGIS listed here gather information about one sector or institutional level not allowing comparisons across the educational system. This arrangement suits the government as a 'purchaser' model, as the SLGIS here provide in-depth information about the specific institutional

level. In the case of the English DLHE the policy level started to use the SLGIS to evaluate the institutions, building on the original aim of informing career guidance. In the other two cases the datasets originally set up for the purposes of central government have been gradually applied in evaluation and audit procedures, rather than making changes to them or setting up new information systems.

In the third model both the policy and the institutional levels are informing students about the employability prospects. Individuals here are supposed to choose their future career and institution partly on the basis of labour market outcomes of former students and graduates. Whereas the institutions market their results, the governments provide platforms for the SLGIS data. These processes, again, utilise information systems that have been set up with different purposes. This is one of the main reasons why the informing choice agenda is questioned by a number of interviewees.

10.4.2 Ownership of the data

The differences in the financial background and institutional setup of the various SLGIS are discussed in Chapter Eight. Along these differences, the question of who has, or feels they have, ownership of the information is raised by a number of interviewees in all three case study countries. This issue is a particular concern for the graduate information collections.

10.4.2.1 Data on leavers from secondary education

At the secondary level within all countries the school leavers' data are produced according to the guidelines of each national government. Respondents in all case study countries pointed out that little use is made of the data at the secondary institutional level. This might be due to the level that the actual surveys depict. If the data are not presented or disaggregated to school-level, schools may find it hard to use the results. There are differences regarding this in the three case study countries. In England and in the Netherlands the information systems about the secondary leavers are only describing a national level picture. On the contrary, in Finland, information is provided at the institutional level. Even though the Finnish secondary level institutions gain data about their former students through the Statistics Finland data collection, the schools still do not make much use of them. One of the interviews suggests that they are aware of the data, but as they are 'old facts' due to the time-lag of publishing, they are not worth looking at them (School 4, FI). Another Finnish interview at the secondary level showed the detailed SF tables of the institution but it seemed that their more detailed knowledge of their former students derived from the leavers 'reporting back' to the institution (School 3, FI). Even though in Finnish secondary schools there is some information from a national, reliable source on all their leavers, this information seems to be of little relevance to the institutional decision making or quality assurance.

This comparison suggests that it is not the level of aggregation of the data, as such, that is causing the lack of utilisation. A common characteristic for all three cases is

that there is little sense of ‘owning’ the data at an institutional level. This could well be because the whole programme is initiated by the central government, giving schools themselves little say in what information should be provided. Thus it seems that even if the datasets are providing information at the institutional level, if secondary schools do not have a sense of ‘ownership’, they do not make much use of the data. As further confirmation of this interpretation, the Dutch example of MBO schools shows even if the national scheme does not provide sufficient information at the institutional level, having schools initiate their own research programmes increases the likelihood of the schools using their leavers’ information.

10.4.2.2 Data on leavers and graduates from tertiary education

The main areas of debate about the graduates’ data within tertiary education are detailed in Table 10-2. The first line in each cell refers to further education, the second line to higher education. The areas covered in the table are the extent to which colleges and universities can influence how the SLGIS is conducted in terms of the main topics and the time-frame of the research, who owns the collected data, and whether the institutions have access to others’ data.

Table 10-2 'Ownership' of the data, for FE and HE

Higher education	Netherlands	England	Finland
Who finances the data collections?	Mainly institutions (HBO)	Mainly institutions (FE)	Nationally funded (Statistics Finland)
	Mainly institutions (WO)	Mainly institutions (HE)	Nationally funded (Statistics Finland) <i>and</i> Institutions (Aarresaari Network)
Who collects the data?	Research organisation (HBO)	Institutions (FE)	Statistics office (Statistics Finland)
	Research organisation (WO)	Institutions (HE)	Statistics office (Statistics Finland) <i>and</i> Institutions (Aarresaari Network)
Do institutions have access to others' data?	Institutions get others' data, within the fee (HBO)	No data available (FE)	Institutions get others' data, additional fee (Statistics Finland)
	Institutions get others' data, within the fee (WO)	Institutions get others' data, additional fee (HE)	Institutions get others' data, additional fee (Statistics Finland) <i>and</i> Institutions get others' data, within the fee (Aarresaari Network)
Who owns the data?	Institutions (WO)	Institutions (FE)	Statistics office (Statistics Finland)
	Institutions and research institution (HBO)	HE Statistics office (HE)	Statistics office (Statistics Finland) <i>and</i> Institutions (Aarresaari Network)
To what extent do institutions have a say in how the SLGIS is carried out? (Research instruments)	Much (HBO)	Very much (FE)	Not at all (Statistics Finland)
	Very much (WO)	Not at all (HE)	Not at all (Statistics Finland) <i>and</i> Very much (Aarresaari Network)
To what extent do institutions have a say in how the SLGIS is carried out? (Time-frame)	Changes constrained by trend-data	Changes constrained by trend-data.	Any year can be analysed (Statistics Finland)
	Changes constrained by trend-data	Changes constrained by trend-data	Any year can be analysed (Statistics Finland) <i>and</i> Can opt in or out; Can choose between different types (Aarresaari Network)

In terms of influencing what data are collected, higher education institutions in all three case study countries can have some influence. The time-frame of the research, however, is more restrained to how the research has been carried out beforehand to preserve comparability. As argued in the case of the secondary level, this should mean a higher sense of 'owning' of the data within the tertiary education institutions. In fact, the colleges and universities in all countries seem to be concerned with their leavers' and graduates' results and seem to apply them within the institutional procedures as well.

Beyond this, tertiary level institutions are also more likely to take action in terms of 'ownership' if necessary, to initiate change around the national graduates' information systems. There are differences to what extent they succeed in this. In the Netherlands the questions around the time-frame, the relevance and who possesses the datasets are solved through changing providers in one of the sectors. Similar problems, like the relevance issue in Finland are solved through the universities initiating their own additional research programmes beyond the national data collection. On the contrary, in the English case a recent review of the DLHE data and how it is collected has resulted in no change in terms of the most problematic issue, the time-frame, and has brought no change for universities in the financial setup either.

Beyond having more 'ownership' of the data, a further plausible explanation of higher levels of data-utilisation within tertiary level could relate to the evaluation and audit processes. As suggested in the previous sections, there are national requirements in all case study countries that institutions especially at the tertiary level have to comply with. These requirements regard the labour market outcomes of the institutions and are almost entirely absent at the secondary level.

10.4.3 The underlying ideas of the SLGIS

The way the data are collected (the focus of the research instruments and the further information attached to the SLGIS outcomes) are determined by how different actors view education. As suggested in the introductory chapters to this research, human capital theory seems to be one of the possible underlying concepts of the school leavers' and graduates' information systems. Beyond the human capital viewpoint of the purpose of education, the humanistic and sociological viewpoints seem to be partially or entirely missing from these information systems. The majority of the SLGIS analysed here allow the combination of other administrative data that hold some level of background information on the school leaver or graduate. However, this does not seem to be widely employed. It is only the more broadly defined English longitudinal studies, the YCS and LSYPE that interpret school leaving within the individuals' social situation. Some further remarks about this 'missing' interpretation of school leaving and graduation are provided in Section 11.2.3.

The economic agenda in the majority of the SLGIS analysed in this research seems to be strong. There are two points that underpin this assumption. First, one of the purposes of having this sort of information is researching the initial transition from compulsory schooling to the world of work, complying with human capital theory. Second, another aspect mentioned in all case study countries is the importance of calculating the returns to education.

Every SLGIS allows for analysing initial transitions from school to working life, in fact this is partly their scope. There are differences in what level of picture these research programmes can provide. Whereas the Dutch research programmes provide a snapshot of transitions of different school levels and sectors a fair amount of time after the individual has left the institution, the English SLGIS on FE colleges and universities (DLHE) attempt to analyse the transition process through gathering data close to graduation. The English LSYPE and the former YCS datasets however, provide longer-term information on the initial transition process after compulsory schooling. In the Finnish case Statistics Finland provides a good view about how people enter employment, how they make their way from education to the labour market; this is complemented with the more detailed, deeper information of the Aarresaari Networks' snapshots at the higher education level. Especially the first-destinations research can bring details about transitions after university.

Calculating the returns to education is possible to some extent in the case of Finland using the Statistics Finland dataset. This dataset provides information about a longer period after leaving the educational institution and it gives data on the salary levels of the school leavers' and graduates'. However, as the information gained through the SF data collection is limited, it is not possible to analyse the type and level of labour market outcome. In England and the Netherlands, the school leavers' and graduates' information systems provide a longer term view on education or give comparative data on more educational levels that would make it possible to calculate returns. In England, the Labour Force Survey is mentioned as an information source that seems to permit calculation and comparison of returns at the different levels and sectors of education. An interview at the higher education section of the ministry mentioned a project, that is,

(...) using Labour Force Survey data and British Household Panel survey data, investigating the returns to a degree. So as to do economic modelling using labour force survey data: what impact does a degree have on earnings in the future? And the department has done a few projects in the past, because that's a very key question, what difference does a qualification make, trying to isolate the impact of a qualification against all the other characteristics. There are standard papers done on that, it's never perfect, but there are standard models is a way to do it. (Ministry 4, EN)

10.4.4 Liability over ‘labour market relevant’ education

Human capital seems to be one of the underlying theories of the information systems under scrutiny as detailed in the previous sub-section. This sub-section sets out to consider the role of the institutional level, what the different schools and universities think about their role in labour market relevant education and how they use the SLGIS in relation to this.

The first question is what is considered a ‘successful outcome’ for the former students or graduates of a particular institution. Secondary schools for instance can have two distinct aims. They either ‘produce’ to the entrance exams of colleges or universities thus labour market relevance being a minor question, or they educate to a vocation which case the opinion of the job market is of higher importance. In the first instance, from the more academic schools only those students go straight to the labour market who ‘failed’ in getting a university place. The schools within the vocational education and training sector ‘should’ be interested in the outcomes of their former students. At the university level, the more ‘vocational’ universities aim to educate for more specific professions, whereas the academic universities usually set out to provide a broader, more general learning experience.

This sub-section considers the secondary and the tertiary levels along the three case studies in terms of a) the extent to which their education could be made labour

market relevant; b) the means of achieving labour market relevance; and c) what role the SLGIS have in making education labour market relevant.

10.4.4.1 *To what extent?*

When considering vocational schools and professional academic universities, in all the case study countries they claimed taking measures to gear their course contents towards the labour market, of course with a different emphasis. Academic universities are less inclined to consider labour market relevance compared to vocational schools and professional universities. Considering the differences in the case study countries, the Dutch and Finnish cases showed a higher importance in gearing education towards a specific profession than the English case. In England, institutions operate within a less prescriptive labour market environment. The necessity of educating to a highly specialised profession is questioned by the interviewees and seems to be of lesser importance. However, in both the Dutch and the Finnish case there are some interviewees who raised the problem of courses being too specific, especially as in Finland people seem to switch between multiple professions throughout their lives (School 4, FI).

Two further concerns are raised in all case study countries in relation to labour market relevant education: the pace of change in the needs of labour market and the necessity of generic skills rather than vocational skills. Moreover, several interviewees pointed out that the final job acquired depends on the actual leaver's or

graduate's ability to apply for jobs as well as the current state of the labour market and whether there are available positions. These might be interpreted as averting some of the liability to other factors outside the institution, as to the students themselves or the external influences.

Another possible explanation of why institutions, especially secondary schools are less inclined to consider and act on labour market relevance is that the national policies affecting them are more geared towards issues 'within' and not 'beyond' school. For instance, in Finland and the Netherlands, the importance of driving down drop-out rates is raised in schools. In both countries it is a crucial current national initiative to tackle the number of early school leavers, schools have their targets of reducing 'drop-out rates' or 'negative outcomes' (School 1, NL; School 3, FI).

It seems to be obvious that it is easier to tackle problems within school, with tools that are didactic, to achieve outcomes that can be measured and compared within the educational sector and that are less dependent on the labour market and anything 'beyond' school. These claims are true for the tertiary level as well. Universities especially point out that their programmes are more geared towards the knowledge of a field, not necessarily 'producing' to the labour market.

10.4.4.2 *Through what means?*

Achieving labour market relevance appeared in three main processes. First, by gathering information to change course content through keeping in touch with labour market representatives from the specific study-fields or more generally from working life (School 3, FI; University 5, EN; University 1, NL). Second, by informing students about the possibilities they have for a career through organising career fairs and providing career guidance (College 2, EN; University 5, EN). And third, by providing practical experiences to students through organising apprenticeships, employability programmes, work-placements and entrepreneurship programmes (School 4, FI; School 1, NL, University 4, EN).

In all case study countries the interviewees especially from vocational further education or professional higher education talk about the importance of advisory boards and keeping in touch with working life. These boards have the duty to advise the school or the university on particular educational programmes and how they could be more relevant to the labour market. First, the focus of the board can change drastically within a short time-frame that is hard to follow within educational planning (College 1, EN; School 3, FI). Second, the most frequent problems raised by the boards are around generic skills rather than specific vocational knowledge (College 1, EN). Third, a specific occupational lobby might have tremendous impact on educational planning (School 1, NL).

Although in almost all countries either the national policy makers or the institutional interviewees point out the need for better career guidance, this normally means a more general guidance, rather than targeted occupational tutoring. Both the Netherlands and Finland have stronger labour market planning practice than England; however, this is exercised at the system level, not at the individual students'.

10.4.4.3 *How is the SLGIS used?*

The school leavers' and graduates' data seem to be applied as an indicator of the extent to which the education provided in the school or university is relevant to the labour market. Necessarily, this is only feasible where the datasets allow for an institutional level analysis. Thus, especially in secondary schools it is more usual to have some anecdotal information about the school leavers through the course tutors, this usually concerns whether and how they found a job. This is even true where data on leavers is available, like in the Finnish vocational schools. The only exception in the interviews is an MBO school in the Netherlands, where the data collected nationally is complemented by the school's own information system and it seemed to feed into the course planning (School 1, NL).

At the tertiary level the data on the outcomes of graduates are partly used as an indicator for monitoring purposes, but in some cases it also serves as a means to initiate institutional change. In the English case for instance the universities are

benchmarked along a certain level of graduate employment measured in the DLHE (University 4, EN), and in some cases this data seems to be used as a prompt for action (University 5, EN). A less prescriptive procedure is visible in the Finnish case, where the nationally accepted datasets are complemented by the tertiary institutions' own research. The outcomes seem to be used especially in career guidance and to some extent, feeding into changes of the course content (Research institute 11, FI).

CHAPTER ELEVEN

FURTHER DISCUSSION OF 'DATA NEEDS'

In this chapter two further summarising sections regarding the data needs and data utilisation are provided in this chapter. Section 11.1 discusses the problems that occur in regards the SLGIS in the different nation states. Finally, Section 11.1 summarises the notion of comparability within the different national systems regarding time and space.

11.1 Using others' data: levels of comparison

The possibilities and challenges of comparing the data from different aspects arose in all three case study countries. The two main questions are first, whether the data give a system level comparison of outcomes or whether they provide comparable information only within educational sectors and levels. Second, whether the data provide a longitudinal view of careers or they give cross-sectional accounts of labour market outcomes.

11.1.1 Comparing: 'space'

The SLGIS that aim to provide a system level picture permit evaluation of the whole educational structure. When only separate sectorial accounts exist that allow comparisons within the same sector and level, the responsibility of achieving better outcomes could be pushed on the institutions rather than thought to be dependent on the education policy. The question of comparability within and across sectors and

levels of education arises in terms of what information the institutions themselves have, and to what extent they can benchmark their outcomes to others or to the national (sectorial) average.

11.1.1.1 *The national view of comparable data*

This section contrasts the case study countries regarding first, whether or not they gain a system level picture of education through the school leavers' and graduates' data, and second, whether comparable data about the different sectors are used in the national policy making process. From the perspective of the related national policies, there are three crucial procedures that presuppose comparable school leavers' and graduates' data at the institutional level. These are system level monitoring, institutional evaluation or auditing, and informing the choice of prospective students.

Both the Dutch and the Finnish information systems provide a national picture of the educational system. However, whereas the Dutch SLGIS provides detailed information at a given time-point, the Finnish statistical dataset provides limited information on longer term outcomes. The English data collections of the different educational levels do not offer a system level picture; it is only the LSYPE that serves these purposes to a limited extent. These also mean that whereas in the Netherlands and Finland the same data are used in the policy processes and within institutions, in

England these two procedures are more divorced from each other at the secondary and the college level.

There is some system level information available in each country that permits monitoring. However, for England the YCS and LSYPE are hardly used by the institutional level, as these information systems do not provide any school or university level figures. Thus the system level evaluation is detached from the institutional assessment, making it more likely that the responsibility for outcomes is only with the school or the university level.

Comparable data within the different levels or sectors is also used for auditing, evaluating institutions on behalf of the national policy makers. The application of the data within auditing and evaluation can be of two types. Either specific set benchmarks need to be achieved by the institutions in terms of their graduate labour market outcomes (like in the case of England), or they need to demonstrate that they are working towards labour-market relevant education and thus they can use the SLGIS outcomes in their argumentation (as in the Netherlands).

The fairly new policy aim of informing choice is raised with different importance in the case study countries, this also presupposes comparable data. Whereas in England and in the Netherlands the designated websites to provide comparable data on the higher education institutions are set up in the recent years, in Finland this concept is

still tentative. In the English and the Dutch case the data on graduates' outcomes feeds into the bigger, national level information systems about the quality of higher educational institutions, the Key Information Sets and the Studie Keuze respectively.

11.1.1.2 *The institutional view of comparable data*

This section details what level of comparison the different SLGIS allow for within the three educational systems. It also points out which sectors and levels have data on other institutions' outcomes. Table 11-1 summarises this information at the different levels and sectors.

Table 11-1: Comparability at a given time-point within the different educational levels and the SLGIS

Comparability at a given time-point	Netherlands	England	Finland
Secondary education	No comparable data (VMBO, VWO, HAVO, MBO) Through separate research organisation: some comparability (MBO)	No comparable data (LSYPE, YCS)	Comparable data, Limited access to others' data (Statistics Finland, secondary level)
Tertiary education – College/university of applied sciences	Comparable data, Limited access to others' data (HBO)	No comparable data	Comparable data, Limited access to others' data (Statistics Finland, tertiary level) Comparable data, Full access to others' data (Aarresaari Network, destinations)
Tertiary education - University	Comparable data, Full access to others' data (WO-Monitor)	Comparable data, Full access to others' data (HESA)	Comparable data, Limited access to others' data (Statistics Finland, tertiary level) Comparable data, Full access to others' data (Aarresaari Network, destinations; Aarresaari Network, follow-up)

From the perspective of the institutions, information on others is useful when benchmarking themselves to others or to the national average, and using this information in their institutional procedures as well as when 'informing choice' through their marketing practices. In terms of benchmarking, at the secondary level the data rarely allows for such comparisons. Even if schools have comparable information as in the case of Finland, they do not seem to apply the data in this way. The datasets available for the tertiary level, however, allow claims about being above

or below a national, sectorial, or study programme average in all three case study countries. This information on graduate outcomes can feed into the institutional strategy planning as seen in the case of the Netherlands (University 1, NL) or into initiating institutional change as an example from England shows (University 5, EN).

Comparing to an average means by definition having half below and half above the mean. The results of SLGIS are used as marketing tools only when they favour the institution. As a ministerial interview from a Netherlands pointed out, comparing to the national average ‘only for a part of the schools is good marketing’ (Ministry 2, NL). Especially in the case of not having marketable results, the majority of the schools and universities use other sources of information on how their study programmes connect to working life, for instance their contacts with labour market stakeholders. This procedure is not comparable across institutions and it is impossible to trace the sources or assess the validity of the information. This could be regarded the ‘easy way’ of concealing for the bad national school leavers’ and graduates’ results.

Comparisons between institutions can be identified in rankings and league tables. Both the Netherlands and Finland are against the creation of such tables. In the Netherlands at the professional university level, there are only a few national averages to which the institutions can compare themselves, as these institutions are said to be unwilling to share their data with each other (Research institute 2, NL). The

Dutch WO-institutions seem to be more cooperative, they share their data with other institutions to benchmark outcomes and allow for deeper analysis. However, due to a sector-wide agreement, they are not allowed to use league-tables in their public affairs (Research institute 3, NL). In Finland a similar approach is in place. An interview from HE suggests that the sector is aiming to compete at the international level, not within the country. Even the financing structure of the universities is geared towards institutional targets rather than comparative advantages and disadvantages,

The idea has been that (...) we should actually compete globally and not against each other... but of course there is always some competition, but not maybe between institutions, it can be also between departments or individuals, within the universities. (Expert interview 7, FI)

Within England the importance of school and university league tables has grown in the last few decades. The DLHE data are purchased by various publishers to produce league tables in which the initial labour market outcomes are just one variable of many. The institutions use their ranks in marketing to claim that the university or a specific department is doing well at the national or at the international level.

One of the issues with league tables is to what extent they 'punish' universities in poorer economic areas, as it might be harder for their students to find jobs. As an

expert interview explained, the issue with using the DLHE data to create league tables and to what extent comparing is fraud in this case,

Destinations data are not suited to a league table set up, because each individual university is different in student bodies; they operate in a different local labour market context. Very simply you only have to look for individual institutions at that matrix of student background in terms of their original postcode and where they go to work and the local labour market context of each individual institution. (...) Even if we have a standard curriculum across institutions, which we don't, and I think that's strength of the system rather than a weakness, then if you compared (...) Manchester University with Southampton University, they have the same curriculum and exactly the same student input; their outputs are different, because they work in different labour markets. (...) Comparing the destination outputs in the league table format tells you nothing of the quality of the institution. (Expert interview 3, EN)

A further problem of league tables is that they might become a driver for change, similar to that of 'teaching to the test' (Loeb and Strunk, 2003). As a consequence, it could disadvantage some parts of the university population. As for instance the league tables are based on full-time undergraduate home-students' outcomes in England, the focus of institutional administration has been geared towards driving up standards for these students. As one of the university interviews explained, provision

for other groups of students, as international students and postgraduate students 'have typically fallen between the cracks' and funding for them had to be 'slid in through' (University 4, EN).

11.1.2 Comparing: 'time'

Comparability over time within the SLGIS is crucial regarding whether they can give an explanation of labour market outcomes after education or if they only provide an association between the outcomes and the schooling. Also, the time-frame of the SLGIS is interesting in terms of whether they provide information about lifelong learning or they concern initial transitions from school-to-work. These latter remarks are dealt with in Sub-section 11.2.3.

There are substantial differences in terms of what claims the different SLGIS allow when considering their time-frame. The possibilities of comparing the results over time are summarised in Table 11-2.

Table 11-2: Comparability over time within the different educational levels in the three case study countries

Comparability over time	Netherlands	England	Finland
Secondary education	Trend-data (cross-sectional accounts)	Longitudinal data	Longitudinal data (Statistics Finland)
Further/Tertiary education – College/University of applied sciences	Trend-data (cross-sectional accounts)	Trend-data (cross-sectional accounts)	Longitudinal data (Statistics Finland) Trend-data (cross-sectional accounts) (Aarresaari Network)
Tertiary education – University	Trend-data (cross-sectional accounts)	Trend-data (cross-sectional accounts) → DLHE and DLHE 'longitudinal' are not used as longitudinal	Longitudinal data (Statistics Finland) Trend-data (cross-sectional accounts) (Aarresaari Network) → destinations and follow-up are not used as longitudinal
National level	Trend-data (cross-sectional accounts) across the system	Longitudinal data to compare across the system (LSYPE)	Longitudinal data to compare across the system (Statistics Finland)

Whereas the Dutch SLGIS only allow claims about associations and historical change due to being based on trend-data, the Finnish system using longitudinal information permits causal claims and the analysis of the individual's biography as well. In the English case, the picture is mixed and this makes comparisons over time and across the system problematic. It is only the LSYPE that gives a longitudinal viewpoint on school leaving in England. There are no longitudinal pictures of the institutional levels available. This is raised as a concern especially in relation to higher education.

11.2 How can the SLGIS go wrong?

This section draws on the three case studies to pinpoint the main problems that can arise when producing and using school leavers' and graduates' data. The following three sub-sections detail when change in the SLGIS is problematic, how the data collected can be misused, and what the major data-gaps are regarding school leaving and graduation.

11.2.1 Change within the SLGIS: why and when is it problematic?

The changing aspects of the school leavers' and graduates' information systems are analysed in all the case studies, here the major trends are reiterated. The main changes either occurred 'within' the SLGIS or 'outside' the initial system, when adding new research to it. Whereas the former seems to cause battles between the different actors, the latter seems to satisfy more data-needs without causing major disagreement. As for the Netherlands, the change in the providers of the survey at the academic higher education level is regarded as problematic and controversial. Regarding England's HESA DLHE, again, change is considered unsatisfactory as the alterations in the research methods and the research instrument do not take the data-needs of the institutional level into account enough. In contrast, in the case of Finland the data-needs of the HE institutional level are met through launching additional information systems without making changes to the 'original' data format or content.

The main questions when modifications in the school leavers' and graduates' information system occur concern the 'status-quo' and whose influence is apparent in the proposed change. Preserving the 'status-quo' serves the stakeholders involved already, like the financing parties, the researchers and the institutional level whose data-needs the SLGIS already satisfy. Alongside this, it can partly exclude some data-needs of other institutional actors, researchers or maybe the general public. But keeping the existing structure also brings the advantage of using a wide range of previously collected research information, especially trend-data or longitudinal data. Thus, if tremendous change occurs, comparability over time might be lost entirely. The school leavers' and graduates' information is normally used in processes where comparability over time is crucial. This is the sort of concern raised both in the Dutch case, where the focus and the content of the WO-Monitor is debated to be altered and in the English case, where the institutional level wants to make changes to the timing of the HE-research.

When change occurs, it is crucial whose data-needs are recognised and to what extent. The Finnish example of starting a new tertiary level survey programme beyond the national data collection system served entirely the Finnish higher education career guidance community and their purposes. The data could be used by other actors as well, but it features only to a small extent in the government's policy procedures or institutional decision making. This change serves the data-needs of those who are not represented enough beforehand. A similar attempt in England where the change is aimed at the already existing structures to involve more

of the information needs of the institutional level is overcome by the policy level. It seems that 'adding' new SLGIS to the system is the least confrontational, as the Finnish case showed. This, of course is interrelated with available funding and the expertise to plan and carry out new data collections.

11.2.2 Scepticism towards, and misuse of the SLGIS data

A reoccurring question in the case studies is whether the school leavers' and graduates' data suits the processes in which they are used. Do the research design and the methods allow for applying the data in the political and institutional procedures in which they feature?

Scepticism in relation to the data, the 'validity' of the information is raised in all case study countries. Some frustration of the institutional interviewees is apparent regarding how the national policy level ignores or does not seem to understand crucial problems with the data. In the Netherlands the time-lag between data collected and new students starting is pointed out as an issue with the informing choice agenda. In England the research project conducted at the HE level is said to be used for the wrong things – the national policy level is said to ignore the issues with the time-frame of the research. And last but not least, universities in Finland find it problematic that the national level only uses basic employment statistics without setting them into context.

The possible misuse of the data is raised especially in relation to the DLHE in England. This survey gathering initial labour market outcomes originally set up to inform the career guidance process is currently applied to create league tables and setting benchmarks for the different universities. Due to the research design, the timing and the content of this survey, many interviewees argue that it does not provide valid information to fulfil these tasks.

In the two other case study countries such problems of 'misuse' did not seem to arise. In the Netherlands, the school leavers' and graduates' information system seems to be used mainly for the purposes it has been designed for more than 20 years ago. Smaller shifts in the content of the research can be observed especially at the higher education level to better serve the institutional data-needs and procedures. Regarding Finland, the Statistics Finland data collection seems to be treated with care in terms of its limitations arising from the combination of datasets. The recent plans to connect 1% of the financing of higher education institutions to the outcomes of this dataset might open up discussions about how suited the data are for these purposes.

However, the very nature of school leavers' and graduates' information systems raise a further important question regarding what they tell the user. The informing choice agenda seems to be especially problematic, as the labour market outcomes of a

person who started their school or university three-to-six years before the data are viewed, do not necessarily tell the story of the educational institution at current times.

11.2.3 What is missing from the SLGIS?

There are a number of topic areas where certain information is not included in the school leavers' and graduates' information systems. These mainly concern three broad issues: socio-economic background of school leavers' and graduates', lifelong and life-wide education, and how choices are made in relation to education and the labour market. Also, there is a further data-gap identified in relation to international mobility of students. These missing points confirm the results of the TRACKIT study. According to that study the 'blind spots in tracking' are non-traditional graduates, such as lifelong learners, mobile and international students and graduates, and there is some information gap regarding disadvantaged and ethnic minority graduates (Gaebel et al., 2012: 45).

11.2.3.1 Socioeconomic background and labour market outcomes

The individual's labour market outcomes could be interpreted through their socioeconomic background, as suggested in relation to transition research discussed in Chapter Two (Raffe, 2008). However, the SLGIS analysed in this research are rarely used for analysing social inequalities, the economic view of school leaving and graduation seems to be stronger.

In the case of England, the LSYPE data collection provides vast amounts of information on the respondent's background. However, only the initial outcomes of the compulsory level could be interpreted due to the research project finishing before the cohort left tertiary education. In the case of the DLHE the outcomes of higher education could be connected to the socioeconomic background data collected when the prospective students apply to university through the UCAS system. However, there are problems with using this data,

We could take the social class data that comes from UCAS returns and link it to the destinations data. That isn't very good because it's not complete, because a lot of people who are going to university don't apply through UCAS.
(Expert interview 3, EN)

In Finland due to the individual ID numbers and the possibilities of combining administrative data between generations it would be feasible to analyse social mobility and the impact of parents' education on the future educational and labour market outcomes,

(...) we have also in the registers data on your parents, we can combine parents to... based on the population register data, which can be combined to student and degree data, so we can see the parents' educational status and so on. (Research institute 10, FI)

However, the crucial problem detailed in the Finnish case study is Statistics Finland's limited resources to pursue detailed analysis of such matters. Thus, although the interviewees say they have done this kind of data combination before, it is not currently published as a part of their official statistics.

In the Dutch system combining some level of demographic data to the HBO and WO-level survey outcomes would be feasible. However, the majority of the actors do not seem to use this in their work. It is only the research institutes, ROA especially, who seem to be more interested in the equality issues flagged up in the SLGIS.

11.2.3.2 How do we have information about 'lifelong learning' then?

One of the starting points of this research is the data-needs arising from the notion of lifelong learning. This concept is based on viewing education and, more crucially, learning as an on-going process that does not finish with the initial years of schooling. It seems that SLGIS mainly 'stop' gathering information after the initial educational levels. In addition, they seem to be concerned mainly with qualifications rather than a more general view on learning.

It is only Finland that gathers data on longer term learning outcomes: the Statistics Finland data allow comparisons of labour market outcomes for at least 10 years after

leaving the institution. However, this information is constrained to whether or not the individual is employed, not detailing the level or the type of employment.

Life-wide learning views 'learning' as happening in many different situations, not only in designated educational institutions. However, SLGIS do not view education from a broad perspective. Learning in these information systems seems to be connected to some economic value and official certification. None of the English survey programmes seem to permit analysis of a wider notion of learning. However, SLGIS gain some evidence on this notion when gathering data about training at the workplaces and beyond initial schooling. In the case of the Netherlands further learning especially at the workplace are viewed within a short time-frame after finishing initial education. In the case of Finland, the Aarresaari Networks' surveys offer some information about learning after leaving the university. The national datasets of Statistics Finland for all educational levels and sectors, however, provide limited information,

Education not leading to a degree, that's not covered very completely (sic!). But education leading to an officially recognised degree, that's complete. If there are some education programmes which are short [?] like some sort of adult education, which are not leading to officially recognised degree, there are not very complete data. (Research institution 10, FI)

Beyond the school leavers' and graduates' information systems analysed in this research, the Labour Force Survey is a crucial information set that covers labour market outcomes and provides a longer term and wider picture on learning as well. This information set is mentioned in all case study countries especially in relation to comparing outcomes from different levels and sectors of education. Crucially, as mentioned regarding the European research programmes on transitions like the CATEWE project, the LFS is one of the most important datasets that permits cross-country analysis of labour market outcomes. It covers both initial labour market positions and longer term career prospects, providing some data about further learning experiences as well. This is the only current comparable measurement that provides information from across several countries over a longer period of time on learning after initial education. The LFS is used as the main information set for the lifelong learning indicators by the European Union to monitor the recent policy initiatives (EU, 2009, Council, 2002).

11.2.3.3 How do people make career choices?

One of the crucial topics raised in relation to the SLGIS is the availability or lack of in-depth data on how people make their career choices both in terms of education and the labour market. These sorts of data are especially important for career guidance experts both when advising pupils on further education and on career choices before labour market entry. As some of the SLGIS analysed in this research are initiated by or set up to satisfy the data-needs of career guidance professionals, it is no wonder they gather some level of data on career choice. This is not necessarily true for other

SLGIS initiated by other actors. Furthermore, due to the research designs and the research instruments used, there are substantial differences in what details SLGIS provide. Whereas the longitudinal information systems offer the possibility to analyse changes as they happen in a biography, the cross-sectional designs allow analysis of historical change from a retrospective viewpoint. In the case of England and Finland, both approaches are used, but they are used exactly the opposite way. In the case of England the LSYPE makes it possible to follow the path of a smaller sample of individuals through compulsory education and how they make their choices of further studies or going to work, the DLHE provides limited information on the vast majority of the graduates regarding why they choose a certain job, or further studies. On the contrary, in the case of Finland, the data-needs on how choices are made are not satisfied through the national, longitudinal datasets on labour market outcomes, thus the university careers services started their own cross-sectional projects to follow-up former graduates. In the Netherlands the research design and the research instruments permit a retrospective view of educational choice, 1.5 years after a school leaver or a graduate has left the institution. One of the crucial aspects is whether the individual would choose the same school or university again.

11.2.3.4 What do we know about international student mobility?

Internationally mobile students seem to be a group 'excluded from' of SLGIS. Although there are students moving to other countries for secondary level education, here only the graduates' data are considered, as tertiary education seems to be more important in European and international debates. Here international students are

understood to move to one of the case study countries to study and then staying or moving out of the country again; and it also considers 'home' students moving away for studying or employment.

In all three case study countries the data collections take the graduates of an institution into account as opposed to the national labour market they go into. However, Finland does not seem to have any information on individuals moving out of the country beyond the 'quantity' of emigrants. This is due to the methodology and the sampling used in the Finnish SLGIS. Both in England and in the Netherlands the methodology operates with sending the online questionnaires to graduates and this provides some level of data from the internationally mobile individuals. Admittedly, the response rate for international graduates and home-graduates living in other countries is lower than home-graduates living in the given country. Collecting data from beyond the borders takes up vast resources according to an English university interview,

Just simply a practical issue is that [asking international graduates] would cost us a fortune in overseas postage. If we want to telephone survey these people, then we have to have people set up in the middle of the night. Because the majority of our overseas students come from Asia, Southeast Asia, there are at least five-ten hours ahead of us in time-difference. Just the

practicalities of doing this would be a real drain for institutions. (University 3, EN)

However, it seems that utilising new technology enhances the tracking of internationally mobile graduates,

The other thing about email [with the online questionnaire], while we're probably in a position now where email is a viable option to all of our territories, but five years ago we've tried emailing certain countries, a number of candidates in certain countries and they couldn't respond for weeks because broadband was down (...) it's got to a point now where email and internet access probably is our main form of communication. But four-five years ago we couldn't rely on that for all territories. (University 3, EN)

The subject of internationally mobile students is expected to become more important in the future. In all case study countries the tertiary level institutional interviewees and ministerial respondents pointed out their commitment to 'internationalise' their higher education partly through attracting more international students. In terms of the graduates' information systems, so far it is only the UK that has taken measures for gathering more reliable data.

CHAPTER TWELVE

CONCLUSIONS OF THIS RESEARCH

The first section in this chapter points towards the further possibilities of this research along with the main strands of further analysis for publication. The second section in this chapter provides reflections and concluding remarks regarding the research questions. The third section discusses the main implications of this research for policy and practice.

12.1 Further possibilities of this research

This research suggests taking a closer look at how practitioners at the policy and the institutional level utilise 'data' more generally. Having a better understanding of how the ministerial structure works in terms of utilising data collections, what the processes are in which data feature, as well as what is missing from the evidence-base, could help researchers to channel more research into the policy-process. This research provides some description and explanation of the interaction between different actors regarding the production and the utilisation of research data. It is suggested that this aspect is crucial in understanding the dynamics of data-utilisation especially at the institutional level. This chapter now lists four major strands that could follow from this research.

First, further European countries and their SLGIS could be investigated in a similar manner as in this research to gain a deeper understanding of what data are available and how it is used. The information collected in this research is contextualised regarding the educational system and to some extent the economic and labour market structures. However, this research could not account for several important details of the context, like the size of the educational system or the labour market legislations and patterns. These could be further investigated if collecting information on more countries and their SLGIS.

A second strand of further investigation could be furthering the ethnostatistical and enumerological approach. This would mean the observation of the flow of school leavers' and graduates' data within ministries and educational institutions. This approach could also provide valuable information on how the SLGIS outcomes are employed at the different hierarchical levels of policy making and educational institutions.

A third possibility for furthering this research would be the analysis and comparison of the actual school leavers' and graduates' data. Through this some European level equivalences could be established to check the feasibility of comparing the SLGIS data. Also, through analysing the SLGIS outcomes the possibilities they provide could be explored more.

A fourth strand of research could be taking an economic approach to put value on the SLGIS from the viewpoint of the different actors and compare them regarding their costs and benefits.

The results of this enquiry contribute to a number of different strands of research. First, due to gathering data on different European countries in terms of their school leavers and graduates information system, this research provides an overview of how this sort of data collection can be set up. Second, as a result of the international comparative framework, this research contributes to the discussion about the role of the European Union within education. Here the processes of Europeanization are outlined and whether its impact can be traced within the research field of school leaving and graduation. Third, deriving from the frameworks on data utilisation, this research provides a detailed example of using one certain type of information set within different national and institutional processes. The research is unique in terms of comparing the data needs of different stakeholders and provides a good example of the challenges posed to them. And fourth, this research provides a comparative example on using evidence in policy-making and thus contributes to the policy and governance literature as well.

12.2 Answering the research questions

The following sub-sections discuss the findings of this research that answer the research questions (See Section 1.3 for the sets of research questions). These sub-sections discuss the answers regarding the questions around aims, the research design, the institutional and financial setup, the history, and the implementation and dissemination of SLGIS. The last sub-section provides a discussion of the implications of this research at the European level.

12.2.1 Aims of school leavers' and graduates' information systems

Regarding the main focus of the SLGIS, this research has found three different types of information systems. Some gather evidence about the initial destinations of the few months to a year after leaving, others deal with the first one or two years of transitioning into a new school or a workplace, and again others gather evidence about the longer term career outcomes, three-five, or more years after leaving or graduation.

This research has identified a number of actors whose interests regarding the aims and data-needs of SLGIS may be in conflict. These are chiefly elected politicians, bureaucrats responsible for policy implementation, statisticians and researchers running the SLGIS, institutional leaders and managers, institutional career guidance professionals, and academic researchers and other professionals using the SLGIS as secondary data.

The majority of SLGIS have been predominantly instigated and funded by national governments and thus they seem to chiefly reflect the data-needs of the central administration. The main focus of governments is reported to be the initial labour market outcomes. In both England and Finland the government uses information systems that tell the story of school leaving and graduation within a very short time-frame. A further common characteristic of the DLHE and the Statistics Finland data is the lack of contextual information beyond the initial labour market outcomes. The Dutch government uses SLGIS with a somewhat longer time-frame about the initial transitions from school-to-school or school-to-work. The Dutch SLGIS also provide some level of contextual information to the outcomes through student background data.

Governments primarily interested in evaluating the preparation for employment provided by an education system would presumably want to wait until after the initial turbulence of leaving education and settling into a career. Employment status and earnings six months after graduation can be very different from employment and earnings 3-5 years later. However, the longer the gap between leaving education and the collection of school leavers' and graduates' information, the greater the risk that the 'employability' evidence is out of date by the time the data reaches the users. There are also further practical considerations regarding higher sample sizes, and the dangers of losing contact with individuals once they leave formal education, that are easier to achieve closer to graduation.

There seems to be some divergence between the two levels of government analysed in this research in terms of the tasks they fulfil and their data-needs. Broadly speaking, the elected policy-makers decide on the crucial characteristics of the SLGIS, but it seems to be the civil servants who keep up interest, sustain the information systems and negotiate the nuances of the SLGIS. In all cases civil servants pointed out the key aspects of the existing SLGIS that would fit the current policies and the discourses used by the elected officials, suggesting that the data can be tweaked along new requirements.

All the case studies detailed the procedures through which civil servants informed policy-makers on the available school leavers' and graduates' data producing circulars and answering ad-hoc questions. The case studies also shed light on the ways civil servants negotiated with the statisticians and researchers running the SLGIS. The role civil servants play in preparing and advising policy-making seems to be the key reason for them to be much more interested in having SLGIS that provide the bigger and longer-term picture and, beyond, the explanations of the processes of school leaving and graduation.

Regarding the institutional level, this research suggests that there are two key strands of information of particular importance. These are first, some feedback from former students on the education and second, some longer term information on how

careers unfold. It is especially institutional leaders and managers who are interested in gaining feedback on the education and its relevance to the labour market. This topic is a part of some of the SLGIS focusing on initial destinations. For the work of career guidance professionals a longer term and a broader view on career choices is desirable. However, as suggested in Sub-section 11.2.3, these are two aspects that seem to be of lesser importance in the SLGIS analysed in this research.

As more accountability measures are based on the SLGIS data, educational institutions have to follow the policy-level's 'lead' regarding the time-frame and the focus of the data they pay special attention to. Both in Finland and in England the institutional interviewees expressed their frustration regarding the timing of the SLGIS. Whereas institutions preferred the collection of data 3-5 years after graduation, governments have insisted on a short time horizon (between six months and a year after graduation). Institutions argue that this time-frame is not enough to judge educational outcomes and therefore the validity of the data is questionable. As the policy-makers decide on the SLGIS and the mentioned practicalities make it nearly impossible to prompt change, the situation is largely unresolved. The 'Finnish-way' out of this conundrum means the universities initiating their own additional information systems to add to the national SLGIS. In the Netherlands the time-frame of 1.5 years seemed to be an 'optimum' compromise, suiting the data-needs of the Dutch actors.

A further crucial problem of the focus of the SLGIS in the case-study countries is the lack of contextualisation for the outcomes. There is little included in the explanation of outcomes in terms of the background and prior attainment of school leavers' and graduates' or the local economy they find jobs at – who goes where. This means that policy analysts cannot easily see how well the system overcomes initial stratification. And schools and universities having more non-traditional or low socioeconomic status (SES) students, or that are situated in economically deprived areas, may appear not to be performing as well as they actually are.

Using the SLGIS as secondary-data for academic research purposes is an economic way of broadening the understanding of school leaving and graduation. In some cases the researchers and statisticians conducting the SLGIS are especially keen to widen the set of actors using the data particularly towards academic research. This is suggested to help raising the importance of the particular SLGIS. There are differences between the cases, however, regarding the extent to which the SLGIS are used as research evidence by academics and other stakeholders. The comparison of the case studies suggests that if the collectors of the SLGIS are detached from the academic world as statisticians or institutions themselves, there is a lower degree of secondary data utilisation by researchers. This could be due to diverging data-needs of actors, fundamental problems deriving from utilising others' data, as well as insufficient information on the SLGIS for the academics.

Other stakeholders, like employer or employee bodies, organisations involved with different sectors or levels of education might also utilise the SLGIS. They seem to use SLGIS outcomes as secondary evidence especially along other sources of data and seemed to be less critical towards the information than academics. There are only a few interviews conducted in this research with such actors, therefore the picture is incomplete.

12.2.2 Research design and methods of the SLGIS

In terms of the methodology for each case, Table 12-1 provides a comparison of the different research designs and population covered, and summarises the strengths and weaknesses of these approaches. The table also provides some suggestions regarding what research aims the different approaches are best suited for.

Table 12-1: Research design and population and the strengths and weaknesses of each approach

Design and population	Cross-sectional design (regular)	Longitudinal design
Sample survey	<ul style="list-style-type: none"> + relatively cheap, + wide range of information, + provides trend-data relatively quickly <ul style="list-style-type: none"> - institutional level picture might not be possible through this information, - no causal inferences about differences in outcomes can be made - no information about longer term outcomes Best for: quick information on school leavers' and graduates' using diverse time-frames	<ul style="list-style-type: none"> + causal inferences are possible + in-depth information about a wide-range of topics + information about longer term outcomes <ul style="list-style-type: none"> - relatively expensive, - time-gaps between data collection and reporting can be big, - no institutional picture Best for: understanding life of young people after school and university and establishing causal links
'Census'	<ul style="list-style-type: none"> + provides institutional and national picture of school leaving and graduation, + provides trend-data relatively quickly + using already available data <ul style="list-style-type: none"> - limited amount of information can be gained, - no causal inferences about differences in outcomes can be made - no information about longer term outcomes Best for: quick information on school leavers' and graduates' especially in a short time-frame	<ul style="list-style-type: none"> + institutional and national picture of school leaving and graduation, + causal inferences are possible, + if using already existing datasets, it can be cheap <ul style="list-style-type: none"> - limited amount of information can be gained, - setting up the dataset might be problematic if using already existing datasets (privacy issues) Best for: understanding longer term career patterns and establishing causal links

The information systems analysed in this research are either built on sample surveys or the combination of registry datasets. Conducting surveys on the one hand provides tailored information and allows collecting attitudinal data from school

leavers' and graduates' regarding their education and their current employment. The main issue with such surveys is, however, reaching sufficient sample-sizes for institutional comparisons and that funding for them might be vulnerable and subject to change. Combining different registers on the other hand is an economic utilisation of the already existing data and is thus a relatively cheap account. However, it bears several problems. Beyond data-protection issues and whether the exercise can be carried out within the national legal frameworks, a further issue is to what extent the existing registers are suited to answer questions on school leaving and graduation. Policy-makers and civil servants seem to be pushing for SLGIS that are based on census. This, regardless of the research design means reducing the breadth and depth of the information gathered. From amongst the cases it is only the Netherlands where the amount of information covered and the target sample sizes seem to be in balance and the majority of the actors are content with the SLGIS. However, in this case the sample-size reached raises problems for the institutional and programme level utilisation.

As suggested in the previous sub-section, the policy-makers are mainly interested in the immediate outcomes of school leavers' and graduates', which is also apparent by the tendency of using trend-data rather than longitudinal accounts. In Finland for instance the Statistics Finland data are available for a longer time-frame on virtually all school leavers' and graduates'. However, the university funding is still planned to be based on cross-sectional accounts, comparing outcomes a year after graduation. One possible explanation for this might be that using trend-data reduces the level of

complexity the data-user has to deal with. Longitudinal information seems to be applied in planning national policies, whereas the trend-data are used more in monitoring the system and evaluating educational institutions.

Both the cross-sectional trend-data, and the longitudinal information collected are subject to one fundamental problem: trying to predict the future of which they will collect data about. A data collection that is aimed to gather information for a longer time-frame has to be set up without appropriate available information as to what might be relevant or irrelevant in the future.

As the utility of the SLGIS partly derives from the data showing trends over time, there has been little change in the research designs of SLGIS. This means that although the processes of using the data have probably changed, subsequently arising data-needs had to be satisfied with the very same data or setting up further SLGIS. The comparison of the cases suggests that adding new SLGIS to the existing systems is less confrontational and can satisfy more data-needs. Additional, in-depth information systems might provide contextual data that accompanies the national picture. However, it is unclear whether these can become important along the previously existing national SLGIS, and what happens when they tell contrasting stories from the nationally acknowledged ones.

12.2.3 Institutional set up and financing scheme of the SLGIS

The key issues in terms of the funding scheme of SLGIS are related to who provides the funding and whether there is a promissory note behind it. As suggested in Chapter Eight, the 'dividing line' regarding the models of funding SLGIS lies between educational levels rather than the nation states. The secondary level SLGIS are generally funded by the state and the level of the data usually depicts a national level picture rather than an institutional one. As opposed to secondary schools, higher education institutions cover the majority of the graduates' information system finances – either voluntarily or required by legislation.

In all case studies there has been some push towards a more economic data-utilisation. This either means reducing costs by changing providers, or minor aspects of the research methods, or by cutting funding for further research entirely. Especially the English case suggests that if it is not the policy-makers immediate interest to run the SLGIS, the continuation of research funding is not self-evident. Mainly due to the time-frame of trend-data, this approach risks the utility and the value of the SLGIS. These also suggest that although the SLGIS capture the notion of career outcomes after schooling and university, the data that policy-makers are really interested in tells the story in short. Such approach provides some headline data but not a lot of in-depth explanations.

Regarding the organisations that conduct SLGIS, there is substantial diversity between and within countries. As suggested in Chapter Eight, SLGIS are either collected through government departments, or statistical agencies, or separate research organisations, or the institutions themselves. These approaches seem to go along with an interesting difference regarding the underpinning idea of the SLGIS. Whereas research organisations and to some extent, government departments seem to be more inclined to consider the sociological aspects of school leaving and graduation, the statistical agencies and the institutions focus on the economic returns to education.

12.2.4 History of the SLGIS

The long history of the SLGIS suggests that there must be some value in the data, assuming they would have been terminated otherwise. This value could be attributed to the processes of utilisation analysed in Chapter Ten. However, it is the long history and the relatively little change in the SLGIS that raises some suspicion that these information systems are just the 'usual thing' to do. England provides an example of higher levels of change in its SLGIS, which could be due to the relative ease of such change here. Having separate SLGIS at the different school levels and sectors might make it easier to initiate change than in an overarching comprehensive system. Whereas the separate English SLGIS are not a part of a wider data collection scheme, both the Dutch and the Finnish information systems are integrated into overarching structures of educational and labour market data. Therefore the Dutch

and the Finnish SLGIS are ‘built-in’, meaning they might be harder to change. Also, being part of the ‘bigger picture’ might provide further utility value.

The relatively little change in the analysed SLGIS happened mainly after 2000 in all case study countries in all aspects mentioned so far regarding the financial and institutional setup, the methodology, and to some extent, the focus of the SLGIS. These could be explained through the changing models of governance, the changing data-needs of governments and institutions, new possibilities opening up due to technological advancement, or the changing dynamics of the role of the state and the educational intuitions.

Some of the change suggests similar trends in the analysed nation states: the push for institutional level data and using that in evaluation, as well as the utilisation of more administrative data for instance. Beyond the explanation provided in Sub-section 10.4.1 regarding models of governance, this convergence might be explained by the European Union’s growing importance within education or, more specifically, the Bologna-process and its impact on accountability in higher education.

12.2.5 Implementation of the SLGIS

The major ways in which the SLGIS are utilised are broadly similar across the different case study countries, as detailed in Chapter Ten. This suggests that the processes of utilising evidence might be universal and not necessarily related to the

actual research methodology of the SLGIS. The differences between the cases lie in the importance attributed to the SLGIS data and the depth to which they are applied in the different processes. This suggests that the 'value' is not intrinsic to the SLGIS but it depends on the judgement of policy-makers and institutional leaders. It depends on their judgement how important the school leavers' and graduates' outcomes are as well as whether and what change is initiated based on the SLGIS. The SLGIS outcomes seem to be mainly applied in monitoring change rather than preparing for action and this is true for both the policy-level and the institutional level. This could be due to the nature of the information, as it pictures processes beyond schools and universities or it could be due to apparent scepticism towards the quality and validity of data.

To further elaborate on the discussion of models of governance provided in Sub-section 10.4.1, here the interaction between the policy and institutional level observed in some processes is further debated. The first such process is informing students. It was originally the institutional level that applied the SLGIS in career guidance, and the national level followed suit with initiatives of informing student choice on educational institutions. Note that these processes of informing students have very different time-frames and implications. When using SLGIS to inform current students on possible careers, the data tell the story of graduates who finished only a few years before them. When showing the same SLGIS outcomes to students choosing further or higher education, this time-gap is much bigger. By the time this future student has to move to the labour market, substantial change could have

happened and the picture might be very different from what they have been 'promised' initially. A second process where interaction between actors can be observed is evaluation of education. The policy level started to use the SLGIS outcomes in evaluation and the institutional level needed to react to this procedure. Along with initiating change to better their SLGIS results, institutions started to gather contextual evidence especially if their SLGIS data suggested bad outcomes at the labour market. These partly mean that the different actors follow the other in an aspect of SLGIS utilisation that was initially considered when the information system was set up, or applying the same data in processes not considered when setting up the information system.

There is substantial scepticism towards some of the SLGIS, as suggested in Sub-section 10.5.2. However, due to pressures of ideology and policy interest, some of these concerns are wiped away by the policy-level through a number of arguments: a) the data-quality is sufficient; b) change in the SLGIS damages trend-data; and c) there are no better current datasets than the national SLGIS. Keeping the status-quo of the information systems serves the interests of the civil servants and the policy-makers at the policy level. Making changes to the existing SLGIS, even if just adding to them might be in the interest of the institutional level. Discontinuing SLGIS might serve the interests of some policy-makers, if comparability over time does not favour the ideology they follow regarding school leaving and graduation, or if the SLGIS are deemed unimportant information systems to spend money on.

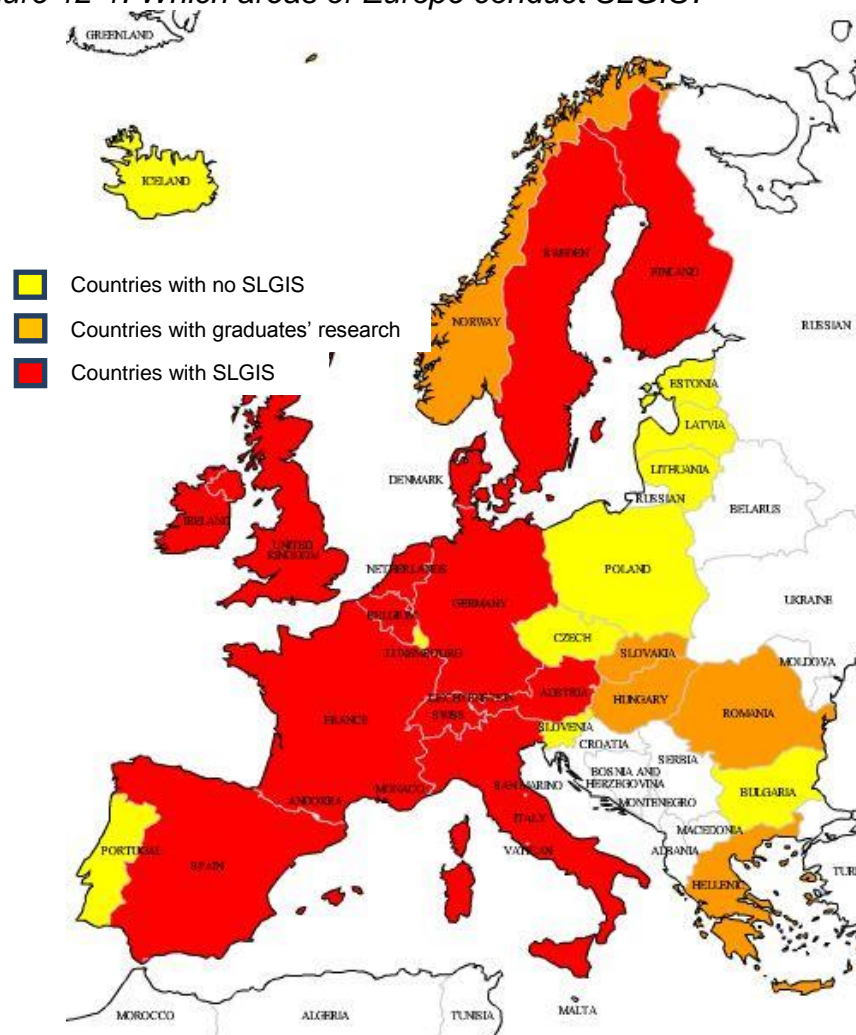
The difference of data-utilisation by schools and universities lies between institutional levels and sectors, rather than the case study countries. One plausible explanation for this is provided in Section 10.4.2 regarding ownership of the SLGIS. On the one hand, secondary institutions have less ownership of the data and, additionally, their school leavers are more likely to continue at another educational institution rather than take up a job. On the other hand, universities have more say in how the graduates' information is collected and their graduates are very likely to continue their careers at the labour market.

There are three crucial aspects that seem to enhance data-utilisation at the institutional level. These remarks are probably true for the majority of the data that are produced within the institutional sector, not only the SLGIS. First, the presence of enthusiastic data users is crucial, as they push for the utilisation of the SLGIS data and disseminate it within the institution. Second, some direct links between the end-user and the research organisation are important as it can fill in the blanks for skills in data-analysis. And third, beyond the human resources, the utilisation and dissemination of the data can be enhanced through using technology. There is some evidence of more democratic data-utilisation due to wider distribution of the SLGIS via data-warehousing or applying specific software.

12.2.6 Europeanization of education

One set of questions of this research refer to the European-level view of school leaving and graduation. As Chapter Six pointed out regarding the findings from the cross-sectional phase, the majority of the Western and Northern-European countries, some of the Southern-European countries and basically none of the Eastern-European countries have SLGIS in place. Figure 12-1 shows the availability of SLGIS or graduates' information systems within Europe.

Figure 12-1: Which areas of Europe conduct SLGIS?



(Created through Freemap)

The variance within Europe could yield a number of explanations. The differences between the regions could be attributed to the economic situation, where the countries with higher GDP spend more on educational research, as for instance gathering information on school leaving and graduation. However, for instance in the case of the Netherlands the SLGIS were initiated in times of economic hardship mainly as an aid for government to plan policies. A further explanation could be policy-borrowing within European Union in respect starting SLGIS. As suggested in the first phase of this research in Chapter Six, evidence for actual SLGIS methods borrowing can be found only in close-knit smaller regions of Europe, rather than within the whole supra-national area. The most plausible explanation seems to be related to the history of Europe, to the existence of communism as opposed to market-economy. In the areas where the communist ideology dictated a planned economy, there was no need to measure school leaving and graduation: everyone was supposed to comply with the labour market planning and take 'their place'. In the market-economy the role of the state is profoundly different. The state provides the structures and the market decides on the 'value' of school leavers' and graduates' from different institutions. This latter approach might raise the need to measure this 'value' and thus the need for information gathered through SLGIS.

All the cases analysed in this research are market-economies. There are differences between them, however, regarding the importance of labour market planning. Whereas it has a strong tradition in the Netherlands and in Finland, in England the labour market is less regulated. This seems to be related to how comprehensive the

SLGIS of a country is. The higher level labour-market planning seems to go along with more comprehensive SLGIS. It could be assumed that the comprehensiveness of the educational level yields an equally comprehensive, overarching SLGIS. Finland fits this assumption; however, the other two case studies do not. England compared with the Netherlands is a more comprehensive educational system, whereas regarding their SLGIS this seems to work the other way around. A further difference between the cases is that in the countries that have a comprehensive SLGIS, the ministries for secondary and tertiary levels are and have been the same organisation. In England, the two ministries are separate with seemingly little relation with one another and this is reflected in the distinct SLGIS for the different educational levels and sectors.

These seem to suggest that it is the role of government that makes a difference regarding whether the SLGIS exist and whether they cover all educational levels similarly or with different approaches. If the role of government is to plan the labour market, a more comprehensive SLGIS seems to be useful. If it is geared towards facilitating the market procedures, more specialised SLGIS that can provide information for student choice and institutional evaluation are more suited.

12.3 Implications for policy and practice

This section provides a discussion of the implications this research has for policy and practice. First, some suggestions are summarised regarding the three cases and their SLGIS. Second, the possible path for setting up a European level SLGIS is outlined. The third section summarises what SLGIS suits best the different policy procedures and the last section reflects on the outcomes of this research.

12.3.1 How could the SLGIS in the three cases improve?

This sub-section suggests some aspects within which the national SLGIS analysed in this research could be improved. The recommendations have two or three levels that refer to time-frames and resources. Whereas the first points are relatively easy and cheap to implement, the second and third recommendations require longer time in planning and implementing, as well as substantial resources.

Regarding the Netherlands, the SLGIS seemed to satisfy the data-needs of the majority of users. The suggestions here, first, refer to better utilisation of the available information. The policy level could utilise the available contextual information more when comparing institutions and planning policies. Similarly, there could be some measures taken for the institutional level to utilise the information more. For instance steps towards more democratic data-sharing within the schools and universities could be achieved through disseminating the information more widely using the available computer tools. At a second level, higher response rates could be pushed

for especially at the HBO and the WO level to enhance institutional relevance. Higher response rates at the institutional and the programme level coupled with a more democratic data-sharing would possibly mean higher degree of SLGIS utilisation. And third, although the 1.5 year time frame seems to work well for the majority of the stakeholders, there could be some information gathered on longer term career outcomes. This might help career guidance and informing choice more generally.

In England the first level suggestions refer to the DLHE data. It seems that disseminating the information widely using a web-based platform is successful at some institutions and could be applied more widely. Currently the DLHE is seldom used within academic research, there could be measures taken for wider and better dissemination of the data within this field. Academic commentators usually suggest that the two main problems are quality and the price of the DLHE data – there could be some steps taken to improve these. The second ‘level’ suggestions for England include gaining reliable and wide-ranging data for the college leavers’. There should be some measures taken regarding the DLHE to recognise the institutional data-needs more. The continuation and constant funding of the YCS and LSYPE-type research would be crucial, as these are the only information systems that can provide appropriate explanations on school leaving and graduation. It would be important to follow the young people from compulsory schooling to tertiary education and the world of work. There seem to be some crucial problems regarding the informing choice agenda and the application of the DLHE within this. Putting money into actual career guidance at the institutional level might be a more viable option. A third

suggestion is to aim for a comprehensive SLGIS, possibly through combining registry data on labour market situation to educational outcomes and having that information of the whole educational system.

Regarding Finland, the first set of suggestions regard the Aarresaari Network data to be used more widely within the institutional decision-making. Data utilisation here could be enhanced using ICT support to avoid problems with the lack of data-analysis skills. Both the AN and the SF data could be used more by institutions to inform the wider public if more were published on their websites. A next set of recommendations regard the combination of the contextual information and more detailed labour market outcomes data to the Statistics Finland's school leavers' and graduates' information. Also, links to academics should be enhanced as they could take some of the analyses responsibilities of Statistics Finland.

12.3.2 Europeanization of SLGIS?

Former international research programmes on school-to-work transitions have utilised some of the national SLGIS to compare the national patterns, as pointed out in the introduction to this research (Section 2.2). However, equivalences in the comparisons can be established only along either using the LFS-data or if additional international data collections are launched. If there is policy interest in gaining a European-level school leavers' and graduates' picture, a number of steps could be taken. One of the starting points towards more comparable data could be that of

capturing the path of internationally mobile students. Currently the available information regards the overall number of student in and out-fluxes of the different countries of the EU. Especially at graduate-level there are attempts in the case study countries to collect better quality data on mobility and internationalisation of higher education. This could be a first area where more measurements and definitions are agreed within the European Union or within the European Higher Education Area to the data then be gathered by Eurostat. Moving forwards from here, it might be possible to agree on some further measurements to compare school leaving and graduation. The European-level comparability of the school leavers' and graduates' data could help policy-borrowing between European countries. This is especially timely considering the high levels of youth unemployment in some nation states of the EU (EUROPEAN COMMISSION, 2013).

12.3.3 What are the different SLGIS for?

This research can provide some recommendations for national governments committed to setting up an SLGIS. A good SLGIS provides valuable information for both the policy-level and the institutional-level actors and there are procedures in place to disseminate the data widely. Regarding the financial aspects, it is important that the budget for the SLGIS is available for a longer time-period as trend-data in this case is crucial. The case studies provided some examples where foreseeable funding was not available thus decreasing the utility of the SLGIS. In terms of who conducts the SLGIS, any setup can be efficient as long as all the main actors are consulted and their data-needs are represented when setting up or making changes

to the SLGIS. As the case studies showed, it might be useful to have resources available for additional research to cover the data-needs not represented in the initial SLGIS.

Here the different policy procedures are listed with recommendations on the SLGIS that would satisfy the information-needs best. First the national policy procedures are analysed, then the institutional processes are detailed and finally other actors and their data-needs are considered as well.

12.3.3.1 The best SLGIS for the policy procedures

1) *Monitoring the educational system in terms school leaving and graduation:*

Monitoring as a policy procedure requires a longer term picture on school leaving and graduation. Cross-sectional trend-data, or if there is some more funds, repeated cross-sectional trend information are suitable here. Monitoring at the system level does not require a census, a sample approach is enough. The important aspect is to gain a comprehensive picture on education for comparability between and across levels and sectors.

2) *Planning national policies on school leaving and graduation:* This procedure requires multiple longitudinal approaches, possibly based on samples. A research that could provide information for planning should be overarching across levels and sectors of education.

- 3) *Planning sectorial policies on school leaving and graduation*: As opposed to the previous point, for planning specific sectorial policies wider information through a census-type approach might be better suited.
- 4) *Evaluating national policies on school leaving and graduation*: The evaluation of national policies requires the establishment of causal inferences. A longitudinal research based on samples that overarches different educational levels and sectors serves this procedure well.
- 5) *Evaluating educational institutions*: This approach requires a census of school leavers' and graduates' built on trend-data. It is important that some longer-term outcomes as well as some contextual information can be attached to this data. Through this institutions with non-traditional students, with students with lower SES, located in deprived areas can argue how their school leavers and graduates are successful despite the possibly worse SLGIS outcomes.
- 6) *Informing students' choice*: Informing future and current students and the wider public on institutional performance requires institutional census data. However, regarding this procedure and its validity policy makers are advised to be circumspect, especially in terms of timing and lack of contextual information. There should be more 'qualitative' information provided along the 'hard-facts' describing how different careers unfold.

12.3.3.2 The best SLGIS for the institutional procedures

- 1) *Monitoring progress*: In terms of monitoring progress within the institution, at least institutional, but rather programme level outcomes are needed. To make the monitoring procedures easier, trend-data is suited here to analyse the yearly change in the further education and employment trends.
- 2) *Institutional policy-planning*: Here longer term outcomes are needed to understand the outcomes of the institution and the different programme. An SLGIS suited for this process should be contextualised with information about the economy and the opinion of the employers.
- 3) *Complying with evaluation requirements*: To comply with the national evaluation requirements institutions should have institutional, or possibly programme level SLGIS outcomes. This should be accompanied by contextual information on the economic situation and the student background of the school or university.
- 4) *Informing future students (marketing)*: As for providing information on the institutional SLGIS outcomes for future students, institutions could use programme level trend-data along with stories, examples of careers.
- 5) *Informing current students (career guidance)*: This procedure requires a longer term view on careers, using data on the labour market situation and its changes over time. Informing current students should build on descriptions of different careers with multiple examples of the outcomes. Regarding the short-term information, it could be used to give suggestions on job-hunting strategies.

- 6) *Keeping in touch with former students:* The SLGIS can be used as a method to keep in touch with former students. Their contact can be then used in career guidance, as a link to workplaces and channelling in labour market information.

12.3.3.3 The best SLGIS for other stakeholders

- 1) *Academic research:* The SLGIS can become more suited to the needs of academia if there is a discussion between the funders/initiators and the academics prior to setting up the research. If academics are consulted in the planning phase and there are measures taken to enhance the utilisation of the SLGIS as secondary source, the dissemination of the information can be much stronger and wider. Academics can fill in the evidence gaps and utilise the data further, beyond the capacities of the initiators of the research.
- 2) *Informing citizens:* As from the perspective of the individual citizen, some information is needed on the institutional labour market outcomes and on the national policy evaluation results.

12.3.4 Are SLGIS worth it?

As the list in the previous sub-section suggests, there is no one way to set up a good SLGIS. The different procedures at the policy and the institutional levels as well as the diverging data-needs of the different actors within and beyond these levels require careful consideration and discussion of how the SLGIS should be set up and changed.

Some of the cases in this research suggest that the policy level might not be inclined to include others' information-needs. However, if for instance the SLGIS does not provide relevant and useable data to the institutional level, they cannot be expected to respond by changing their procedures to better the outcomes. Similarly, if the SLGIS is not considered valid evidence by academics, they will not use it as secondary evidence in their research.

This research through describing the three cases and summarising the suggestions on SLGIS in the previous sub-sections suggests several key steps that can be taken to make the SLGIS more relevant and useful information systems. Without a real commitment to take at least some of those steps, the value to tax-payers of the expenditure on existing or future SLGIS is questionable.

CHAPTER THIRTEEN

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CHAPTER FOURTEEN
APPENDICES TO THE THESIS

Appendix 1 Eurostat data terminology

These Eurostat indicators are used as comparable background information in Appendices Appendix 16, Appendix 20 and Appendix 27 on the three case studies countries (Description of indicators from: EUROSTAT, 2011b, EUROSTAT, 2011a, EUROSTAT, 2011c, EUROSTAT, 2013).

Population at 1 January – Persons

The inhabitants of a given area on 1 January of the year in question (or, in some cases, on 31 December of the previous year). The population is based on data from the most recent census adjusted by the components of population change produced since the last census, or based on population registers.

Life expectancy at birth / Males - Years

The mean number of years that a newborn child can expect to live if subjected throughout his life to the current mortality conditions (age specific probabilities of dying).

Life expectancy at birth / Females - Years

The mean number of years that a newborn child can expect to live if subjected throughout his life to the current mortality conditions (age specific probabilities of dying).

At-risk-of-poverty rate after social transfers - %

The share of persons with an equivalised disposable income below the risk-of-poverty threshold, which is set at 60 % of the national median equivalised disposable income (after social transfers).

Employment rate (age group 15-64) - %

This employment rate is calculated by dividing the number of persons aged 15 to 64 in employment by the total population of the same age group. This is not the Europe 2020 employment rate indicator which refers to persons aged 20 to 64. The indicator is based on the EU Labour Force Survey. The survey covers the entire population living in private households and excludes those in collective households such as boarding houses, halls of residence and hospitals. Employed population consists of those persons who during the reference week did any work for pay or profit for at least one hour, or were not working but had jobs from which they were temporarily absent.

Unemployment rate - %

Unemployment rates represent unemployed persons as a percentage of the labour force. The labour force is the total number of people employed and unemployed. Unemployed persons comprise persons aged 15 to 74 who were: a. without work during the reference week, b. currently available for work, i.e. were available for paid employment or self-employment before the end of the two weeks following the reference week, c. actively seeking work, i.e. had taken specific steps in the four weeks period ending with the reference week to seek paid employment or self-

employment or who found a job to start later, i.e. within a period of, at most, three months.

Early leavers from education and training - % of the population aged 18-24 with at most lower secondary education and not in further education or training

From 20 November 2009, this indicator is based on annual averages of quarterly data instead of one unique reference quarter in spring. Early leavers from education and training refers to persons aged 18 to 24 fulfilling the following two conditions: first, the highest level of education or training attained is ISCED 0, 1, 2 or 3c short, second, respondents declared not having received any education or training in the four weeks preceding the survey (numerator). The denominator consists of the total population of the same age group, excluding no answers to the questions "highest level of education or training attained" and "participation to education and training". Both the numerators and the denominators come from the EU Labour Force Survey

Persons of the age 20 to 24 having completed at least upper secondary education - % of the population of the age 20 to 24

The indicator is defined as the percentage of young people of the age 20-24 years having attained at least upper secondary education attainment level, i.e. with an education level ISCED 3a, 3b or 3c long minimum (numerator). The denominator consists of the total population of the same age group, excluding no answers to the questions "highest level of education or training attained". Both the numerators and the denominators come from the EU Labour Force Survey (LFS).

Population by citizenship - Foreigners - Persons

Total number of foreigners including citizens of other EU Member States and non-EU citizens, usually resident in the reporting country. January, 1

Population by country of birth - Foreign-born - Persons

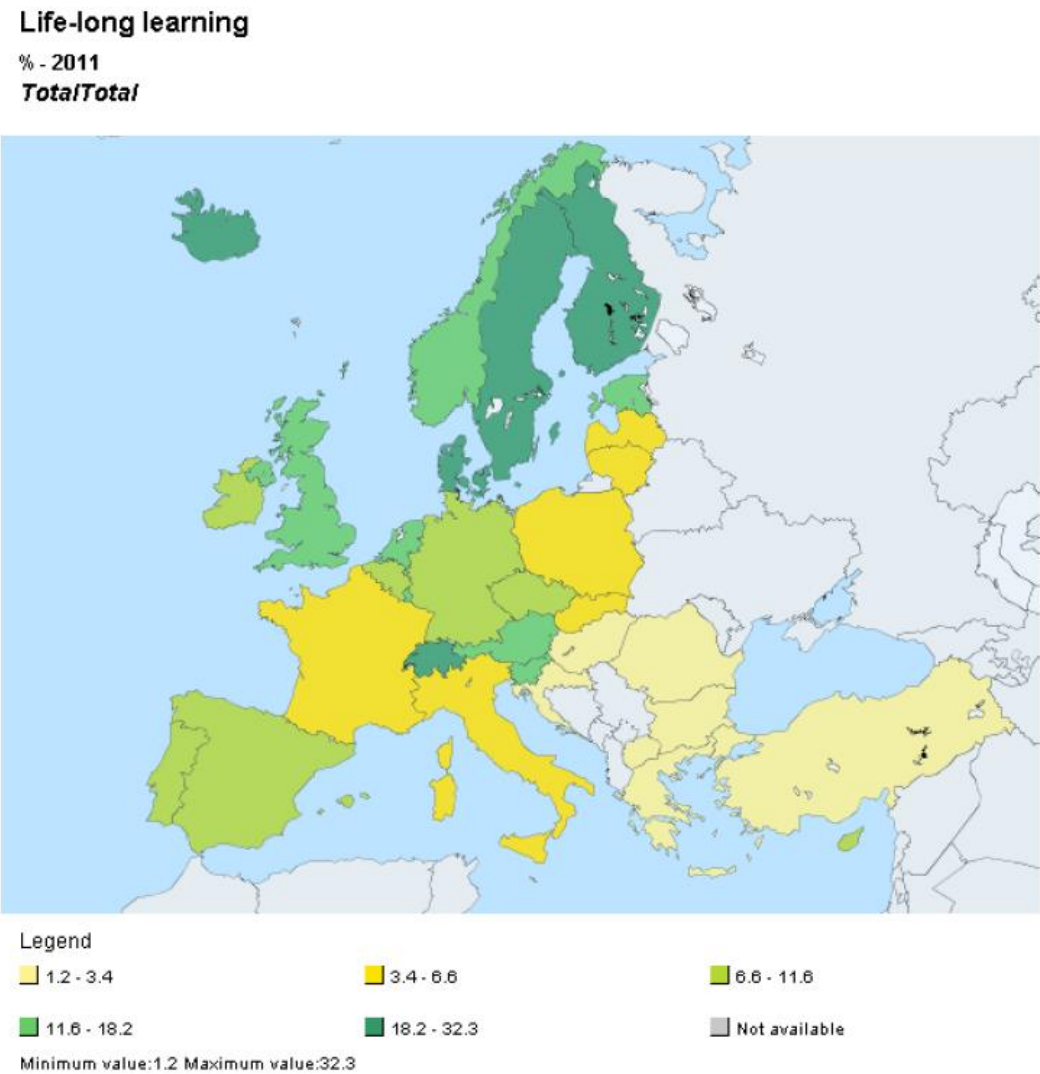
Total number of persons born abroad, usually resident in the reporting country on 1 January.

Lifelong learning ratios for 2011

Life-long learning refers to persons aged 25 to 64 who stated that they received education or training in the four weeks preceding the survey (numerator). The denominator consists of the total population of the same age group, excluding those who did not answer to the question 'participation to education and training'. Both the numerator and the denominator come from the EU Labour Force Survey. The information collected relates to all education or training whether or not relevant to the respondent's current or possible future job.

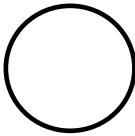
Appendix 2 Lifelong learning ratios in the European Union

Figure 14-1: Lifelong learning ratios in the EU for 2011



(Source: EUROSTAT, 2013)

Appendix 3 Geographical levels of the analysis



Regions initially considered for this research. These are the first regions in which the author found information about the national SLGIS.



Regions from which further countries and their SLGIS are added to the analysis at a later stage.

Appendix 4 Research ethics

Initial contact emails sent to possible interviewees (1)

Dear [name, names],

I am conducting research on how we know what happens to young people once they leave school, college or university in a range of European countries. This work is being conducted with Professor Stephen Gorard at the University of Birmingham. The research project compares national research programmes across Europe that are gathering information on leavers' path after compulsory education, in order to recommend areas of best practice, especially for newer countries in the European Union. So, I am interested to speak to people involved with tracking school, college or university leavers, whether they use a school leavers' survey, have their own data, or prefer a different approach.

I would highly welcome a chance talk to you about student/graduate career trajectories, the available school leavers' data on them and your thoughts concerning how to use it at the level of higher/further educational institutions. I would welcome your suggestions as well in relation to other experts within the college/university I should ask concerning my topic.

Further information on the research is provided in the information letter attached.

I will contact you through email in the next few days again for possible dates to meet as well as your suggestions for any further experts to talk to.

Thank you very much.

Initial contact emails sent to possible interviewees (2)

Dear [name, names],

I would like to ask whether I could meet you to talk about tracking the school leavers' destinations and success, as I mentioned in my previous email dated [dd/mm/yyyy]. Please let me know if you are willing for me to meet you at your convenience any time from now until [month] 2012.

If you think that there is someone else I should contact at your institution, or elsewhere, whether instead of or in addition to you, I would also welcome any suggestions for further contacts.

Thank you very much.

Kind regards,

Information letter attached to the initial contact emails

Information letter for the research entitled 'Investigating school leavers' surveys across Europe'

What is the purpose of the study?

This research project is concerned with the destinations and later educational trajectories of school leavers in a range of EU countries. It looks at how data is produced and used within a specific area of educational research and policy-making. The study involves analysing and comparing national research programmes which gather information on school leavers once they have left compulsory education. The analysis deals with the research methodology of the surveys themselves, how the research is financed and managed, and special emphasis is put on the dissemination and utilization process. Through comparing them and pointing out the main similarities and differences the investigation will propose elements of European 'best practice' for these types of surveys.

Why have I been invited to participate?

The participants of the research are generally professionals, interested in school and college leavers and what happens to them next. They may be either producing or using a school leavers' survey in their country, or they may have their own data or approach. Participants include, but are not limited to, those belonging to one of the following categories:

- Managers of the survey currently and from the past
- Policy makers as users of the survey data
- Representatives from the guidance system as users of the survey data
- Institutional leaders as users of the survey data
- Other experts who have used the survey data extensively

We hope that you can provide valuable information and possibly documentary data on the production or the utilisation of the school leavers' survey data. However, if you know little about it or do not use it, that in itself, could be just as informative.

Do I have to take part?

Participation is not compulsory. If you decide to take part but afterwards you want your data to be omitted, you can withdraw from the study by contacting me through email within two weeks from the interview. (Email address:)

What do I do?

Through an interview planned to last not more than 1 hour, you would be asked several broader questions on the topic of school leaving, student trajectories and the surveys in general. These are the main areas that the project addresses and you *may* want to contribute to any of these:

- *Aims of school leavers surveys:* why school leavers surveys as research programmes exist, what their aim is and what information need do these surveys satisfy
- *History of school leavers surveys:* the main changes in the school leavers surveys are to be examined as well as the major drives for the changes.
- *Research design and methods of school leavers surveys:* the main research questions, research design, sampling and data collection methods are to be analysed.
- *Implementation of school leavers surveys:* this section explores how the school leavers surveys are used by the different stakeholders.
- *European level:* what are the main implications of the national level for the transnational organisations, like the European Union, the UNESCO or the OECD?

Also, you may be asked to suggest useful documents concerning the research topic. (E.g. Official documentation of the school leavers survey and/or using the survey data.)

Where will we meet?

You can choose whether you want to meet me at your office/workplace or in a coffee place nearby. If a meeting is not possible I would still be interested in conversation with you either by phone or email.

How is the data collected, handled and stored?

I would prefer the interview to be recorded; the record will be only accessible to me. The anonymised transcript of the interview will be used in the research. In accordance with Data Protection guidelines on data storage, data will be stored for a minimum of ten years in line with the University's Code of Practice for Research and will be stored safely on password protected computers. (Code of Practice for Research, UoB: <http://www.birmingham.ac.uk/Documents/university/legal/research.pdf>)

Will what I say in this study be kept confidential?

Participants can decline to give answer to certain questions if they do not want to respond to them.

Participants' identity in the research will be confidential and anonymous. All interviewees will be described with the nature of their positions as long as this does not reveal an individual. Where doubt arises about this description, the person will be contacted to agree on it.

Only the researcher will know how and to whom the descriptions have been assigned. Any data with regards to the opinion of the interviewee will be fully anonymised and treated with special care.

What will happen to the results of the research study?

A report of the findings will be provided through a short version of the case study of the participant's country as well as summarising and comparing the different cases; the conclusions and recommendations.

What are the possible benefits of taking part?

Helping my research with your expertise on the topic will result in a wider and deeper knowledge on how different school leavers surveys and data collection processes operate and possibly lead to a European best practice.

Who is organising and funding the research?

The study is funded by the School of Education at the University of Birmingham.

Who has reviewed the study?

University of Birmingham's Humanities & Social Sciences Ethical Review Committee has reviewed the ethical guidelines for this study.

What ethical guidelines does the study follow?

The research is in line with the British Educational Research Association's Ethical Guidelines for Educational Research. (It can be viewed at: <http://www.bera.ac.uk/files/2011/08/BERA-Ethical-Guidelines-2011.pdf>)

Contact for Further Information

If you require any further information, please contact me at [REDACTED]. For further information, please feel free to contact my supervisor, *Professor Stephen Gorard* ([REDACTED] or [REDACTED])

Yours sincerely,
(...)

Consent form attached to the initial contact emails and signed by all interviewees at the time of the interview

**Consent form for the research entitled
'Investigating school leavers surveys across Europe'**

Conducted by Rita Hordósy at the School of Education, University of Birmingham under the supervision of Professor Stephen Gorard.

Please put a tick where appropriate.

☐

I confirm that I have understood the information relating to the research entitled 'Investigating school leavers surveys across Europe' and give my consent to take part in the project.

☐

I understand that the material I provide throughout the interview is protected by a code of professional ethics. I understand that the interview will be recorded.

☐

I understand that I can decline to answer questions if I do not want to respond to them.

☐

I understand that I can withdraw from the research and thus the information provided will not be used by contacting the researcher within two weeks from the interview.

☐

I hereby assign the copyright in my contribution to the project.

Participant Signature: _____ Name: _____ Date: _____

I confirm, as the researcher in this project, that I agree to keep the undertakings in this contract.

Researcher Signature: _____ Name: _____ Date: _____

Contact letter for sending the first draft version of the case study

Dear [name, names],

I am Rita Hordósy, conducting my research on school leavers' and graduates' data collections at the University of Birmingham. We have talked about this topic last year; I would like to thank you for your help once more.

You might be interested to see the first draft describing the school leavers' and graduates' data collections in [country] to which your input was used greatly. Please find the document attached. Exact quotations of your contribution can be found under the pseudonym '[pseudonym]' in this document.

If you have any comments on this first version of the case study description, I would be very much interested in them.

Thank you very much.

Kind regards,

Appendix 5 Research instruments

Interview schedule samples from the English case: Ministry

Higher education – [name(s) of interviewee(s)]			
	Question	Additional	Tracking
	Main areas of expertise and roles? For how many years are they fulfilling these roles?		
1.	What are the main characteristics of the higher education sector in England? What are the main challenges these days?	DOCUMENT?	
2.	What data are used by the Ministry on this generally? <ul style="list-style-type: none"> - Who produces it? - What are the key datasets? - What is the methodology of the data collection? 	(research design, methodology, sample...)	
3.	What information is used whilst the graduates are within the system ? <ul style="list-style-type: none"> - Who produces it? - What are the key datasets? - What is the methodology of the data collection? - Feedback to the colleges? - Who else is involved? - Financial aspects? 	What is the mechanism to use them?	
4.	What information is used after the graduates leave the system ? <ul style="list-style-type: none"> - Who produces it? - What are the key datasets? - What is the methodology of the data collection? - Feedback to the colleges? (Info from them?) 		

Higher education – [name(s) of interviewee(s)]			
	Question	Additional	Tracking
	<ul style="list-style-type: none"> - Who else is involved? - Financial aspects? 		
5.	Does the data fit the needs of the policy making procedure?		
6.	What is the relation between the Ministry and the provider of the research ? <ul style="list-style-type: none"> - Are there any mechanisms to discuss research methods? - Are there any mechanisms to discuss the research outcomes? - Finances? 	FORM of reports? Presentations?	
7.	DLHE <ul style="list-style-type: none"> - Assess reliability - Assess usefulness of the data - About the questionnaire → how are the different areas used? 	6 months? Missing data? Areas asked?	
8.	DLHE longitudinal <ul style="list-style-type: none"> - Assess reliability - Assess usefulness of the data - About the questionnaire → how are the different areas used? 		
9.	What is missing? What would be useful information in addition to these?		

Interview schedule samples from the English case: Research organisation

LSYPE and YCS – [name(s) of interviewee(s)]			
	Question	Additional	Tracking
	Main areas of expertise and roles? For how many years are they fulfilling these roles?		
	AIM OF SLS		
1.	What is the (stated) aim of the LSYPE survey? What is the (stated) aim of the YCS survey? Why are they conducted? In what settings are they used?	Purpose from different stakeholders' view?	
2.	Has the aim of the different surveys changed over the years? How? What influenced these changes? What is the reason behind merging the YCS and the LSYPE? → How does this affect comparability/longitudinal aspects?	How were the different stakeholders involved in the changes?	
	DATA-NEEDS		
3.	What sort of data are needed in relation to school leaving? → ministerial needs? → institutional needs?		

LSYPE and YCS – [name(s) of interviewee(s)]			
	Question	Additional	Tracking
4.	How do these needs relate to the methodology of the survey? Assess it from the viewpoint of the different users	Different age group? Social-background variables? Educational achievement? Qualifications? Area of study? Labour market outcomes –early years? Later on?	
5.	To what extent does the school leavers survey supply the data-needed ? → ministerial needs? → institutional needs?		
STRENGTH AND WEAKNESSES			
6.	What are the major strength of the LSYPE? What are the major weaknesses of the LSYPE?	Research design, method, implementation, topics covered!	
WHAT CHANGED?			
7.	Having talked about the change in the aim of the survey, how did the LSYPE itself change over time? Having talked about the change in the aim of the survey, how did the YCS itself change over time?	What aspects have changed? Design? Methods? Time-frame? Area covered? (In England!) Implementation? Topics?	
8.	Were there any major conceptual changes ? Why were they necessary?		

LSYPE and YCS – [name(s) of interviewee(s)]			
	Question	Additional	Tracking
9.	Who were the main actors throughout the changes? How are decisions made ?	What was their role?	
10.	Was there any model from other countries that was used when planning//making changes to the school leavers survey?	Policy borrowing?	
INSTITUTIONAL BACKGROUND			
11.	What is the institutional background of the survey ? Were there any changes in the past? [YCS (NatCen → Sheffield?)]	How did these affect the survey?	
12.	What is the financing scheme of the survey ? Were there any changes in the past?		
RESEARCH DESIGN			
13.	What is the reason for doing longitudinal studies in the YCS and LSYPE? How does this relate to the data-needs discussed earlier?	What information is gained and what is lost this way?	
SPACE and TIME			
14.	What is the geographical scope of the survey? YCS covers Wales ↔ LSYPE covers England	Has this changed throughout? How does this relate to the data-needs discussed earlier?	
15.	Why is the survey repeated yearly ? What is the reason behind the YCS not being consistent?	How does this relate to the data-needs discussed earlier?	

LSYPE and YCS – [name(s) of interviewee(s)]			
	Question	Additional	Tracking
	PARTICIPANTS		
16.	What is the age range of the two surveys?	How does this relate to the data-needs discussed earlier?	
17.	Could you please summarise the sampling process ? What are the major problems, if any?	DOCUMENTS on it!	
18.	How did the response rates change over time? How is it currently? → Attrition?		
	RESEARCH METHODOLOGY		
19.	How is the survey information collected ? How do these relate to the response rates? <ul style="list-style-type: none"> • Postal survey? • Telephone survey? • Personal interviewing? • Internet questionnaire? • Mixed? 	Change over time? [TNS-BMRB?]	
20.	Could you describe the analysis process ?		
21.	Could you assess the reliability of the data?		
	TOPICS		
22.	What are the major topics of the survey?	QUESTIONNAIRE!	
23.	What major topics are absent from the survey? Why are they absent?	(age group, repetition, length, research questions?)	
	IMPLEMENTATION		
24.	Whose task is to implement the research findings? How successful is it?	Has it changed historically?	

LSYPE and YCS – [name(s) of interviewee(s)]			
	Question	Additional	Tracking
25.	How are the research outcomes presented ; what format is available?	Report? Scholarly articles? Newspaper articles? Policy recommendations? Presentations – to whom?	
26.	What mechanisms are there to ensure the research outcomes reach the different users? (User-friendliness of the data?) Are there any procedures of feedback?		
27.	Could you assess what the critical success factors of implementation are?	What are the major challenges?	
28.	Are there any mechanisms to make sure that the school leavers' survey data are used along its aims?	What is the financial background for the implementation of the survey?	

Interview schedule samples from the English case: College

College, Information services – [name(s) of interviewee(s)]			
	Question	Additional	Tracking
	Main areas of expertise and roles? For how many years are they fulfilling these roles?		
	Please tell me a bit about your college: What is a typical student career here? Where do they come from , what are they doing afterwards ?		
	Tracking within and after school		
1.	How are you tracking their progress throughout the school? <ul style="list-style-type: none"> - What <i>sort of information</i> do you have? - What <i>procedures</i> are built on this information? - Who is <i>producing</i> the data? - Who is <i>using it</i> in what settings? <i>External assessment</i>? - How would you evaluate the tracking process within school? - How would you evaluate the quality of the data? 	Is there any difference in relation to the different courses? (Do you track students dropping out?)	
2.	What mechanisms are available to you to track their progress once they left the college ? <ul style="list-style-type: none"> - Do you have your own tracking system? - What data are collected from the former students? - How is the data used, in what settings? External assessment? - How would you evaluate the tracking process after school? - How would you evaluate the 	→ IF not, jump to 4!	

College, Information services – [name(s) of interviewee(s)]			
	Question	Additional	Tracking
	quality of the data?		
3.	Are these tracking mechanisms/data from them connected? - How is this information used afterwards ?		
	INFO from LSYPE and YCS?		
4.	What do you know about the Youth Cohort Study and the Longitudinal Study of Young People in England? - Does the data fit the needs of the institution? - In what ways can you use it? - A new research report comes out. Could you explain how it reaches the institutional decision making process?		
5.	What type of information would make more use of in your college?		

Appendix 6 Timeline of this research

Table 14-1: Timeline of this research

	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
First year of PhD (Academic year 2010/2011)												
Coursework: Research in Social Science												
Literature review												
Research methods												
Construction and amendment of research instruments 1.												
Conferences attended: EERA ECER, Berlin 2011												
Second year of PhD (Academic year 2011/2012)												
Ethical approval of this research												
Construction and amendment of research instruments 2.												
Piloting the research instruments												
Organising the Dutch fieldwork												
Organising the English fieldwork												
Organising the Finnish fieldwork												
Dutch case study, fieldwork												
English case study, fieldwork												
Finnish case study, fieldwork												
Additional interviews over phone (all countries) 1.												
Transcription of interviews 1.												
EERA ECER, Cadiz 2012												
BERA Conference, Manchester 2012												

Timeline of this research

	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
Third year of PhD (Academic year 2012/2013)												
Additional interviews over phone (all countries) 2.												
Transcription of interviews 2.												
Coding of interviews												
First version of the case studies - Netherlands												
First version of the case studies - England												
First version of the case studies - Finland												
Sending the first versions of the case studies to the interviewees of this research												
Writing-up the thesis												
First version of the entire thesis												
Amendment of the thesis along comments from supervisors												
Submission of thesis												
AERA Annual Meeting, San Francisco 2013												
EERA ECER, Istanbul 2013												
BERA Conference, Brighton 2013												

Appendix 7 Appendices to the findings from the cross-sectional phase of this research, country descriptions

Austria

Name of research	Statistics Austria: Education-related employment career monitoring
Focus of SLGIS	First experiences at the labour market and career pathway
Starting year	2011 (?)
Repetition	New cohort yearly
Research design	Longitudinal
Population	Census
Age group/ Time after leaving	1, 12, 18, 24 months after leaving

The Austrian school leavers' and graduates' information system uses administrative data-files to combine the information set called 'Education-related employment career monitoring' (STATISTICS AUSTRIA, 2012). Using the methodology of merging different datasets, information is provided on virtually all school leavers and graduates. A new cohort is started yearly and the information can be viewed in a longitudinal manner; the Statistics Austria website provides information 1, 12, 18 and 24 months after leaving schools or universities. Currently it is only one cohort that constitutes the information on the website, presumably this is because the project started in 2011 (STATISTICS AUSTRIA, 2012). The information sheets provided through the Statistics Austria website detail what position the school leaver from the different types of schools is in 1, 12, 18 and 24 months after leaving. The categories are the following: In training, Employed, Preregistered at the Public Employment Service Austria (AMS) or Other/inactive. Another information sheet provides the initial

earnings the school leavers' and graduates' from different types of schools and universities.

Belgium

Name of research	Flemish Longitudinal Research in Secondary Education
Focus of SLGIS	Transitions from school to further education and to labour market
Starting year	1999
Repetition	3 cohorts between 1999-2006
Research design	Longitudinal
Population	Sample
Age group/ Time after leaving	Contacts made at the ages of 23, 26, and 29

The research project of Belgium in reality only concerns the Flemish part of the country; it is a project on transitions after compulsory schooling. The research project is built on a longitudinal design using a sample-approach; three cohorts were started since 1999. Young people in this research are contacted three times, at the ages of 23, 26 and 29 (KULeuven, 2011). The research projects aim to give an account of young people's transition pathways 'including educational and work careers of adults until the age of 35' (KULeuven, 2013).

Denmark

Name of research	From education to labour market (Fra uddannelse til arbejdsmarked)
Focus of SLGIS	Transitions from school to further education and to labour market
Starting year	2000
Repetition	New cohort yearly
Research design	Longitudinal
Population	Census
Age group/ Time after leaving	2 months after leaving, then yearly from 1 to 10 years

Name of research	Graduate employment (Nyuddannedes beskæftigelse)
Focus of SLGIS	Transitions from school to further education and to labour market
Starting year	2004
Repetition	New cohort yearly
Research design	Longitudinal
Population	Census
Age group/ Time after leaving	4 to 19 months after graduation

The Danish data collection on school leavers entitled ‘Fra uddannelse til arbejdsmarked’ (From education to labour market) and the information provided about graduates entitled ‘Nyuddannedes beskæftigelse’ (Graduate Employment) both combine employment and population registers, as well as taxation and pension registers (STATISTICS DENMARK, 2012, Jensen, 2012). Acquiring a longitudinal perspective is possible through ‘flow statistics’ where ‘data on the same individual is chained together for consecutive time periods’ (UNITED NATIONS, 2007: 33). The first Danish SLGIS provides information about school leavers for a ten-year period, whereas the second information set gives a picture about graduates for a shorter time period after leaving university. Thus the main information presented about the

school leavers and graduates in the two separate accounts is the type of activity the former students have a given period after leaving or graduation. Statistics Denmark provides information on the leavers from general education a year after they have finished; however, the statistical database of the website makes it possible to look at the information yearly as well (STATISTICS DENMARK, 2012). The Agency for Universities and Internationalisation that provides the data on graduates' gains the data from Statistics Denmark as well. The key information set details whether the former students are employed 4-19 months after graduation; the website provides data on areas of studies and provides a comparison of cross-sectional accounts and also analyses how the rate of unemployment changed in the first 4 to 19 months after graduation (Jensen, 2012).

England and Wales

Name of research	Youth Cohort Study (YCS) - terminated
Focus of SLGIS	Life of young people including school leaving and graduating
Starting year	1995
Repetition	New cohort biannually
Research design	Longitudinal
Population	Sample
Age group/ Time after leaving	2, 3, 4 contacts yearly, between the ages 16 and 19

The already terminated English and Welsh 'Youth Cohort Study' (YCS) was designed 'to monitor the behaviour and decisions of representative samples of young people aged sixteen upwards' (Carpenter, 2007, ESDS, 2008b, ESDS, 2008d). This study gained information about the lives of young people more generally in England and

Wales just after they finished compulsory schooling. To do so, this research project was built on several cohorts, providing a longitudinal view of young people's lives through contacting them a number of times. The Young Cohort Study was based on a sample survey with 2, 3 or 4 sweeps, contacting young people between the ages of 16 and 18 or 16 and 19 and sometimes following them up to a later age as well (Carpenter, 2007). Table 14-2 provides further details about the actual sweeps and contacts made throughout the 13 cohorts. Note that the last cohort only covered England; it did not sample Welsh students.

Table 14-2: YCS cohorts and sweeps with the age of completion of questionnaire

Cohort/Year	1	2	3	4	5	6	7	8	9	10	11	12	13
1985	16												
1986	17	16											
1987	18	17	16										
1988		18	17										
1989			18	16									
1990				17									
1991				18	16								
1992					17	16							
1993					18	17							
1994			23			18	16						
1995													
1996							18	16					
1997													
1998								18	16				
1999									17				
2000								20	18	16			
2001													
2002										18	16		
2003										19	17		
2004											18	16	
2005											19	17	
2006												18	
2007												19	16
2008													17
2009													18
2010													19

(Adapted from: Carpenter, 2007)

England

Name of research	Longitudinal Study of Young People in England (LSYPE)
Focus of SLGIS	Life of young people including school leaving and graduating
Starting year	2004
Repetition	One cohort
Research design	Longitudinal
Population	Sample
Age group/ Time after leaving	Yearly from the age 13/14 till 23/24. Terminated 3 years before planned, in 2010

The study entitled the 'Longitudinal Study of Young People in England' (LSYPE) begun in 2004, and was based on a sample of pupils between the ages of 13 and 14. This longitudinal study was planned to continue for at least ten years, the sample of young people was planned to be followed up to their 23rd-24th birthday according to the initial plans. However, due to austerity measures the research programme was terminated after the 7th wave. The data collected was supplemented by administrative records, geo-demographic data, and interviews with parents were conducted as well (ESDS, 2012a). The first four waves of the study were conducted using face-to-face interviews, subsequent waves were using multi-method data collection procedures applying online, telephone and face-to-face interviewing (ESDS, 2012a).

Although the data description of the LSYPE stated it was gathering data on 'the transitions young people make from secondary and tertiary education or training to economic roles in early adulthood' (ESDS, 2012a), as a review of this dataset states, it covered wider issues of young people's lives:

(...) past Waves of the first LSYPE cohort have focused on the educational experiences of young people, but other issues have also been covered including their views on local areas, community cohesion, participation in social activities, participation in risky behaviours, crime or anti-social

behaviours, health, and their aspirations for the future. (Collingwood et al., 2010: 20)

Name of research	Learner Destinations
Focus of SLGIS	First destinations of leavers
Starting year	2009
Repetition	Yearly, with the exception of year 2010
Research design	Cross-sectional
Population	Census (?)
Age group/ Time after leaving	At the time of leaving (surveying from April to August in the case of 2013)

The research entitled ‘Learner Destinations’ gathers information about the further education leavers at the time-point of leaving the college. As the website for the research indicates, it gathers information from students finishing the 16-18 and the 19+ apprenticeship as well as the students who finished the 19+ skills programme (SFA, 2013). The majority of the data are collected through combining different datasets and the a substantial part of the cohort is then queried using questionnaires (SFA, 2012, SFA, 2013).

Finland

Name of research	Statistics Finland: Transition from school to further education and work
Focus of SLGIS	Transitions from school to further education and to labour market
Starting year	1990
Repetition	New cohort yearly
Research design	Longitudinal
Population	Census
Age group/ Time after leaving	One year after leaving secondary or university and longitudinal accounts

The information set by Statistics Finland entitled ‘Transition from school to further education and work’ is based on combining different national data-registers (STATISTICS FINLAND, 2011d, STATISTICS FINLAND, 2012g). The datasets describe the status of the individual as well as ‘the transition by area, industry, employer sector or other information’ (STATISTICS FINLAND, 2011d). This dataset provides information about virtually all former students who have finished their studies in a Finnish school or university and stayed in Finland afterwards. The data collection is based on the type of school or university (STATISTICS FINLAND, 2010, STATISTICS FINLAND, 2011d, STATISTICS FINLAND, 2011c). The information provided concerns whether the former students are employed or unemployed, whether they are studying or whether they are in any other activity. The data provided on the Statistics Finland website concerns a time-point 1 year after leaving; however, the data can be also analysed in a longitudinal manner.

There are a number of graduates' data collections related to the Finnish higher education and the labour market outcomes. These are conducted by smaller groups of universities, like the exit-polls, first destinations and the career follow-ups collect information from subsequent cohorts in a cross-sectional manner asking a sample of former students.

Name of research	Aarresaari Network Career follow-up
Focus of SLGIS	First experiences at the labour market and career pathway
Starting year	2000s
Repetition	New cohort biannually
Research design	Cross-sectional
Population	Sample
Age group/ Time after leaving	Five year after leaving university; two-three years after graduation for doctoral students

The Aarresaari Network's 'Career follow-up' researching the academic higher education sector, aims to gather information about the graduates' experiences at the labour market 5 years after they left from the institution. This research project is conducted biannually in a cross-sectional manner with every second cohort of Master's graduates; in other years two cohorts of former doctoral students are contacted 2-3 years after graduation (Puhakka and Tuominen, 2011). This SLGIS aims to provide data on the longer term outcomes of university graduates with a focus on their employment path. The research also investigates what type of skills graduates needed to obtain their job and whether their university prepared them fully for employment.

Name of research	Aarresaari Network First destinations
Focus of SLGIS	First destinations of leavers
Starting year	2005
Repetition	New cohort yearly
Research design	Cross-sectional
Population	Sample
Age group/ Time after leaving	One year after leaving university/polytechnics

The Aarresaari Network's 'First-destinations' researches the initial labour market outcomes and the graduate's opinion on their recent studies one year after the graduate left the institution. The research samples a new cohort yearly since 2005. This SLGIS is conducted by a number of academic as well as professional higher education institutions. The main focus of the first-destinations is to gain the graduates' feedback on their university education.

Name of research	Exit-polls
Focus of SLGIS	First destinations of leavers
Starting year	N/A
Repetition	New cohort yearly
Research design	Cross-sectional
Population	Census (?)
Age group/ Time after leaving	At the time point of leaving university

The 'Exit-polls' used by a smaller number of universities query graduates at the time point of leaving the university as a part of a wider student-satisfaction survey system. As this system is relatively new and not employed by many universities, only a few methodological details are known; these are detailed in the case study description of Finland.

France

Name of research	L'enquête 'Génération 92, 98, 2001, 2004, 2007, 2010
Focus of SLGIS	Transitions from school to further education and to labour market
Starting year	1992
Repetition	1992, 1998, 2001, 2004, 2007, 2010
Research design	Longitudinal
Population	Sample
Age group/ Time after leaving	3, 5, 7 and 10 years after leaving

The French study entitled 'Génération' carried out by the Centre d'études et de recherches sur les qualifications (Céreq) is following a number of cohorts of young people for seven years and is described as 'an appropriate statistical tool for monitoring transition-to-work paths and occupational trajectories' (Céreq, 2011). The research gathers data on leavers from schools as well as universities; the main criteria for the sample are to have left education in the given academic year, not started schools or university again within one year, and not being older than 35 years (Céreq, 2010, Céreq, 2011). Cohorts are started in years 1992, 1998, 2001 and 2004; these four cohorts are contacted three times throughout. The information is collected through using structured questionnaires.

Name of research	Les bacheliers
Focus of SLGIS	Transitions from school to further education and to labour market
Starting year	1996
Repetition	Cohorts from 1996, 2002, 2008
Research design	Longitudinal
Population	Sample
Age group/ Time after leaving	Yearly after school leaving school, into university

The research project entitled ‘Les bacheliers’ follows secondary school leavers through their transition to university and within this subsequent educational phase. Three cohorts were sampled for the purposes of the longitudinal study and the young people are contacted yearly after they left school (Lemaire, 2010, Lemaire, 2012).

Germany

Name of research	Nationale Bildungspanel (NEPS)
Focus of SLGIS	Life of young people including school leaving and graduating
Starting year	2010
Repetition	One panel of multiple cohorts
Research design	Longitudinal
Population	Sample
Age group/ Time after leaving	For 10 years, contacts yearly; connected to school levels

The German study entitled ‘National Educational Panel Study’ (NEPS) aims to analyse ‘how education is acquired, to see how it impacts on individual biographies, and to describe and analyse the major educational processes and trajectories across the life span’; to achieve a ‘successful individual and social life’ (von Maurice et al., 2011: 2). This SLGIS is built on a panel of multiple cohorts covering different age groups; the stages of sampling signify different phases of the school pathway and the

labour market career from early childhood to adult education. In 2010 five cohorts were started; '[s]ample selection is oriented toward transitions both within the education system and between the education system and the labor market' (UNI BAMBERG, 2010a: 20).

The total sample is planned to be 60,000 persons; the future respondents will be interviewed for ten years. The cohorts sampled in 2010 examine transitions 1) from kindergarten to elementary-school and then to lower-secondary; 2) from lower-secondary to upper-secondary and then to further or higher education; 3) from upper-secondary to further or higher education and then to the job market and 4) from further or higher education to the labour market (UNI BAMBERG, 2010c, UNI BAMBERG, 2010b). 'An exception is the fifth starting cohort recruited to study adult education', as this one does not necessarily deal with transitions (UNI BAMBERG, 2010a: 20, von Maurice et al., 2011). The research description does not detail attrition for the majority of the cohorts but it adds details of drop-out of the sample and the ratio of boosting it for the 'adult' cohort (UNI BAMBERG, 2010c, UNI BAMBERG, 2010b, UNI BAMBERG, 2010a). The research is built on questionnaire data combining personal and self-interviewing using paper questionnaires and computer assisted interviewing methods (UNI BAMBERG, 2010a).

Name of research	Hochschulabschlüsse
Focus of SLGIS	First experiences at the labour market and career pathway
Starting year	1989
Repetition	1989, 1993, 1997, 2001, 2005 and 2009
Research design	Longitudinal
Population	Sample
Age group/ Time after leaving	1 and 5 years after leaving; for some cohorts 10 years after leaving as well

This study entitled ‘Hochschulabschlüsse’ follows former students of a particular type of German school for a longer time period. The majority of the cohorts are contacted one and five years after leaving, but some groups of respondents are interviewed 10 years after they left school as well. The research project is built on following a sample of young people and gathering information about their first experiences at the labour market as well as how their careers unfold over time. A total of six cohorts have been started since the first study in 1989 (Rehn et al., 2011).

Italy

Name of research	ISTAT survey on the educational and work experiences of upper secondary school leavers ISTAT Graduate Survey
Focus of SLGIS	Transitions from school to further education and to labour market
Starting year	1998
Repetition	New cohort every 3 years
Research design	Cross-sectional
Population	Sample
Age group/ Time after leaving	3 years after leaving secondary school or university

The Italian National Institute of Statistics (ISTAT) conducts two research projects that are combined into a national level ‘education-to-work transition’ dataset. The

information system entitled ‘L’Indagine sui percorsi di studio e di lavoro dei diplomati delle scuole secondarie di secondo grado’ (Survey on the educational and work experiences of upper secondary school leavers) gathers data on the upper-secondary leavers, the other entitled ‘Graduate Survey’ on graduates. The respondents in these research projects are asked about their educational experiences as well as their labour market experiences, their job status and circumstances, and their social background. Both research projects are based on a sample of leavers’ or graduates’ contacting the respondents three years after they have left the institution. These information systems are in place since 1998; new cohorts are sampled every three years (ISTAT, 2011b, ISTAT, 2012, ISTAT, 2011a). Data are collected through computer assisted telephone interviewing for both research programmes. As for the samples, at the upper-secondary level an approximately 10% sample is aimed to be contacted in 2007, the response rate is around 65%; for the university level the sample aimed is around 20%, the final response rate is around 70% (ISTAT, 2011b, ISTAT, 2012, ISTAT, 2011a).

Name of research	Graduates’ Employment Conditions Survey (of a given year)
Focus of SLGIS	First experiences at the labour market and career pathway
Starting year	1997
Repetition	New cohort yearly
Research design	Cross-sectional
Population	Sample
Age group/	3 years after leaving university
Time after leaving	(some level of information is collected 1, 3 and 5 years after)

There is a further study conducted to gain information from graduates of Italian universities. The research entitled ‘Graduates’ Employment Conditions Survey’ samples young people three years after they left university; it provides information in a cross-sectional manner and gathers data from cohorts yearly since 1997 (Cammelli, 2012).

Netherlands

Name of research	ROA School-leaver and graduate surveys VSNU WO-Monitor
Focus of SLGIS	Transitions from school to further education and to labour market
Starting year	1989
Repetition	New cohort yearly; biannually for WO-level
Research design	Cross-sectional
Population	Sample
Age group/ Time after leaving	1.5 years after leaving secondary school or university

The Dutch ‘School-leaver and graduate surveys’ (VWO, HAVO, VMBO, MBO, HBO and WO-monitors) are built on several cross-sectional accounts collecting data from school leavers and university graduates 1.5 years after they finished their education. The information system is built on samples of young people, and every new cohort is queried once since 1989; since 2007 the WO-level is contacted every second year (ROA, 2009b, VSNU, 2007b). This SLGIS adopt a multi-mode data collection technique, using paper questionnaires, web-based questionnaires and telephone interviewing as well.

Northern-Ireland

Name of research	School Leavers' Survey
Focus of SLGIS	First destinations of leavers
Starting year	1979
Repetition	New cohort yearly
Research design	Cross-sectional
Population	Census
Age group/ Time after leaving	At leaving

The Northern-Irish data collection gathers information at the time-point of leaving compulsory schooling to gain a picture about the first destinations of leavers, whether they are going into further education or work. This information system collects data through using statistical information validated by schools, thus providing a census of all young people. As for the topics covered, some social background variables beyond the destinations information are collected. New cohorts are contacted yearly since 1979 (Osborne D., 1992, DENI, 2010).

Republic of Ireland

Name of research	School Leavers Survey
Focus of SLGIS	Transitions from school to further education and to labour market
Starting year	1980
Repetition	New cohort yearly or biannually
Research design	Cross-sectional
Population	Sample
Age group/ Time after leaving	12-18 months after leaving school

The Irish 'School Leavers Survey' programme collects information through a sample survey. The Irish survey is carried out annually or biannually and it asks former

students 12-18 months after leaving school. As this SLGIS begun in 1978/1979, the 24th survey was conducted in 2007 (Byrne et al., 2008). Before 2007 mainly face-to-face interviews were used, in 2007 multi-mode data collection approach was employed using e-mail, telephone, face-to-face and internet interviewing (ISSDA, 2007).

Name of research	What do graduates do? First Destination Report
Focus of SLGIS	First destinations of leavers
Starting year	1987
Repetition	1987, 1992, 1997, 2002, 2006, 2007, 2008
Research design	Cross-sectional
Population	Sample
Age group/ Time after leaving	9 months after graduating

The Irish research project entitled ‘What do graduates do? First Destination Report’ aims to gather information about the first destinations of graduates of Irish universities. This dataset is a snapshot, contacting a sample of graduates 9 months after they left university. The research has been carried out since 1987 seven times (HEA, 2010).

Spain

Name of research	Young people's entrance to the labour market (Observatorio de Inserción Laboral de los Jóvenes)
Focus of SLGIS	First experiences at the labour market and career pathway
Starting year	1996
Repetition	1996, 1999, 2002, 2005, 2008 and 2011
Research design	Cross-sectional
Population	Sample
Age group/ Time after leaving	Within 5 years of accessing the labour market after leaving; 16-30 year olds

Name of research	University Observatory for Employment (Observatorio Universitario de Inserción Laboral)
Focus of SLGIS	First experiences at the labour market and career pathway
Starting year	N/A
Repetition	New cohort yearly
Research design	Cross-sectional
Population	Sample
Age group/ Time after leaving	N/A

The Spanish studies provide a picture about how young people cope with the first few years of entering the labour market (García-Montalvo and María Peiró, 2011). This SLGIS deals specifically with higher education gathering data about the integration of graduates to the labour market (ANECA, 2009). These research projects collect information from samples of young people within 5 years after they left school or university. There has been 6 cohorts sampled since 1996 every three years; the study collects data in a cross-sectional manner.

Scotland

Name of research	Scottish School Leavers' Survey (SSLS) – terminated
Focus of SLGIS	Transitions from school to further education and to labour market
Starting year	(1970)
Repetition	Recently: 1991; 1993; 2001; 2003
Research design	Longitudinal
Population	Sample
Age group/ Time after leaving	At the ages of 16/17, 18/19, 21/22, 23/24

The already terminated 'Scottish School Leavers' Survey' (SSLS) gathered information on the school-to-school and the school-to-work transitions viewing a longer time period after the individual left compulsory schooling. The Scottish School Leavers Survey was carried out regularly but gap between the different cohorts varied. In the early years of the survey the cohorts followed each other biannually. The latest four cohorts were first sampled in 1993, 1999, 2001 and 2003 (ESDS, 2005b, ESDS, 2005c, ESDS, 2005a). The SSLS was based on a representative sample of Scottish school leavers using postal questionnaires. Young people were contacted four times from the ages of 16/17 till the ages of 23/24 (Howieson and Croxford, 2008).

Name of research	Destinations of Leavers from Scottish Schools AND Follow up Survey of Leavers From Scottish Schools
Focus of SLGIS	First destinations of leavers
Starting year	2005
Repetition	New cohort yearly
Research design	'Longitudinal' (2 data points)
Population	Census
Age group/ Time after leaving	3 months and 9 months after leaving

The ‘Destinations of Leavers from Scottish Schools’ and the ‘Follow up Survey of Leavers From Scottish Schools’ are based on statistical data collected by the national guidance service. The initial data collection is carried out by Skills Development Scotland, contacting all school leavers from across Scotland. The individual pupil outcomes are then matched to pupil characteristics from the year of leaving, sometimes from the year before leaving (ScotStat, 2009, ScotStat, 2010). The destination and follow-up information systems provide data annually, three months and nine months after the young people have finished compulsory schooling. The nine month data are gathered by Careers Scotland partly by data-matching, partly through following up the school leavers.

Name of research	On Track
Focus of SLGIS	First experiences at the labour market and career pathway
Starting year	2004
Repetition	Two cohorts: 2004; 2007
Research design	Longitudinal
Population	Sample
Age group/ Time after leaving	For 5 years after leaving, 4 times interviewed

The research programme entitled ‘On Track’ samples graduates from Scottish universities; they are contacted a total of four times over a five year period. The research aims to gain a broader understanding of the experiences of graduates at the labour market and how their careers unfold. This research project builds on two cohorts so far, sampled in 2004 and 2007 respectively (SFC, 2010).

Sweden

Name of research	The transition from upper secondary school to higher education
Focus of SLGIS	Transitions from school to further education and to labour market
Starting year	1989
Repetition	New cohort yearly
Research design	Cross-sectional
Population	Census
Age group/ Time after leaving	At leaving

The Swedish dataset entitled ‘The transition from upper secondary school to higher education’ uses administrative data to provide information about the transition of students between two educational levels. This dataset is a snapshot, and data are provided on every student of the new cohorts yearly since 1989 (STATISTICS SWEDEN, 2012).

Name of research	The Entrance to the Labour Market; Upper secondary school leavers The Entrance to the Labour Market; University graduates
Focus of SLGIS	First experiences at the labour market and career pathway
Starting year	1996
Repetition	New cohort yearly (?)
Research design	Cross-sectional
Population	Sample
Age group/ Time after leaving	3 years after leaving upper secondary school / 3 years after leaving university

The ‘Entrance to the Labour Market’ studies collect information about the first experiences of former students’ and graduates’ at the labour market, three years after they left the institution. Data are collected by postal and electronic questionnaires sent to a sample of students three years after they finished their

upper-secondary education and separately to those who finished their university years (Sauli, 2008, Samuelsson, 2004). A new group of leavers' and graduates' is sampled yearly for this research project since 1996.

Switzerland

Name of research	Transitions from Education to Employment (TREE)
Focus of SLGIS	Transitions from school to further education and to labour market
Starting year	2000
Repetition	One cohort
Research design	Longitudinal
Population	Sample
Age group/ Time after leaving	Between the ages of 16 and 26, contacting them yearly till 2007 then 2010

The 'Transitions from Education to Employment' (TREE) study conducted in Switzerland is based on one cohort. The sample consists of pupils who were 16 years old in 2000 and participated in the first PISA study; they are followed till they are 26 years old. The study is based on a sample survey using postal questionnaires in the first four sweeps and applying computer-assisted telephone interviewing in the subsequent three. So far it is unknown what methodology was used in the last, 2010 sweep. The research project follows this sample of young people throughout their post-compulsory schooling into their first workplaces to grasp an idea about transitions into higher education and the world of work (Bergman et al., 2013, Bergman et al., 2010b).

Name of research	Graduate Survey
Focus of SLGIS	First experiences at the labour market and career pathway
Starting year	1977
Repetition	New cohort biannually
Research design	'Longitudinal' follow-up
Population	Sample
Age group/ Time after leaving	1 year after graduation; since 2002, the graduates are also followed up 5 years after graduation

This Graduate survey conducted in Switzerland started as early as 1977 (BFS, 2011). It was gradually extended from the research universities to institutions of applied sciences and to cover 'Bachelor's degree, diploma, licentiate, Master's degree and PhD' (BFS, 2011). The research is built on a sample surveys one and five years after the graduate has left university in Switzerland. Beyond employment and training history after graduation the questionnaires also ask the respondents to evaluate their career to date. The research also gathers some data on the personal data and the living conditions of the graduate.

United Kingdom

Name of research	Destination of Leavers from Higher Education (DLHE)
Focus of SLGIS	First destinations of leavers
Starting year	1995
Repetition	New cohort yearly
Research design	Cross-sectional
Population	'Census'
Age group/ Time after leaving	6 months after graduation

The United Kingdom-wide ‘Destinations of Leavers from Higher Education’ (DLHE) is built on asking all undergraduate full-time home students six months after graduation about their initial labour market outcomes. The DLHE and its previous formats have been around in the UK since 1994/1995. The research uses offline and online questionnaires and telephone interviewing. All institutions that have higher education provision across the United Kingdom, are required to achieve an 80% response rate (HESA, 2007). For part-time students, international and EU-students the prescribed response rate is lower. Due to time and financial constraints the questionnaire is relatively short and mainly contains information about the present activity of the graduate. The DLHE is by the institutions according to the guidelines of the Higher Education Statistics Agency (HESA). The national dataset makes it possible to compare institutions; the DLHE features in the university rankings as well (HESA, 2007).

Wales

Name of research	Careers Wales Destinations
Focus of SLGIS	First destinations of leavers
Starting year	Mid-90s
Repetition	New cohort yearly
Research design	Cross-sectional
Population	Census
Age group/ Time after leaving	At leaving

The ‘Careers Wales Destinations’ data collection provides information on leavers from secondary schools in Wales; it gathers information on the initial destinations of

all young people. This dataset combines administrative data acquired from schools and tracking down the students for whom there is no information in available. This dataset provides a snapshot every year about three year-groups since the mid-90s (CAREER SWALES, 2012b, CAREER SWALES, 2012a).

Appendix 8 Fieldwork report from the case study countries and the list of organisations consulted

The fieldwork reports for the three case study countries detail a) how the initial contacts with informants were made; b) the procedure of negotiating access, especially in terms of choosing participants for the interviews and their responses to the first contact; and c) some reflection on the experiences during the fieldwork. After each fieldwork report a detailed list of organisations consulted is provided along the main topics of the interviews with those organisations and individuals. Table 14-3 lists the organisations interviewed for the purposes of this research along with the acronym of the organisation, the pseudonym used to refer to the organisation throughout the thesis and where further details can be found in this appendix.

Table 14-3: List of interviews conducted for this research

Country	Organisation	Acronym	Pseudonym	Sector	Page number
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Country	Organisation	Acronym	Pseudonym	Sector	Page number
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Fieldwork report from the case study countries and the list of organisations consulted

Country	Organisation	Acronym	Pseudonym	Sector	Page number
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Appendix 9 Piloting the research instruments

The research instruments and the analysis process were planned to be piloted prior the fieldwork. The piloting aimed to find out what would work in terms of negotiating access, whether the interview schedules are fit for purpose, and how the transcription, coding and analysis of the interviews would work. To save resources and time these were planned to happen in England.

One of the first issues encountered during the pilot was obtaining access to the organisations and various positions within them. The first challenge was to find an appropriate email contacts. Some organisations have emails clearly available on their websites along with the name of the principal/director/leader, but many do not provide contact details of those in charge. Searching the website and general search engines for names and email addresses was mostly successful; no organisation dropped out for a lack of contact details. The initial contact email informed the possible participant(s) about the research and a second email a few days later requested confirmation of interview date. The sample contact letters are provided in Appendix 5.

The pilot was planned to consist of four to five interviews. Therefore, several organisations in the Midlands region were contacted and asked to contribute to research on school leavers' survey programmes, namely the 'Young Cohort Study (YCS) and the Longitudinal Study of Young People in England (LSYPE)'. A guidance

organisation and several colleges and universities as well as some local policy makers were contacted. Out of the 14 contacts only three were positive. One school responded positively straightaway, the guidance organisation asked for some time until their re-modelling was finished and another institutional expert answered the email two months after receiving the initial email. In several cases telephone contacts were attempted to raise awareness of the emails but these were largely unsuccessful, mainly being 'held up' by 'gatekeepers' like secretaries. This process started in November/December 2011 and, through time pressure to arrange the Dutch fieldwork, the pilot was limited to a single interview. As will be later explained, organising the Dutch fieldwork was easy with low non-response or experts unwilling to participate. Regarding the English case, it appears that there was a problem with the emails sent and/or the topics raised. The only pilot interview was illuminating; it became clear that FE and HE institutions do not know about the quoted research (YCS and LSYPE) and they use different data sources to obtain information about their school leavers and graduates. This interview was finally used as a normal interview for the analysis as the topics were similar to those conducted later.

Therefore, just before the Dutch fieldwork started, a new set of emails were sent to new contacts in England, not solely focusing on the Midlands, to the national level. These emails were more general, not naming the exact research programme in question, but asking the respondent to talk about the data available on the school leavers' or graduates'. After re-formulating the contact email this way, the response

rates for England were much closer to those in the Netherlands. The Finnish interviews were organised easily one or two months prior the fieldwork.

Appendix 10 Fieldwork report – Netherlands

Start of fieldwork

The initial contact person in the Netherlands was a Professor at the Universiteit van Amsterdam who helped the author to recruit interviewees, and who was willing to provide some contextual information about the Dutch case. This was especially important as the Dutch educational system is one of the most complicated, in international comparison; it is hard to comprehend the different structures from an external position within a short amount of time. This was extremely problematic as some of the important stakeholders were excluded, due to not knowing they would be important to include, regarding the SLGIS.

Choosing participants

The participants were chosen on the basis of their expertise. Obviously, the research institutes dealing with the school leavers' and graduates' information systems were to be consulted as well as some people from the educational ministry. The schools to visit were chosen randomly as the author did not have prior knowledge of them.

Research institutes

The research institutes interviewed for the purposes of this research are the following:

- ROA: conducting the SLGIS for several decades
- DESAN: carrying out the fieldwork for ROA for several decades
- VSNU: university organisation; ordering the WO-Monitor for several decades formerly from ROA, currently from IVA
- IVA: carrying out the fieldwork of the WO-Monitor for a number of years for VSNU

ROA, DESAN and the VSNU were obvious possible participants, whereas no information regarding IVA was available to the author until the interview with VSNU and thus they were asked at a later stage via a telephone interview. A further organisation that is responsible for depositing and storing the SLGIS data did not want to take part in the research, believing their expertise to be irrelevant.

The author was in email contact with the HBO-level equivalent of VSNU and tried to call them prior to starting the fieldwork, but no interview was achieved. The contact person from here felt that they could not contribute to the research, although it was pointed out to them that the questions would cover how they use the ROA data, not about the actual data collection process.

Another institution that should have been asked throughout the fieldwork is a research organisation conducting school leavers' surveys for schools; unfortunately

their existence was only discovered during the second week in a ROC (regionaal opleidingscentrum) interview. Therefore a telephone interview was organised with them at a later date.

Ministerial contacts

Three main sections of the ministry were contacted: the Directie Kennis (Directorate for Knowledge), the early school leavers' section and the vocational and adult education area. Through suggestions and gaining new contacts three interviews were carried out. One with a person from general secondary education, one with a person from the vocational and adult education section and one from the post-secondary vocational area. In total, eight people were contacted; from the ministry there was no one who was strongly against giving their opinion to the research. No contacts were obtained from the higher education section of the ministry; this proved problematic during later analysis.

Schools and higher educational institutions

Three ROCs were contacted initially, one did not reply, the other two were willing to participate. In one institution interviews were carried out with the leadership and persons involved in institutional policies on early school leaving and career guidance. In the other institution beyond the leadership, data experts were also queried.

Two gymnasia (VWO-level) were contacted prior to the start of the fieldwork. Only one of these institutions responded. The author did not have the contact details of the second institution member; the principal suggested they would get in touch. No HAVO institution was contacted, for the same reason as VWO: their students go on to further studies, so the school leavers' information on labour market outcomes are deemed less important. The author's knowledge on the VMBO-level schools was limited. Finally for all of these secondary level institutions data were acquired from the researchers and ministerial contacts.

Out of two HBO-level institutions, one replied; the interview there was rescheduled to take place as a Skype discussion due to unforeseen circumstances. A WO institution was contacted using several email addresses but none of the three contacts replied to any inquiry. Lacking a WO-level interview during the fieldwork, later telephone interviews were set up with the help of VSNU.

Arranging interview dates

Arranging interviews was relatively easy; the first emails were sent at the end of November - beginning of December 2011. Half of the interview dates were fixed in 2011 and only two were arranged during the fieldwork period itself. Of the 31 persons contacted, 7 did not respond to any email enquiry. As Table 5-6 in section 5.3.1 of the thesis details, a total of 15 interviews were carried out with a total of 18 people,

the total amount of recorded material for the Netherlands is nearly 12 and a half hours.

Fieldwork experiences

The fieldwork took place between the 6th and 17th February, 2012. Generally, the fieldwork was a good experience; the interviewees were interested in the topic and glad to talk about their expertise. The main problems encountered related to getting to know the system and discovering extra organisations that should have been contacted. This was partly tackled later through telephone interviews. The majority of respondents spoke good English, providing rigour to the data.

Appendix 11 Organisations/Experts interviewed in the Netherlands

Research Centre for Education and the Labour Market, University of Maastricht (ROA) (Research institute 1, NL)

ROA was set up to conduct research on the relationship between the educational system and the labour market in 1986. It is a research centre of the Maastricht University School of Business and Economics. The three main streams of their research are: Dynamics of the Labour Market, Education and Occupational Career, and Training and Employment (ROA, 2009a). Their main projects are: research on two professional branches; match between education and the labour market; labour market prospects; competencies and labour market outcomes of higher education graduates along the REFLEX international project; and the school leavers' surveys (ROA, 2009a). ROA works with approximately 35 researchers. As for their financial background, the website (ROA, 2009a) tells only about the fundamental research being 'partly funded by the Netherlands Organization for Scientific Research (NWO) and the SBE's research school METEOR. Interviews conducted at ROA and the Ministry of Education suggest that part of their funding comes from several ministries that contribute to the labour market forecasts and the school leavers' surveys. (Research institute 1, NL; Ministry 1, NL)

The interview touched upon conceptual, methodological changes, institutional and financial changes behind the Dutch school leavers' survey (SLS). We talked about their relation to schools as well as the ministry and how the topics of the SLGIS

changed over time. The main challenges and problems of the survey were assessed as well as the reasons why this SLGIS is unique.

DESAN Research Solutions (DESAN) (Research institute 2, NL)

DESAN has conducted the fieldwork of the SLGIS for more than two decades, since 1987. It is a 'private micro-statistical office'; carrying out socioeconomic data collection using different techniques, compiling and cleaning the datasets and presenting the results of studies (Research institute 2, NL). In the case of working with ROA on the SLS, they do not perform analysis.

In this research, the main areas they were consulted about were how the fieldwork of the SLS is organised for the different monitors; what research instruments they use; how they acquire the sample and the contact details of participants; and the time-frame of the research. Their responsibilities in disseminating the results were discussed, especially as the HBO-monitor received a new, more interactive online interface developed by DESAN.

Association of Universities in the Netherlands (VSNU) (Research institute 3, NL)

VSNU is an organisation representing the 'shared interests of the 14 research universities in the Netherlands in the fields of research, education, knowledge transfer, business operations, human resource management and international policy' (VSNU, 2007b: 5). Their main aims are to 'promote the common interests of the

universities'; provide information; and serve as a platform for employers and employees within the university sector (VSNU, 2007b: 5). The organisation receives its funding from the institutions it represents (Research institute 3, NL). VSNU has commissioned graduates' research for more than 20 years. During this time, , ROA has conducted the WO-Monitor for almost 15 years, but recently, it has been carried out by the research organisation called 'IVA beleidsonderzoek en advise'.

The interview concerned the tasks of VSNU especially related to informing the universities. The interview touched on why VSNU decided to work with IVA instead of ROA and how the change occurred. The interview also discussed graduate research methodology, report format used, the main changes in the questionnaire and their future plans.

Duo-Onderwijsonderzoek (DUO-O) (Research institute 4, NL)

This research organisation conducts educational research at primary and secondary levels; they use several different methodologies and cover many topics relating to education, ranging from student or parental satisfaction surveys researching teachers' views to the image of schools. They maintain school leavers' and graduates' information systems; this being the main reason they were included in this research. Their SLGIS covers half of the schools within the MBO sector. The organisation has approximately 20 co-workers, more than 10 of whom are researchers, and has existed for approximately 15 years.

This interview was carried out over the phone and touched on several issues: the research methodology of their school leavers' survey, the way educational institutions are approached and involved, the services schools can choose from, and some crucial information about the research organisation itself.

IVA beleidsonderzoek en advise (IVA) (Research institute 5, NL)

This research organisation conducts social research and is a part of the University of Tilburg; the interview was carried out with the department working within the school sector of the Dutch educational system. .

As previously mentioned, the interview was carried out over the phone. The main areas concerned IVA's role in gathering data for the WO-Monitor and the process of data collection. The interview also covered how IVA helped some of the institutions to utilise the WO-Monitor data and what their future plans in the dissemination process were.

Ministry and sections of the ministry interviewed (Ministry 2, NL, Ministry 1, NL, Ministry 3, NL)

The Ministerie van Onderwijs, Cultuur en Wetenschap (Ministry of Education, Culture and Science) has separate directorates for the different sectors/levels of education; the two contacted for this research are the *Director-General of Primary and Secondary Education* and the *Director-General of Higher and Vocational Education, Science and Emancipation*. The first general directorate consists of a directorate for

teachers, one on primary, one on secondary education, a project on school dropout and a sub-directorate of Youth, Education and Care. The second general directorate is made up of the adult and vocational education , higher education, and research and science policy sectors (MINOCW, 2012b).

Ministry interview - general secondary education (Ministry 2, NL)

The interview touched on the institutional system of the general secondary education, the differences between institutions, the main pathways of the leavers and the information used in relation to school leaving within the policy making process.

Ministry interview - vocational education and adult education (Ministry 1, NL)

The interview began by assessing the challenges of the Dutch vocational educational system, through which the main characteristics of the system were discussed. The policy making process was then discussed more generally along with the information used on leavers.

Ministry interview - vocational education (Ministry 3, NL)

Several types of research projects and how they are utilised in the policy making process were the broader topic of the interview. One sub-topic was the SLGIS data and how they are gathered and used.

MBO institution (School 1, NL)

This ROC has MBO-level courses for young people and adults and is located in a major city of the Netherlands. The organisation has a few major domains of instruction, and those clusters are split into programmes such as economics, ICT or nurse education. The institution has approximately 17,000 students including adults on different programmes.

MBO institution (School 2, NL, School 2 Guidance, NL)

This ROC that educates young people and adults at the MBO-level is located in one of the bigger cities, other than School 1. This school has several different locations and provides programmes in different areas ranging from health studies through administrative careers to technical areas. The institute has approximately 22,000-25,000 students, 85% of whom come from the region where the school is located.

Interview with leadership (School 2, NL)

The general situation of the institution was discussed in relation to student background and student pathways. The main topics concerned how they know what the students do throughout their school career and how this information is used, along with the differences between the areas of study. Furthermore, their plans to follow students and the necessity of having school leavers' information were detailed in the interview.

Interview with guidance personnel (School 2 Guidance, NL)

The main topics were the patterns of early leaving in this ROC and the programmes and measures they have in place for reducing the level of early leaving. The other main areas of the discussion were the guidance procedures and what information is used to inform this area of educational services.

HBO institution (University 1)

This HBO-level institution is located in one of the biggest cities of the Netherlands and they have locations in several different smaller towns. This University of applied sciences covers many different subject areas; it has faculties including economics, communication, health and engineering. The institution has more than 30,000 students; a small proportion of which are studying international programmes.

Due to unforeseen circumstances this interview could not take place during the fieldwork trip to the Netherlands but had to be carried out over the telephone. In the interview the main topics were the following: characteristics of the HBO institution in relation to student numbers and educational programmes; drop-out patterns; and data used by central administration and different organisational units.

WO institution (University 2)

This university is located in one of the major cities of the Netherlands; it has 30,000 students studying on more than 50 Bachelor's programmes and 130 Master's programmes. Many of the latter are offered in English, thereby attracting a large number of international students. The faculties of the University range from dentistry,

science and medicine through economics and social science to humanities and law. This University is listed high in most of the international university rankings.

This interview was arranged at VSNU's suggestion, as the attempts to make contact with universities before and throughout the actual fieldwork failed. The main topics covered were the following: the University's main characteristics; student data available, staff and administration and more specifically, graduates. The relation between the University and the research organisation regarding the SLGIS, as well as the internal information chains were also addressed.

Researchers at a WO institution (Expert interviews 1 and 2)

These interviews were conducted with researchers at a WO contact institution with a professor who was the initial Dutch contact person for this research and their colleagues. These interviews were not recorded; no direct quotes are used from them in this thesis.

These interviews provided contextual information to the Dutch case by explaining certain aspects of the educational system and the current debates.

Appendix 12 Fieldwork report – England and Wales

Start of fieldwork

For the English case study author's doctoral supervisors provided some guidance in terms of the English educational system. Interviews for the English case study were conducted between the two other fieldwork period; therefore the time period was more spread out. This meant that there was more time to make corrections and develop the ideas more thoroughly, but, accordingly, the consistency of the interviews is less obvious.

For most organisations, the email address of the division leader or the institutional leader was used initially. The contacts could decide afterwards whether they wanted to participate themselves, delegate the interview to their colleagues, or invite some of their co-workers for a group interview to contribute to the research. For the Welsh study, a professor at a Welsh university provided contacts in the Welsh Government.

Choosing participants

The participants were chosen on the basis of their expertise and their involvement with the different SLGIS. The educational institutions were chosen to represent different areas of England, and different types of institutions as far as it was possible with a small number of interviews.

Research institutes

One of the first organisations contacted was NatCen, who were responsible for the previous two cohorts of the YCS. The potential respondents from NatCen declined to participate, stating that the research was conducted by them many years ago and they were therefore unable to help. The second important set of respondents was the researchers involved with the LSYPE, and one of the organisations involved in the fieldwork was also contacted (TNS-BMRB). After the first interviews at a college and a university, the importance of contacting HESA was apparent; this organisation became the third on the list of research institutions.

Within the Welsh context, contacts at Career Wales were suggested within a ministerial interview and were followed up over the phone.

Ministerial contacts

Contacts at the Department for Business, Innovation and Skills (BIS) higher education section and at the BIS further education section were initially emailed. The contact person at the higher education section of the ministry was unwilling to respond after a longer email conversation, possibly due to misunderstandings around the actual research topic. Finally a contact for this section of the ministry was obtained via a suggestion in another interview. The initial contact at the further education section of the ministry provided further contacts and the interview was carried out with them.

In the Welsh context, two separate group-interviews were carried out, one with policy experts and the other with data experts, all of whom were working for the Welsh Government. Their expertise was wide-ranging, from policy making to gathering and analysing data. These group-interviews were organised by the person contacted initially, in the Welsh Government, thus the author had little influence on who was included.

Schools and higher educational institutions

As previously mentioned, the start of the English fieldwork was problematic due to the author's initial misunderstanding of the research context: it was not the YCS and the LSYPE that was used by colleges and universities, but other datasets described in the English case study. Therefore it was not surprising that from a total of 11 schools and universities contacted, only four resulted in interviews.

For the purposes of this research two colleges and two universities were contacted. At both of the colleges the interviews were conducted with persons involved in planning, collecting and analysing the college-level SLGIS data. At one of the universities both the data experts working within institutional planning and persons working in career guidance were interviewed. At the other university only experts from the career guidance section were asked.

In the Welsh context no school or university interviews were carried out.

Other stakeholders

Researchers using the LSYPE data were chosen from the list of projects provided on the ESDS website in early 2011 (ESDS, 2012b). The list was randomized and the first ten projects were chosen. Out of these, a few contacts were not available for interview – either not working in research anymore or not accessible due to living on other continents. Other people contacted did not want to participate, or were not using the LSYPE data to an extent it would have been sensible to interview them. Finally, one researcher was interviewed.

Arranging interview dates

As the author was located in England, a longer time-frame could be offered for the possible interviewees to choose an interview date. The number of people or organisations contacted in England and Wales was 50; eight of whom did not respond to email or phone contacts. As indicated in Table 5-6 in section 5.3.1, a total of 13 interviews were carried out with a total of 19 people in England. In Wales the three interviews were conducted with a total of 11 people. The recorded material for England and Wales totalled 15 hours.

Fieldwork experiences

The first interview was carried out on the 25 January 2012; the last interview took place on 2 May 2012 for England, and a month later for Wales. The interviewees were generally interested in the topics raised and many were enthusiastic about the issue of information on school leavers and graduates, and were willing to provide further materials and contacts.

Appendix 13 Organisations/Experts in England and Wales

Department for Education (DfE) involved with the YCS and the LSYPE (Research institute 6, EN)

The LSYPE is one of the biggest research projects carried out by the Department for Education (DfE), Longitudinal Surveys Team in the Department for Education. It started in 2004 interviewing students in year 9 and ended with a 7th sweep when they were between the ages of 19 and 20 years. The LSYPE was used by the DfE and some other department and it is a source for individual researchers utilising panel data. LSYPE is also referred to as Next Steps (DfE, 2012c).

The interview was carried out with researcher(s) involved in producing the LSYPE data; they were formerly involved in dealing with the YCS data to a smaller extent as well. The interview touched on the main reasons for carrying out the research, the reasons of the research design and the topics covered, and the advantages and disadvantages of this particular research. A substantial part of the interview related to the utilisation of the data by the different ministerial actors and beyond.

The LSYPE is one of the biggest research projects carried out by the Longitudinal Surveys Team in the Department for Education (DfE). It started in 2004 interviewing students in year 9 and ended with a 7th contact with the sample when they were between the ages of 19 and 20 years. The LSYPE was used by the DfE and other departments and is a source for individual researchers utilising panel data. LSYPE is also referred to as Next Steps (DfE, 2012c).

The interview was carried out with researcher(s) involved in producing the LSYPE data; they were also formerly involved in dealing with the YCS data to a smaller extent. The interview touched on the main reasons for carrying out the research, the reasons for the research design, topics covered, and the advantages and disadvantages of this particular research. A substantial part of the interview related to the utilisation of the data by the different ministerial actors and beyond.

Organisation involved in the fieldwork of LSYPE (TNS-BMRB) (Research institute 8, EN)

This organisation conducts research for the British Government, and the private and third sectors. Their expertise includes 'the provision of national statistics, public policy analysis, public service performance measurement and improvement, and communications evaluation' (TNS-BMRB, 2012). Their approach includes many different types of research methodologies in a wide range of policy areas. In a consortium of two other research organisations they conducted the fieldwork for the LSYPE.

The interview was carried out over the phone as it was more convenient for the interviewee(s). The topics covered were: the main features of the LSYPE fieldwork, the organisation of the research team, the process of the research, and some questions around the YCS because the last two cohorts of that study were also carried out by TNS-BMRB.

Higher Education Statistics Agency (HESA) involved with the DLHE (Research institute 7, EN)

HESA is the 'is the official agency for the collection, analysis and dissemination of quantitative information about higher education' (HESA, 2010). HESA is responsible for setting the guidelines and compiling the national, UK-wide dataset from the Destinations of Leavers from Higher Education (DLHE) data collected by the different higher education institutions. They also initiate the longitudinal follow-up version of the DLHE every two years (HESA, 2010).

The interview explored the history of the DLHE data, key changes to the data collection and the main aims of the current version. Also, the process of collecting, validating and organising the data was discussed along with the different stakeholders' involvement in the process. The advantages and disadvantages and the quality of the data was a further major topic of the interview. The DLHE longitudinal research, its history and the financial setup also was discussed.

Ministry and sections of the ministry interviewed (Ministry 5, EN, Ministry 4, EN)

In contrast to the other two case study countries, in England HE and FE do not belong to the Department for Education (DfE). They are part of the Department for Business, Innovation and Skills (BIS). This Department is divided into eight management groups; further education belongs to the 'Business and Skills', whilst higher education is listed under 'Knowledge and Innovation' (BIS, 2012). The interviews for this research were carried out with experts from these two sectors.

Further education sector of the ministry (Ministry 5, EN)

The interview touched on the main areas of data utilisation at the FE level: the main datasets at the moment and the planned data production processes for the future. Also, the differences between FE and HE level as well as the post-secondary and FE sector were pointed out in relation to available school leavers' and graduates' data.

Higher education sector of the ministry (Ministry 4, EN)

The interview detailed the main information sets used by this section of the ministry from the LFS to the HESA datasets and other smaller research projects commissioned or used. The ways of analysing these different datasets was discussed along with the format that is available for the interviewee(s). The interviewee(s) provided description on what types of information and in what setting is used from amongst those available on graduation

College interview (College 1, EN)

This college is a relatively big institution as the city decided to merge its separate colleges into one major organisation. Through the mergers the college caters for all levels of further education post-16 as well as higher education. The college caters for all subject areas and it has several locations around the city.

The interview covered the main features of this particular college, especially as it has undergone some major mergers and it has a quite specific student population. The

main topics concerned how data are acquired and used within the organisation with regards to the current student population and leavers' of the institution. Unfortunately the background noise of the recording of the interview was high and the interview was stopped a few times.

College interview (College 2, EN)

College 2 is located in one of the major cities of England. It caters for approximately 8000 students on its further education and higher education courses including a high proportion of international students. The college has both further education level courses – like health, hospitality and catering, sports, and beauty – and higher education level courses in similar fields.

The interview was conducted to gain information about the organisation, the strengths and weaknesses of the college; and especially on the information they have in relation to students. This interview was first considered as the pilot interview; however, due to the valuable data and the final interview structure later being similar to this one, it was used as all other interviews in the analysis.

University interviews (University 3, EN, University 4, EN)

This university is one of the high ranked universities of the UK that has more than 25,000 students; a fifth of the student body has an international background. The university has several different faculties covering for all major subject areas. Two-thirds of the student population is studying at undergraduate level.

University 3, EN

This interview was organised through snow-ball sampling to reach university experts who are dealing with producing the HESA DLHE data at a particular institution. The interview was carried out with expert(s) involved with the DLHE data collection, compiling reports on DLHE, promoting the SLGIS throughout the institution and keeping in touch with HESA. The interview touched on the process data collection and reporting, and how the different stakeholders within the university are using it.

University 4, EN

This interview was organised through snow-ball sampling to reach university experts who are dealing with producing the HESA DLHE data. The interview was carried out with expert(s) involved in with the DLHE data collection, compiling reports on DLHE, promoting the SLGIS throughout the institution and keeping in touch with HESA. The interview touched on the process data collection and reporting, and how the different stakeholders within the university are using it.

University interview (University 5, EN)

This university is one of the main research universities in England. This university has more than 23,000 students, more than half of whom are studying at undergraduate level. A third of the student body comes from an international background. It has a wide range of disciplines from law through science to humanities, social sciences and economics.

The interview touched on the main restructuring that occurred in the guidance sector in this university and the reasons for the organisational changes. The main career guidance initiatives were discussed, along with the information used to provide these. This university was one of the first ones to provide the DLHE data on graduates' on their website using specific software.

Expert interview, users of LSYPE data (Expert interview 5, EN)

The researcher(s) are working at one of the research universities in England; their work is connected to issues around families, parenting, education and youth using a variety of methodologies. They used the LSYPE data at the start of a particular research project and compared the national panel information to their own local data on young people.

The interview touched on the main research interests and the types of research they usually conduct. With regards to the LSYPE data, the main topics were the feasibility of using this sort of data and the extent to which the researcher(s) were doing so. The interview touched on how the data producers helped the researcher(s) with information and guidance.

Expert interview in higher education (Expert interview 3, EN)

This organisation works within the field of higher education; one of their tasks is gathering their own data along with using already existing information, like the HESA DLHE.

This interview touched on the advantages and disadvantages of using the DLHE data, as well as the possible further utilisation of this information source. The main features of the data production process were also discussed.

Expert interview in further education (Expert interview 4, EN)

This organisation works in the further education sector and as such, it uses all sorts of information on further education, partly the college leavers' data.

In the interview, the main features and the history of the college sector in England were discussed along with the data available and used within the sector. The interview touched on the main duties of the organisation and the processes in which they use the data available on the college sector especially with regards to college leavers' outcomes.

Welsh Assembly (Ministry 11, WAL, Ministry 12, WAL)

The Welsh Assembly was set up at the end of the 1990s and has devolved powers including education as well.

Ministry 11, WAL

This interview concerned the general differences in educational policy trends between Wales and England since devolution. It more closely discussed the different datasets the Welsh Assembly could use in the area of school leaving.

Ministry 12, WAL

This interview concerned the major datasets and research programmes that are used within the Welsh Assembly's work especially related to compulsory and post-compulsory schooling. Another major area discussed within this interview was the future plans regarding data-matching.

Career Wales (Research institute 13, WAL)

Careers Wales mainly deals with providing career guidance to any individual who lives in Wales. The organisation is also responsible for collecting school leavers' information on Welsh schools and provides this information on its website.

The interview touched on the roles of Careers Wales and its recent reorganisation beyond detailing the responsibilities it has in providing career guidance. The interview mainly concerned the procedure of collecting school leavers' data, and the methodology of combining different datasets to acquire such data.

Appendix 14 Fieldwork report – Finland

Start of fieldwork

The initial contacts in Finland were made with a professor at one of the universities who suggested several of their colleagues and pointed out the most important stakeholders to talk to in Finland. One of the professors suggested from another university provided several contacts from different areas and different levels of the educational system. Similarly to the Netherlands, one of the academic contacts was consulted to gain a better understanding about the Finnish educational system.

Choosing participants

The participants were chosen on the basis of their expertise, their knowledge, and their involvement in the school leavers' and graduates' data collection or usage. The schools or universities I visited were chosen more randomly. In each case a key person working on student careers, strategic planning, or data utilisation was asked to participate.

Research institutes

For the data production the key informants were experts from Statistics Finland (SF), who could explain how the data registers were combined together to produce all sorts of national statistics. Further contacts were people working at universities or universities of applied sciences, who were involved in getting their own graduates'

information. Two research contacts involved with the Aarresaari Network's (AN) graduate data collections were consulted a few months after the Finnish fieldwork over phone as contacts with these experts was not achieved for the fieldwork. The gap between the fieldwork and the phone contact was necessary due to the summer holidays in Finland. Experts utilising the data were interviewed as well, mainly relating to the graduate data available in Finland.

Ministerial contacts

The ministerial contacts were gathered using the educational ministry's website, targeting the different sectors, such as higher education, higher education applied, vocational education and training and general education. This way all major areas of the educational system were covered. The first contact was the Councillor of Government; usually they passed the email on to their colleagues dealing with data production and analysis within the organisation. Due to the academic universities and the universities of applied sciences belonging to the same institutional section of the ministry, finally only one interview was carried out despite two being arranged initially.

Schools and higher educational institutions

Schools and higher educational institutions were chosen from online lists to represent a variety of the Finnish educational system (Koulutusnetti, Date unknown, Opintoluotsi, Date unknown) As it was rather hard to travel within Finland due to the

long distances, most of the institutions were chosen from the Helsinki area, but not exclusively. Interviewees were consulted at three universities, one university of applied sciences and two vocational schools. The persons consulted at the universities and schools were either data experts or career guidance experts, or academics using the school leavers' and graduates' data available in Finland.

Arranging interview dates

Arranging interview dates was rather straightforward especially compared to the problems encountered in England and to some extent the Netherlands. The first emails to possible participants were sent in the beginning of March 2012. Out of the 34 contacts 4 did not respond at all to the email enquiry. All the interview dates were fixed at least two weeks before the start of the fieldwork. There was no major area or type of respondent that was missing before the fieldwork begun. During the fieldwork and later over the phone a total of 16 interviews were carried out with a total of 23 respondents, the recorded material thus totalling 17 hours.

Fieldwork experiences

The fieldwork in Finland was conducted between the 11th and 20th of April in 2012 and further phone interviews were carried out in the autumn of 2012. On a general level, the respondents were willing to talk about the general features of the Finnish educational system as well as about the topic more closely related to this research. Whereas in the Netherlands the language of the interview being English did not arise

as a major problem, in the case of Finland there might have been some level of data loss due to the English language proficiency of some of the interviewees.

Appendix 15 Organisations/Experts in Finland

Statistics Finland, Tilastokeskus (SF) (Research institute 10, FI)

Statistics Finland was founded in the second half of the 19th century. It employs over 1,000 experts and has regional offices in several Finnish cities. The main tasks of SF are: compiling the national statistics from registry and administration records as well as to develop a national statistical service to be used by the different stakeholders as well as the general public (STATISTICS FINLAND, 2011g).

The interview covered the educational statistics in general along with the process of matching data registers detailing the quality of such information sets as well. The main area of discussion was the student flow statistics and the possibilities it provides to the different stakeholders regarding school leavers' and graduates' information.

University researcher(s) interview, involved with the AN data collection (Research institute 11, FI)

This interview was carried out with researcher(s) working at a university. This university has campuses in a number of smaller cities of Finland, where a total of 15,000 students are studying. The university also has a considerable number of students enrolled on their Open University courses.

The interview with this research institute touched on the Aarresaari Network's research programmes, how they are conducted and how the results are used within

the university itself. The interview also concerned the involvement of the Ministries in the research programmes.

University researcher(s) interview, involved with the AN data collection (Research institute 12, FI)

This interview was carried out with researcher(s) working at a university. This university is situated in a number of cities of Finland. The university accommodates more than 20,000 students in total and educates in many of the major subject areas.

This interview concerned the research programmes conducted by the Aarresaari Network and the involvement the interviewee(s) had. The interview detailed the financial and institutional set up, and the major aims of the SLGIS, as well as the history of them and how the results of the AN data are used by the university.

Ministry and sections of the ministry interviewed (Ministry 8, FI, Ministry 9, FI, Ministry 10, FI)

The Ministry of Education and Culture of Finland (Opetus- ja kulttuuriministeriö, MinEdu) has two main departments dealing with education; the Department for Education Policy covers the general educational issues as well as the vocational education and training matters. The Department for Higher Education and Science Policy covers the polytechnics, the universities, and adult education (MinEdu, 2012).

Ministry 8, FI – higher education sector

At the start of this interview it turned out that the HE and the HE applied sections of the ministry are merged (despite the separate legislation). Therefore, this interview covered information for both sectors and the separate interview for the subsequent day was cancelled on the request of the interviewee(s). The main areas of discussion were the challenges of the higher education sector, the information available on graduates' and the process of policy making.

Ministry 9, FI – vocational education sector

This interview covered the type and source of data on vocational education that are used by the Ministry, the main reports produced from the school leavers' data and in what settings and by whom they are used.

Ministry 10, FI – comprehensive education sector

This interview addressed the challenges of comprehensive education as well as the main features of the system. The interview covered the comprehensive primary and lower-secondary as well as the general upper-secondary level. The main areas of discussion included the statistical data and research information available for the policy makers especially on school leaving.

University interview (University 6, FI)

This university is located in one of the biggest cities of Finland. The university caters for more than 35,000 students. As in the case of most Finnish universities, the majority of the students study to Master's level. The university caters for all major subject areas and has substantial research expertise.

The interview covered the measures taken to provide guidance at the university and the structure of the information collection ranging from statistical data to surveys conducted by the university itself.

University interview (University 7, FI)

This university is located in one of the bigger cities of Finland. It has approximately 7,000 students with a small number of international students. The main subject areas cover social sciences, humanities – these are the main focus – mathematics, economics and education.

The main topics of the interview concerned the information system on graduates of this university and how the data are used by the career guidance organisation. All the different survey programmes were discussed along with how they developed their institutional background and their methodologies.

University interview (University 8, FI)

This polytechnic or UAS is located in the southern part of Finland. It has 15,000 students who are studying on more than 60 degree programmes. This UAS has a smaller number of international students as well. The subject areas taught range from business, engineering, health to cultural studies.

The interview concerned the information this UAS collects on students throughout their study career and the information available on graduates. Also, the alumni relations were discussed along with some of the career guidance aspects and employer involvement.

School interview (School 3, FI)

This school is a private vocational college located in one of the biggest cities of Finland. It has more than 3,000 students. This institution has extensive adult education provisions in the area of economics and business as well as information and technology. Some of the instruction is provided in English, the school has a smaller number of international students as well.

The interview covered the main features of this school, the main areas of instruction and the organisation of the school year. The interview covered the career guidance process and the information used.

School interview (School 4, FI)

This secondary vocational school offers study programmes for young people as well as adults. The two major study-areas are hospitality and beauty. The school has almost 2,000 students on two different locations in the metropolitan area of Helsinki.

The interview concerned the information this school has about its students whilst they are studying and how the different study programmes operate.

Researcher(s) using data on labour market relations (Expert interview 8, FI)

The researcher(s) are working at one of the major universities of Finland. The expertise of these researcher(s) includes higher education and labour market relations.

The interview covered the main features of the higher education sector of Finland with regards to the history of the dual system. The main datasets and the data incorporated in these systems were discussed along with the survey programmes the interviewee(s) commissioned in recent years.

Finnish Higher Education Evaluation Council (FINHEEC), Korkeakoulujen arviointineuvosto (KKA) (Expert interview 7, FI)

This organisation assists universities and the ministry in higher education matters, both for universities and polytechnics. The organisation conducts evaluations on

different areas of interests, and they support the development of quality assurance measures (FINHEEC, 2012).

The interview covered the main duties of the organisation, detailing the HE and the HE applied sector's main features and the evaluation processes carried out. Also, the interview covered what information the institutions have on their student flows and their graduates.

Finnish National Board of Education, Opetushallitus (OPH) (Expert interview 10, FI)

The Finnish National Board of Education is responsible for the national curricula, the evaluation of education, providing information and support services for the following sectors: 'pre-school and basic education, upper secondary education, basic vocational training, adult education, and liberal adult education, including folk high schools and adult education centres' (OPH, 2012). They are data users as well as data producers. They have several projects running in relation to education.

The interview dealt with the main features of the educational system in Finland, regarding the general education, the upper-secondary general and vocational education. The discussion touched on the main data sources as well as the procedure to use them in policy making.

Organisation standing for graduates of a specific field (Expert interview 6, FI)

This organisation aims to improve the success of graduates in a specific field by informing, providing a platform to make contacts and by negotiating collective agreements.

The interview covered the main duties of the organisation, their intermediary role between the universities, the graduates of the field and the employers as well as other organisations. The discussion touched on the several different reports the organisation produces for universities to enhance educational quality, as well as their information systems for their members on wage and employment quality.

Professor at a university (Expert interview 9, FI)

This interview was conducted with a professor at a university in Finland. This interview served the purposes of getting contextual information about the Finnish educational system, its history and the current debates and issues.

Appendix 16 Background to the case study on the Netherlands

Population and economic background of the Netherlands

This introduction to the Dutch case provides some contextual information about the Netherlands and especially its educational system and the most important current debates. The Netherlands has a population of 13.66 million people in 2011 (EUROSTAT, 2011b). The country is a member of the European Union since 1957. The official language of the country is Dutch ('Nederlands').

The Netherlands has a substantial foreign born sub-population. According to the Eurostat (EUROSTAT, 2011b) this was 11.2% of the total population in 2011. Table 14-4 shows the breakdown of the foreign born population; German, Indonesian, Moroccan and Turkish foreign born residents comprise each around 350-390,000 of the population. Surinamese residents have a slightly smaller community of approximately 340,000 people; there are another approximately 140,000 residents from the former Netherlands Antilles and Aruba. The ethnic minorities, taking account of the first as well as the second generation of migrants, comprised 19.6% of the total population in 2008 (Eurydice, 2009).

Table 14-4: Country of origin of population in 2011

Dutch	Germany	Indonesia	Morocco	(former) Netherlands Antilles and Aruba	Suriname	Turkey
79.42%	2.27%	2.28%	2.14%	0.85%	2.07%	2.34%

(Source: CBS, 2011)

As for the living conditions, life expectancy in 2010 is slightly higher than the EU 27 average (EUROSTAT, 2011b). The risk of poverty affects every fifth person in 2010, which is reduced to every tenth after social transfers; these figures show a better situation than the EU average (EUROSTAT, 2011b).

The Dutch employment rate at 64.1% is higher than the EU 27 figure. This is coupled with a particularly low unemployment rate, 4.4% in 2010 for the Netherlands compared to the 9.6% of the EU 27 (EUROSTAT, 2011b). Taking a look at the educational background of the unemployed, in 2009 people with only primary education had an unemployment rate of 7% whereas residents who had higher education diplomas had an unemployment ratio of 3% (MINOCW, 2010: 17). The Dutch economy is centred around commercial services and it is internationally oriented (Eurydice, 2009: 16).

Education in the Netherlands

In 2010 5.1% of the GDP was spent on education, with student finances comprising 0.6% of the GDP (MINOCW, 2010: 19). The number of educational institutions at the

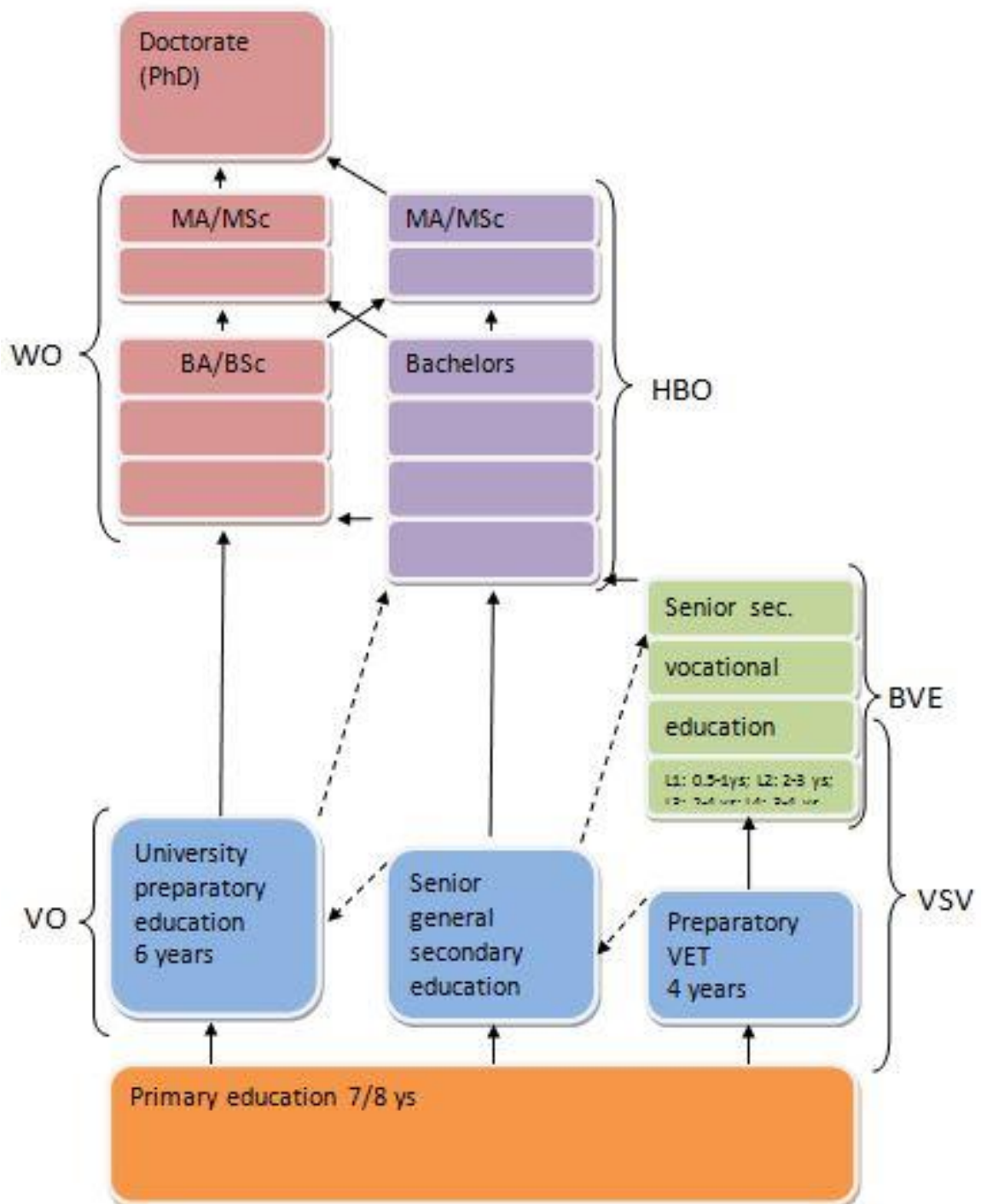
different levels in 2010 was the following: primary educational establishments, 7480; secondary educational institutions (VMBO, HAVO, VWO), 646; vocational and adult educational institutions (ROC), 59; professional higher education (HBO), 35; academic higher education (WO), 14 institutions, including Wageningen University and the Open University (MINOCW, 2010: 19). This section uses data gathered from the Eurostat. The data terminology is provided in **Error! Reference source not found..**

For the 5-14 age-groups the enrolment rate was 99.6% in 2008; for the 15-19 age-groups it was 89.6%; for the 20-29 age-groups it was 28.8% - all these figures show higher enrolment rates than the OECD average. The ratios for the 30-39 and over 40 are substantially lower. Whereas the OECD average is 5.9% for the former age group, the Dutch figure is 2.8% only (OECD, 2010). Although Marginson (2008: 12) argues that this could mean 'a relatively weak commitment to lifelong learning' that 'may be embedded in social culture, in that older people do not see award programmes in tertiary education as an option', the figures for non-subsidized adult education are high; a total of 12.2% are taking part in such learning programmes from the 17-65 cohorts (MINOCW, 2010: 51). Non-subsidized education is covered by the enrolled citizen, and the 'main forms are part-time courses at private institutes, correspondence courses and company training courses' (MINOCW, 2010: 50)

Early school leaving shows an improving pattern in the Netherlands. The early leavers' measure in 2010 according to the Eurostat was 10.1%, whereas the EU27 average was 14.1%. The ratio of new dropouts is declining substantially after a 10 year strategy was set out for 2002-2012; at the start there were 5.5% of the 12-23 age-cohorts not having a basic qualification; for 2008/2009 this measure was 3.2%. This national strategy meant that starting from an above EU-average level of early leavers throughout the 2000s the Netherlands cut down on the number and proportion of its early leavers substantially (MINOCW, 2010).

Structure of the educational system in the Netherlands

Figure 14-2: Dutch educational system



(Source: Nuffic, 2011)

The Dutch education system is a complex one. It resembles the Germanic model, where early tracking of students is accompanied by a strong separation of the vocational and the academic tracks. As *Figure 14-2* shows, after the primary education of 7/8 years (orange colour) pupils can either enrol into the preparatory vocational, or the senior general secondary, or the university preparatory educational track (blue colour); these secondary level schools last 4, 5 and 6 years respectively. As even the name of them shows, they prepare the student from the age of 12 for a specific further track. The vocational further education track, marked green on *Figure 8*, prepares students for a specialised vocation at the post-secondary level (ISCED 3). The tertiary sector is divided into higher professional institutions and academic institutions; the former are called 'hogescholen' or 'hoger beroepsonderwijs' (abbreviated HBO), the latter are called 'universiteits' or 'wetenschappelijk onderwijs' (abbreviated WO). These two tracks are markedly different (purple and red colour on *Figure 14-2*). Whereas the vocational or professional higher education provides for a more specific, more vocational degree usually up to a Bachelor's level, the academic higher education degree means an almost automatic continuation of the Bachelor's degree into a Master's level degree within an academic subject.

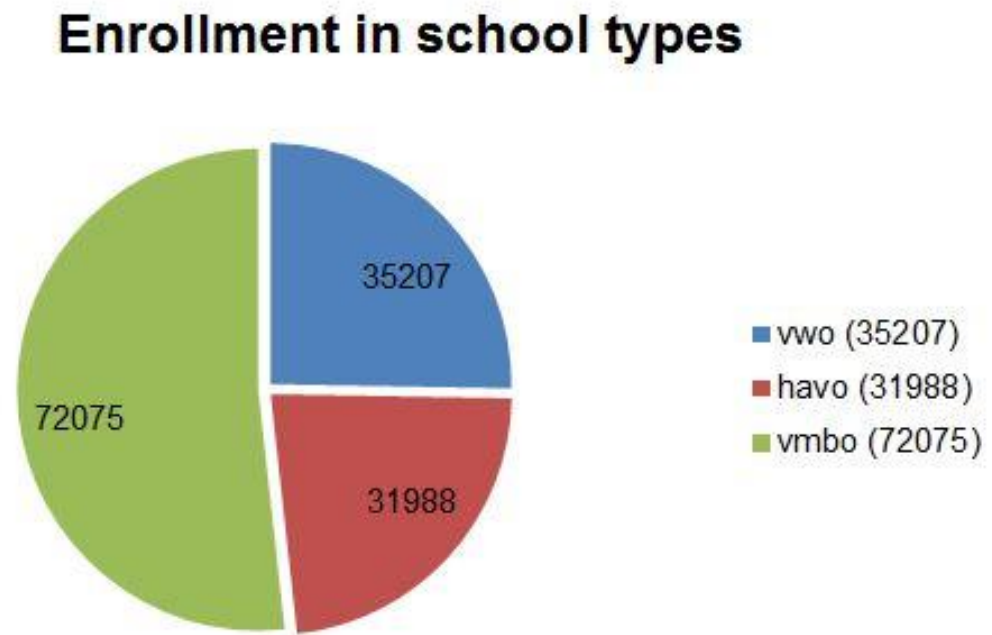
Compulsory schooling was set first in 1900, when pupils had to attend school between the ages of 6 and 12. The upper age limit was raised to 16 in 1969; the lower age limit was set at 5 in 1985. Also, in 1971 additional part-time education was made compulsory for young people under the age of 18. The latest change in the policy regarding compulsory schooling was initiated in 2007 through which everyone

had to achieve a basic qualification – this can be a VWO, a HAVO or an MBO-level-2 certificate. Note that the VMBO-level certificate of the basic vocational education is not a basic school leaving qualification (Eurydice, 2009, Istenes and Péceli, 2010).

Dutch secondary education

Around half of the students were enrolled in the vocational VMBO track in 2005; a quarter of the students went to VWO schools and almost a quarter to HAVO institutions, as *Figure 14-3* shows. The picture is changing as the reputation of VMBO is declining: more and more students aiming to go to HAVO or VWO institutions.

Figure 14-3: Enrolment in secondary education, students entering in 2005



(Source: MINOCW, 2010: 37)

The strong tradition of early tracking means that students take on fundamentally different school careers at the age of 12. Through the latest changes of the curriculum, the first few years of the secondary education puts the emphasis on 'acquiring and applying knowledge and skills' through an integrated curriculum using attainment targets (Eurydice, 2009: 77). A minimum amount of two thirds of the hours in lower secondary education has to be spent on the attainment targets; the 58 different targets are translated into 'subjects, projects, areas of learning, and combinations of all three, or into competence-based teaching' (Eurydice, 2009: 91). The lower years are the first two years of VMBO and the first three of HAVO and VWO schools. After these basic years in the VMBO schools the students chose their

sector, in the HAVO and VWO they chose their subject combination (Eurydice, 2009).

In a VMBO school, pupils can chose from four different sectors – ‘engineering and technology, care and welfare, business or agriculture’ – and different learning pathways having their own curriculum (Eurydice, 2009: 91). The learning pathways are the following (See *Table 14-5* for enrolment information):

- basic vocational (BL)
- middle-management vocational (KL)
- combined (GL)
- theoretical (TL).

Table 14-5: Enrolment per type of secondary institutions in 2010

Years	VWO	HAVO	VMBO BL	VMBO KL	VMBO GL	VMBO TL	VMBO-MBO 2 learning
Year 6	37700						
Year 5	41600	50900					2200
Year 4	42700	59399	7100	18100	7200	39900	
Year 3	42700	40900	7400	18700	12600	33800	
Year 2				162800			
Year 1				165000			

(MINOCW, 2010: 103)

The upper years of the HAVO and VWO schools are organised on the basis of study load that ‘is based on the time required by the average pupil to Master’s a particular quantity of material’ (Eurydice, 2009: 92). This study load is divided into:

- a common component (Dutch, English, culture and arts, social studies, physical education, general science and additional language in VWO);
- a specialised component (science and technology, science and health, economics and society and culture and society); and
- an optional component (Eurydice, 2009).

Early tracking in the Netherlands means that based on a primary school leaving exam at the age of 12 students are directed to different types of schools. They are tracked into 'three hierarchically ordered groups on the basis of academic potential: the VWO, the stream constituting the pathway to research intensive universities (for the WOs), though some go the HBOs; the HAVO which provides students for the HBOs or MBO vocational training at tertiary stage; and the VMBO which prepares students solely for MBO tertiary training' (Eurydice, 2009: 14). The school board makes enrolment suggestions at the end of primary education, assessing 'their suitability' through 'tests developed centrally to gauge pupils' level of knowledge and understanding' (Eurydice, 2009: 83). The VWO track is thought to be the favourable outcome for many families and students, and the national aim is to raise the ratio of higher education participants to 50% of a cohort by 2010 (Marginson, 2008). The effects of tracking are to be reduced by the possibilities of moving within the different levels of the system – upwards as well as downwards, especially between the tracks. After a peak of intra-secondary transition in the late 60s - early 70s, the ratio of mobility between tracks is declining slightly and fluctuating recently (Marginson, 2008, MINOCW, 2010, Tieben and Wolbers, 2010). Marginson (2008: 14) argues

that although early tracking goes along with severe inequality, according to the PISA data the 'overall performance is so high that even lower achieving school students in the Netherlands do quite well compared to students from other nations'.

Early tracking is associated with inequality between different social groups, like pupils with non-western migrant backgrounds, students with lower socioeconomic background, part-timers and students above the age of 30 years, who are not entitled to subsidized higher education (Marginson, 2008). At secondary level the difference in the proportion of Native Dutch and Non-Western migrants is apparent as shown in *Table 14-6*. This table shows that for both VWO and HAVO the ratio of Non-Western migrants is lower than that of Native Dutch young people; whilst every second Native Dutch child attends VWO or HAVO schools in 2010, this is only true for every third Non-Western migrant pupil.

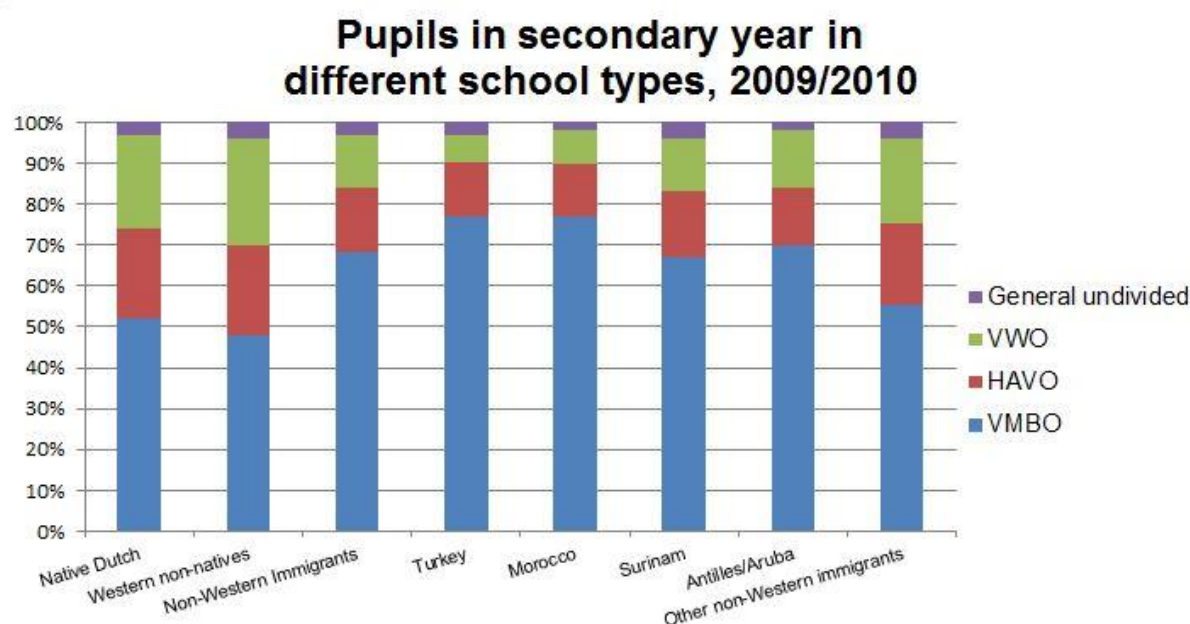
Table 14-6: Participation in secondary education by ethnic background, 2010

	VWO	HAVO	VMBO GL/TL	VMBO KL	VMBO BL
Native Dutch	26.61%	23.75%	25.00%	12.13%	12.52%
Non-Western	13.49%	17.81%	25.87%	13.29%	23.54%

(Data from: MINOCW, 2010)

Figure 14-4 shows an even more striking picture for the school year 2009/2010. The ratio of Native Dutch students and Western Non-natives in the least prestigious VMBO schools is around 50%. The same ratio for students with a Non-Western migrant background like the Turkish, Moroccan, Surinamese and Dutch Antilles/Aruban pupils is between 69% and 77%.

Figure 14-4: Participation in different educational institutions by ethnicity, 2009/2010



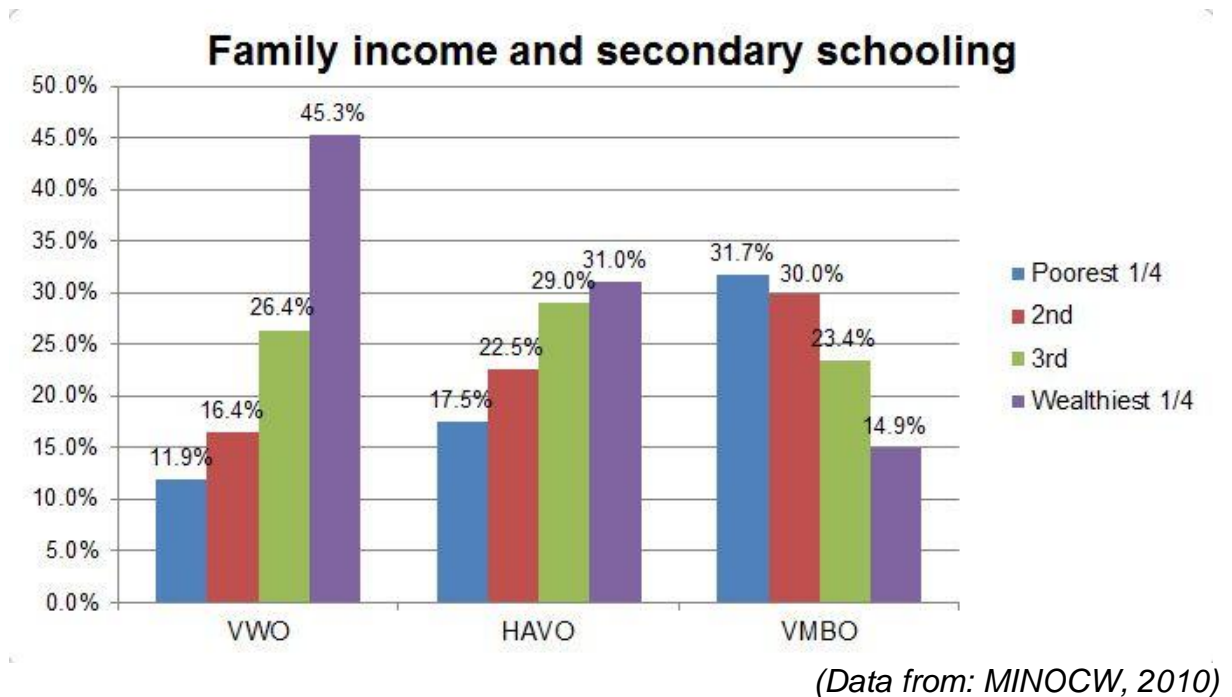
(Data from: MINOCW, 2010)

One important aspect that precedes ethnic and socioeconomic segregation at secondary level is the segregation at the primary level. According to Karsten et al (2006) the former class segregation of the 1980s-90s was outstripped by segregation on the basis of ethnicity by the 2000s. This is largely due to demographic trends, residential segregation and the free school choice through which White native families prefer to send their children to schools with a low percentage of ethnic minorities as well as minority groups started to set up their own schools (Karsten et al., 2006: 244). These trends are especially true for the four major cities – Amsterdam, Utrecht, Rotterdam and Den Hague. A previous study showed that in the four major cities ‘35% of schools currently have more than 70% ethnic minority pupils’ (Karsten et al., 2003: 457).

While effects of father's occupational status are entirely explained by previous school transitions, the effects of parents' education remain significant, even after controlling for initial track placement and intra-secondary transitions. This indicates that children from highly educated backgrounds not only reach a higher diploma, because they are placed in higher initial tracks and are better able to reach an advantageous track by intra-secondary transitions, but also are better able to avoid failure in the chosen track (Tieben and Wolbers, 2010: 288).

Figure 14-5 shows the participation in the different tracks and its relation to family background; whilst among the students from the wealthiest quarter almost every second child goes to favourable VWO track, for the poorest quarter this figure is only one in nine.

Figure 14-5: Participation in secondary education by family background



Dutch vocational and adult education

Following on mainly from the VMBO track, the aim of senior secondary vocational education is to provide 'theoretical instruction and practical training in preparation for the practice of a wide range of occupations' (Eurydice, 2009: 142). Vocational and adult education is organised in regional training centres (ROC) that were set up in 1996. In 2010 there were 45 ROCs; the MBO sector catered for 495,200 students in the same year (MINOCW, 2010). Within the ROCs there are two distinct tracks, the BOL (Beroeps Opleidende Leerweg) and the BBL (Beroeps Begeleidende Leerweg). The BOL consists of 20-60% of practical training, whereas the BBL, the former apprenticeship system operates with more than 60% of practical training.

Throughout the MBO studies there are four levels which can be achieved; note that level 2 has to be achieved to gain a basic school leaving qualification since 2007:

- level 1: assistant level to do simple tasks
- level 2: basic vocational qualification 'to perform executive tasks'
- level 3: professional training diploma for independent work
- level 4: 'middle-management or specialist training' for independent work with having a specialisation in the field (Eurydice, 2009: 146).

In the late-80s due to the high unemployment rates of young people a discussion started on whether the Dutch educational systems serves the labour market with adequate and appropriate training of future workers. To tackle this issue, the so called WEB Act (Wet Educatie Beroepsonderwijs) was passed in 1996. This aimed to establish a more relevant vocational educational system, with business and industry gaining significant impact on the skills and competences that the different training programmes provide (Sung, 2010). The influence of industrial stakeholders is achieved through national consultations at branch level and through advising the specific institutions at a regional level.

The unusually strong links between employers and the educational institutions as well as the influence of industry on the content of the training is true both for the upper-secondary level (MBO) and the tertiary level, the WO and HBO (Eurydice,

2009, Stern and Wagner, 1999). The latter two differ to the extent which they are engaged with employers. The HBO sector is linked to business and industry through instructional staff, employers participating on the boards and helping the schools as advisors (Marginson, 2008: 60). Within the academic higher education sector there are three 'technical universities' that have robust relations to industry. To a lesser extent, but the 'research universities with a strongly theoretical and research-led orientation offer study programmes [that] are in fact strongly oriented towards working life' (Marginson, 2008: 61).

Strong labour market relations and the dual system according to some studies enhance a smoother school-to-work transition (Gangl, 2003b, Wolbers, 2003a). Whereas in Germany and Austria vocational education 'took the form of apprenticeships at the workplace', in the Netherlands it is mainly organised in schools (Müller and Wolbers, 2003a: 28). According to Müller and Wolbers (2003a: 54) the Netherlands is one of the countries in Europe – amongst the Scandinavian countries, Germany and Austria – that succeeds to provide higher qualification than ISCED 0-2 for the largest ratio of its citizens; 'these are at the same time the countries with the largest share of vocationally oriented qualifications at the secondary level'. A high share of young people entering the labour market early to combine studying and working in the Netherlands is accompanied with a low level of youth unemployment (EUROSTAT, 2011b, Couppié and Mansuy, 2003, Stern and Wagner, 1999). Apprenticeships in the Netherlands – as opposed to Germany for

example – are to ‘a significant degree allocated to lower-level positions’ (Gangl, 2003a: 17).

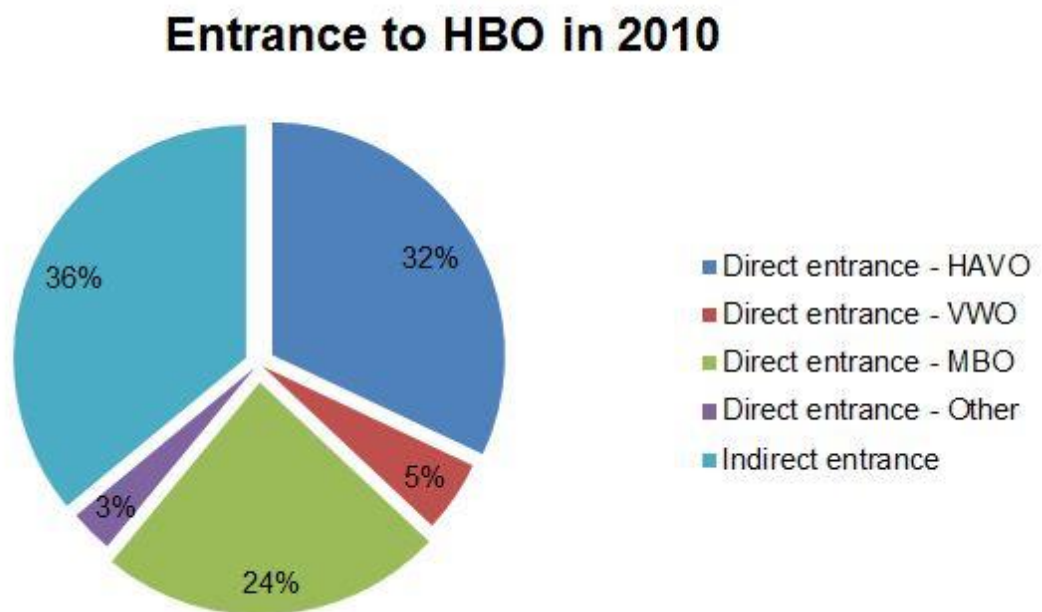
Dutch tertiary education

Anyone having the appropriate qualification and sometimes grades from specific subjects can enrol into higher education. Into HBO institutions students can apply from VWO, HAVO and MBO; to WO from VWO and from HBO. Students in higher education have to pay fees; under the age of 30 this means a statutory tuition fee of 1620 Euros for the academic year 2009/2010. For students above the age of 30 the rate of tuition fee is set by the institutions themselves (Eurydice, 2009).

The vocational or professional higher education institutions, the HBOs provide an occupationally tailored model for their students who complete their studies in 4-5 years, leaving mainly with Bachelor’s-level qualifications (Marginson, 2008, MINOCW, 2010). The HBO sector consisted of 35 institutions in 2010 but beyond these publicly funded organisations there were around 60 ‘legal entities providing higher professional education’ (Eurydice, 2009: 116, MINOCW, 2010). *Figure 14-6* shows the different entry routes to the HBO sector. In 2010 there were 407,300 students enrolled on HBO programmes, not accounting for the agricultural programmes (MINOCW, 2010). Higher professional education was separate from the WO sector since its foundation in 1968 till 1993, when a joint regulation was set up for both type of institutions. The students from the HBOs ‘find employment in various

fields, including middle and high-ranking jobs in trade and industry, social services, health care and the public sector' (Eurydice, 2009: 110).

Figure 14-6: Entrance to HBO sector in 2010 by previous education

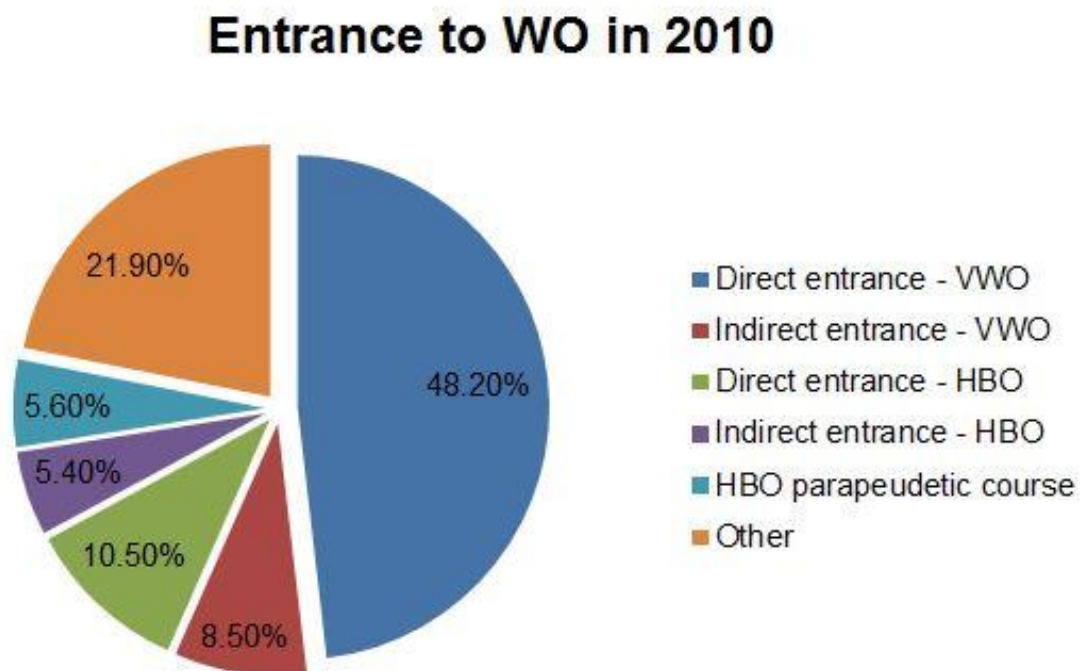


(MINOCW, 2010: 141)

The main aim of the academic higher education, the WO is to prepare graduates for occupations requiring an academic background; only a small proportion of graduates is eventually employed in research (Eurydice, 2009). The academic higher educational sector consisted of 13 institutions (without the agricultural university) in 2010; enrolling 233,800 students in the same year excluding agricultural universities (MINOCW, 2010). To enter the WO sector one has to have either completed pre-university education (VWO), or a HBO course, or complete an entrance examination; *Figure 14-7* shows the entry ratios from these different routes. For most of the

courses universities require exams in certain subject areas. Everyone is admitted to university who has the minimum exams from either a VWO or a HBO, but some courses where the capacity is limited have admission quota and a weighted lottery is held to decide on entry (MINOCW, 2010).

Figure 14-7: Entrance to WO sector by previous education in 2010



(MINOCW, 2010)

Appendix 17 Change in research organisations conducting the Dutch WO-Monitor

This section provides further details about the change in the providers of the WO-Monitor. As suggested regarding the Dutch case, there were visible tensions between VSNU and ROA that relate to the change in the providers of the WO-Monitor. These tensions come to surface when ROA combines the national school leavers' report. As the VSNU interview suggested,

(...) they say that it's [VSNU-IVA data] not quite comparable to the data they conduct for the universities of applied sciences, so they tell the government that we do it wrong and then we get questions from the government why do you do this. So still, up to today it is a controversial survey [and change in the providers]. (Research institute 3, NL)

According to DESAN involved in the academic higher education monitor before 2007, the change to another research organisation could be connected to the price ROA and DESAN charged for the WO-Monitor and the underlying competition between research institutes,

And for whatever reason, I don't know, the university council pulled it up for tender at some point in time (...). I don't think they were very dissatisfied with

the result, it's just that it takes a certain amount of money, because it's expensive, it's time and money consuming process. So they wanted it to be a little bit cheaper, so they changed from one year to every two years and the data collection... the response rates in the current survey are lower than they used to be. (...) but like I said there is a competition between these research institutes (...). In these tendering processes there is all kinds of stuff going on in the background that you can't get your fingers behind... (Research institute 2, NL)

The main concern of ROA with regards to changing some of the questions or modules of the academic higher education survey as well as the methods was related to comparability over time and across the system.

The interview with IVA suggested they were unsure about the reasons why VSNU chose their organisation to do the survey at the university level:

I don't really know why VSNU chose IVA, we... I think it had to do something with the price, maybe we are cheaper than ROA and I heard that maybe they were not too happy with the quality about ROA; it might be that it's good to change after ten years to another party, which you trust. (Research institute 5, NL)

Regarding the financial aspects of the change between the research providers, the details are unclear. VSNU suggested that when ROA conducted it, '[it] took about 600.000 euros' for all universities together; with IVA '[we] brought it back to 9000 euros'. In the note that initiated the change with regards to who is doing the WO-Monitor, ROA is said to gather data for € 47. 600 per annum; another research organisation is mentioned with less than half of this amount for the same work (VSNU, 2007a: 8).

Appendix 18 Early school leavers' survey in the Netherlands

This section provides a short discussion of the early school leavers' data collection conducted in the Netherlands. A recent important national public policy in the Netherlands is the reduction of early school leaving in the Netherlands. An early school leaver is a young person without a minimum qualification meaning not having a VWO, HAVO level certificate or an MBO-level 2 qualification (MINOCW, 2010). As one of the ministry interview explained this policy,

(...) we are steering very strong on early school leaving; it's a very intense programme. The schools did a very good job, because they brought the percentage of early school leavers very much back. (Ministry 1, NL)

The Dutch targets are ambitious. They plan to reduce the percentage of early school leavers as defined by the EU from 15.4% in 2001 to 8% by 2020 (MINOCW, 2012a). The progress with regards to this policy is measured through collecting data from schools, compiling a national data file and feeding it back to schools (MINOCW, 2012a). Thus schools can compare their progress to the national level as well as to schools similar to them.

To accompany the raw student numbers on drop-out, an early school leavers' survey conducted by ROA was started in 2007 (Research institute 1, NL); to understand

'their reasons and why they left and what were their intentions when they came to school' (Ministry 1, NL). The data collection on early school leavers' is carried out by ROA using a sample approach 1.5 years after leaving education without a starting qualification. The survey was started in 2007 and it is financed by the ministry. Before starting this survey programme, the ministry was using the already mentioned data collected from schools; that information had no details on why young people left the system,

The survey is different in the sense that one of the most important part of the questionnaire is why they left the education system. Questions about if they had before already problems with schools etc. So that is a very important part. But then we also look what they are going to do later on, in the first 1.5 years. The reason we're looking at 1.5 years is that by that you give them actually the possibility, some of them have actually returned to school or some of them find good jobs, so that's interesting to see. (Research institute 1, NL)

The survey is administered 1.5 years after leaving to give comparability with all the other surveys; thus as ROA disputed,

If we would have started from scratch with an early school leavers' survey, I'm not 100% sure if we would have taken 1.5 years. Perhaps you would have been earlier, and you would let the focus on why they left school. Now both

because we also want to provide information on how well they are doing on the labour market, whether they returned to school, and because all the other surveys and comparison reasons also, it has been logical to [keep it at 1.5 years]. (Research institute 1, NL)

The methodology of the early school leavers' survey is similar to that of the secondary schools. ROA and DESAN acquire the sample through DUO; they ask the early school leavers approximately 1.5 years after leaving education without a starting qualification. One of the issues with the early leavers' survey is the registry and thus the base for sampling being inaccurate,

(...) what we observe quite a lot is that people seem to have dropped out of the educational institute but they didn't drop out at all. (...) They changed from one institution to the other or they dropped out of the education and then went back again but not at the same time, or sometimes not financed by the Ministry of Education. (...) So these people are not early leavers, they are leaving the institute but not the educational system. We have no way of dealing with that within the sampling frame. That's where we get lots of calls from angry parent, ok, my boy hasn't dropped out of education and we had a major fight with the educational institute and bla-bla. (Research institute 2, NL)

The early school leavers in this survey are contacted via postal mail; they receive the questionnaire, the reminders and can submit the questionnaire online as well. Due to the problems already mentioned this research is said to be the least reliable amongst the SLGIS in the Netherlands (Research institute 2, NL).

Appendix 19 Response rates for SLGIS in the Netherlands

Table 14-7: Response rates of SLGIS conducted by ROA and DESAN 2007-2011

	Sample	Response rates	Number of cases	Population	Sample/ Population ratio
2007					
HAVO	2909	37.0%	966	38152	7.6%
VWO	2247	40.0%	840	29327	7.7%
VMBO	10604	35.0%	3789	98246	10.8%
MBO BOL	20254	31.0%	5818	75639	26.8%
MBO BBL	7644	30.0%	2183	44710	17.1%
HBO	37085	38.0%	13258	42740	86.8%
WO	22930	40.0%	9988	28841	79.5%
2008					
HAVO	3709	37.0%	1352	38493	9.6%
VWO	3272	43.0%	1405	30811	10.6%
VMBO	15774	30.0%	4715	92723	17.0%
MBO BOL	27354	24.0%	3404	84180	32.5%
MBO BBL	14200	20.0%	2846	43675	32.5%
HBO	43479	38.0%	15400	50363	86.3%
WO *	9462	39.0%	4511	27926	33.9%
2009					
HAVO	2881	34.0%	975	41359	7.0%
VWO	2292	40.0%	921	32404	7.1%
VMBO	10301	28.0%	2791	89898	11.5%
MBO BOL	19150	20.0%	3880	83030	23.1%
MBO BBL	7359	17.0%	1236	50407	14.6%
HBO	39839	37.0%	13614	49550	80.4%
WO	ROA is not the contractor for the WO-Monitor from 2007				
2010					
HAVO	1922	35.0%	667	40713	4.7%
VWO	1681	41.0%	691	34093	4.9%
VMBO	10519	28.0%	2969	85005	12.4%
MBO BOL	19611	24.0%	4603	82328	23.8%
MBO BBL	9472	20.0%	1871	56488	13.8%
HBO	40882	38.0%	14861	49506	82.6%
WO	ROA is not the contractor for the WO-Monitor from 2007				

	Sample	Response rates	Number of cases	Population	Sample/ Population ratio
2011					
HAVO	2010	36.0%	722	39901	5.0%
VWO	1381	43.0%	596	29511	4.7%
VMBO	7751	29.0%	2219	82290	9.4%
MBO BOL	18791	24.0%	4566	80731	23.3%
MBO BBL	9338	19.0%	1795	54950	17.0%
HBO	42584	40.0%	16252	47402	89.8%
WO	ROA is not the contractor for the WO-Monitor from 2007				

*Without 2 WOs; this was the transition year between providers for the WO-Monitor

(Source: ROA, 2009c, ROA, 2008, ROA, 2010, ROA, 2011, ROA, 2012; sample/population ratio calculated)

Appendix 20 Background to the case study on England

Population and economic background in England

This introduction to the case study on the English school leavers' and graduates' information systems focuses on the educational structure and provides some insight into the other home-countries of the United Kingdom (UK) as well. The economic and population figures are provided at the UK level. This section uses data gathered from the Eurostat. The data terminology is provided in **Error! Reference source not found..**

The whole population of the United Kingdom is 62.4 million people in 2011. The United Kingdom joined the European Union in 1973. The official language of the country is English with recognised regional languages. The United Kingdom comprises of England, Wales, Scotland and Northern-Ireland, accounting for 83.9%, 4.8%, 8.4% and 2.9% of the population respectively in 2010 (NATIONAL STATISTICS, 2011a).

The United Kingdom has a substantial foreign born population; according to the Eurostat (2011c), in 2010 11.3% of the population was born in another country. *Table 14-8* shows the seven biggest foreign born groups; around 600-700,000 residents from both India and Poland; 400-450,000 residents from Pakistan and Ireland; 200-300,000 residents from Germany, South Africa and Bangladesh and over 3.6 million people from several other countries (NATIONAL STATISTICS, 2012).

Table 14-8: Foreign born population, 2010-2011

Not born in another country	India	Poland	Pakistan	Republic of Ireland
89.5%	1.1%	0.9%	0.7%	0.7%
Germany	South Africa	Bangladesh	Other	
0.5%	0.4%	0.4%	5.8%	

(Source: NATIONAL STATISTICS, 2011a, NATIONAL STATISTICS, 2012)

Life expectancy in 2009 was slightly above the EU 27 average, at 78.3 years for males and 82.5 for females (EUROSTAT, 2011c). In 2010 17.1% of the population were at risk of poverty after social transfers, which is around the EU 27 average (EUROSTAT, 2011c).

The employment rate in the United Kingdom is somewhat above the EU average; in 2010 it was 69.5%; the unemployment level is 8% (EUROSTAT, 2011c). From April 2009 to March 2010 the unemployment rate for a degree and/or a higher education qualification was 4.3-4.5%; for advanced secondary qualifications (A-levels) it was 7.3%; for general secondary qualifications (GCSEs) it was 10.1%; for no qualification it was as high as 15.5%. The total number of unemployed people was 2.4 million. The unemployment rates for England, Wales, Scotland and Northern Ireland were 8.8%, 9.4%, 8.4% and 7.3% respectively (NATIONAL STATISTICS, 2011b). During the 20th century the British economy started to be geared towards the service sector rather than the manufacturing industries; especially producer services grew, such as the banking and the financial sector, as well as the health services (Booth, 2001).

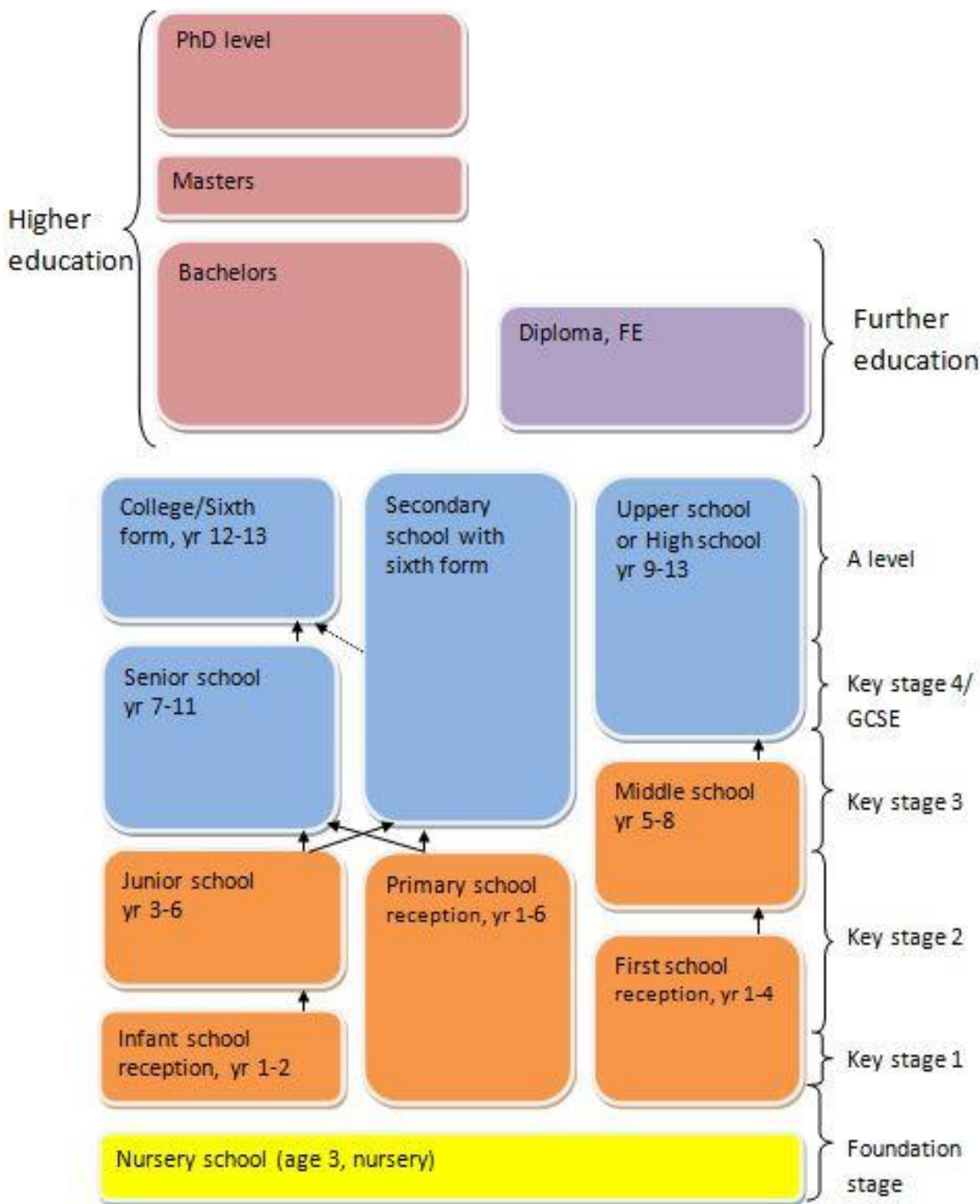
Education in England

According to the Eurostat (2011c) the United Kingdom spends 5.79% of its GDP on education, which is slightly above the EU average. The number of schools in 2007 in England was above 25 thousand; out of these there were more than 17 thousand primary schools, more than 3300 secondary schools, above 400 nursery schools and more than 2000 independent schools. The number of schools is declining constantly (DfE, 2006). According to a Universities UK publication, there are 165 universities in the UK in 2011 that receive funding from the higher education funding councils (O'Prey, 2011).

The attainment level in 2012 for students who have achieved a level 2 qualification continues to rise. At the age of 19 in 2012, 85.1% of young people in England had at least a level 2 or higher qualification, which equates to an ISCED 2 or 3 category (Schneider, 2008, DfE, 2013b). The total number of students in higher education in 2009/2010 was almost 2.5 million (UNIVERSITIES UK, 2011). The participation in lifelong learning is relatively high in the UK compared to other European countries; approximately every 5th person between the ages of 25 and 64 is in education or training compared to the EU average of 9.1% (EUROSTAT, 2011c).

Structure of the educational system in England

Figure 14-8: English educational system



(Source: Eurydice, 2010b)

The educational system of England is traditionally diverse, allowing different choices at all levels. This description refers to some of the crucial differences between the educational systems of the four home-countries of the UK as well.

As *Figure 14-8* on the English educational systems shows, the primary sector (orange colour) consists of several different types of institutional routes. As there is no selection before primary, these schools cater for all abilities. There has been a strong policy initiative to include pupils with special educational needs (SEN) in mainstream schools, thus reducing the number of special schools and the ratio of students in such schools (Tomlinson, 2012). Before 2003 the 'eleven plus' exam results decided which secondary schools primary pupils would be allowed to go to, currently this exam is only used for the remaining grammar schools in England and in Northern-Ireland (Tomlinson, 2005). Primary and junior schools end at the age of 11, the secondary schooling begins after this age.

Education is compulsory from the child's fifth birthday till the last Friday of June of the year they reach 16 years. The compulsory school age is currently raised by the Education and Skills Act 2008 to 17 by 2013 and 18 by 2015 for England; this will require 'all young people to participate in education or training until their 18th birthday through either full-time education or training; work-based learning; or part-time education or training' (Eurydice, 2010b: 33). The primary and secondary education is divided into four – two and two – key stages that end with the General Certificate of

Secondary Education (GCSE). A common feature of the four UK educational systems is a high number of students leaving education at 16. The proportion of early school leavers' in 2010 was 14.9%, which is around the EU average (EUROSTAT, 2011c, Raffe, 2000).

The tradition of diversity and selection in the English system is less apparent in Wales and is not a structural feature in Scotland, but until recently it was an important factor in Northern-Ireland (Dunn, 2000, Eurydice, 2010b, Gorard, 2000, Harris and Gorard, 2009, Matheson, 2000, Raffe, 2000, Raffe et al., 2000, Tomlinson, 2005). The diversity of the English educational system is partly explained by there being not enough political support for making the system comprehensive. The comprehensive changes started in 1952 but even at this point private education and grammar schools could continue to have selective mechanisms. Although the number of selective grammar schools has declined over the last couple of decades, there are several local authorities that choose to retain selective schools (Harris and Gorard, 2009, Raffe, 2000, Tomlinson, 2005).

Beyond the nationally funded system of schools the fee-paying independent schools make up a smaller but significant sector of the British school system. These schools account for 6-7% of the entire school population of students in England at the primary and the secondary level, as *Table 14-9* shows. Research has shown that pupils from independent schools are over-represented in higher education and especially within

the more prestigious sectors of HE (SUTTON TRUST, 2004). Note that there are further types of educational institutions beyond the ones shown in *Table 14-9*, like special schools and pupil referral units.

Table 14-9: Number of primary, secondary schools and independent schools and their students in England in 2012

	State-funded Primary	State-funded Secondary	Independent
Number of schools	16,818	3,268	2,420
Number (headcount) of pupils	4,217,000	3,234,875	577,445

(Source: DfE, 2012b: extract from Table 2a)

The two corresponding government departments involved with education in England are the Department for Education (DfE) and the Department for Business, Innovation and Skills (BIS) currently. The DfE deals with general education. Further education issues are covered by the Business and Skills group, whereas the higher education matters belong to the group called Knowledge and Innovation section of BIS (BIS, 2011).

Relating to the governance structure it is important to highlight that the different funding bodies have an important role within the different sectors of education. As Harris and Gorard (2009: 7) suggest, ‘the quasi-autonomous statutory bodies responsible for funding and quality assurance in all sectors of education, such as the Learning and Skills Council for England (covering further education, which is full-time education for people aged 16 or over and any education for people aged over 18 which is not higher education), the Higher Education Funding Council for England

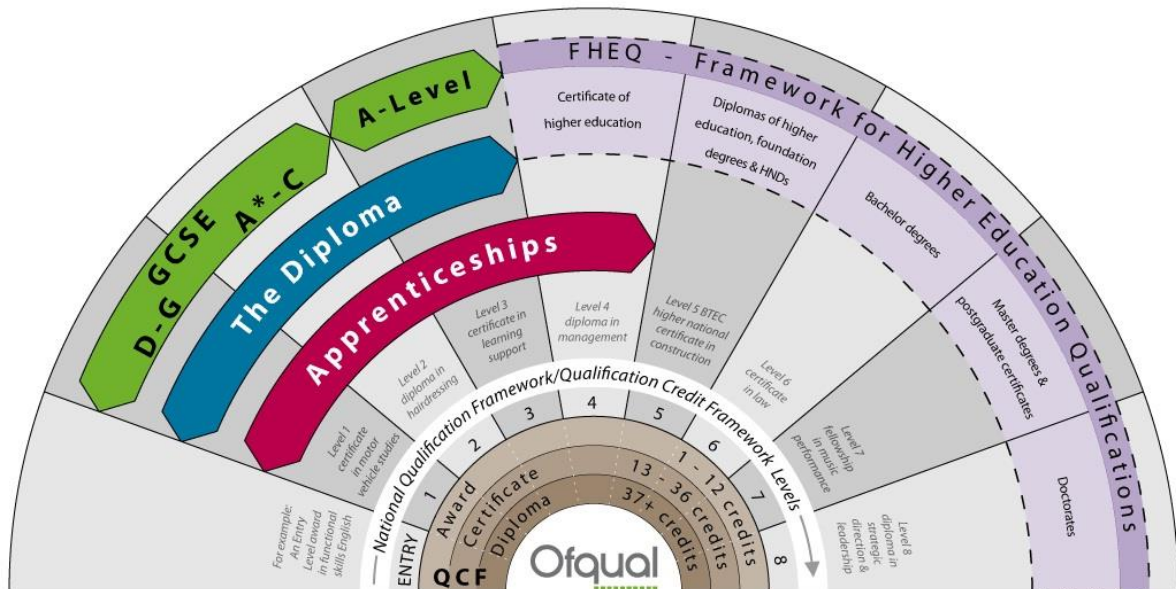
(HEFCE) and the Office for Standards in Education, Children's Services and Skills (Ofsted), also exert regulatory control'.

English secondary and non-tertiary post-secondary education

The last five years of the compulsory education, from the ages of 11 to 16 are marked with colour blue on *Figure 14-8*; education and training after this period is referred to as post-16 choices. Secondary education can be completed in secondary schools, grammar schools, school sixth forms or sixth form colleges, or in some parts of England in upper schools. The end of the compulsory education is marked by the General Certificate of Secondary Education (GCSE). Post-16 full-time education is rather specialised in England; it can aim for getting a diploma in a specific field or study for the General Certificate of Education Advanced Level (A-levels) (Eurydice, 2010b, OFQUAL, 2009). A diploma is a catch-term for qualifications between the National Qualifications Framework (NQF) levels 1 and 3 (OFQUAL, 2009). A qualification can be achieved through gaining an apprenticeship that is 'a framework that contains separately certified elements, including an appropriate work-based qualification such as a National Vocational Qualification (NVQ) at either level 2 or level 3, key skills and in some cases a relevant knowledge based qualification such as a [Business and Technology Education Council] BTEC' (OFQUAL, 2009). To be able to apply to university, students have to either successfully complete the General Certificate of Education Advanced-level (A-levels), or earn a level 3 qualification, such as a BTEC diploma for instance (Eurydice, 2010b).

The English educational and training system in particular is complicated through the many types of different post-16 qualifications and their different levels and credit frameworks. This flags up the problem of information deficiencies and thus the problems of choice as well. As *Figure 14-9* shows, there are a number of different systems at the moment that constitute the type of qualifications awarded within the English FE/HE system. The National Qualifications Framework ranges from level 1 to level 8. The Qualifications and Credit Framework gives awards, certificates or diplomas depending on the amount of credits accumulated at the particular education level. All types and areas of education and training are then fit with these frameworks; for example a GCSE can be classified as level 1 or level 2 depending on the exam outcomes, or a Bachelor's degree gained at a university equals a level 6 diploma (OFQUAL, 2009).

Figure 14-9: Explaining qualifications



(Source: OFQUAL, 2009)

One of the explanations for the diversity at the further education level in terms of types of providers, types and levels of qualifications is the long-standing second-class status of the English FE system to the academic sector. As Finegold and Soskice argue as early as 1988, subsequent governments in the second half of the 20th century had little influence and capacity to initiate change in the FE system and that it was left for industry rather than to be governed centrally (Finegold and Soskice, 1988).

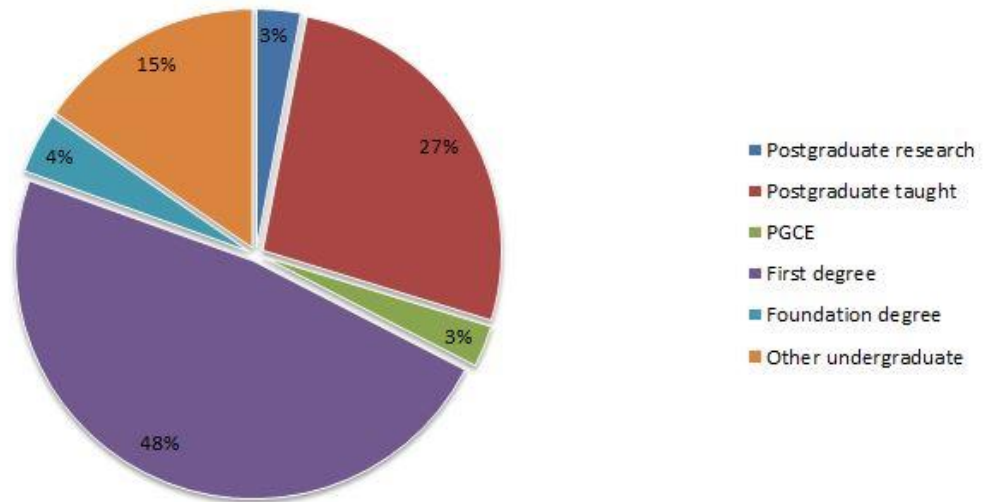
Higher education in the United Kingdom

The higher education system of the United Kingdom is one of the most successful and well known systems that have 'reserved' places in any international university

league table. The system gives awards, certificates or diplomas depending on the credits accumulated at levels 4 to 8 of the OFQUAL system as shown on *Figure 14-9* (OFQUAL, 2009). The university system dates back to the 12-13th centuries for England's most famous universities. The next wave of university foundation took place at the beginning of the 20th century; these are the so-called red-brick institutions. The 50s-60s saw an even higher number of institutions emerging. In 1992 when the former polytechnics were granted university status, almost 40 institutions emerged as the 'newer' universities (HEFCE, 2009, Tight, 2011). There were 24 institutions in 2011 named university colleges that offer HE level courses beyond FE qualifications, 5 other specialist institutions with a university status. There are substantial differences between institutions of higher education in England and in the UK in terms of prestige; the different 'mission groups' of HE require different levels of entry grades and offer diverging subjects (Mangan et al., 2010). The size of the universities is varied, they cater for students between 4,500 to 40,000 students (HEFCE, 2009).

Figure 14-10: Qualifications obtained in English HEIs in 2010/2011

Qualifications obtained in English HEIs in 2010/2011



(Source: HESA, 2012)

Figure 14-10 shows the qualifications obtained at English HEIs in the academic year 2010/2011; postgraduate taught and research degrees and Postgraduate Certificates in Education (PGCE) make up a third of the qualifications obtained, others are first degrees, foundation degrees, and other undergraduate degrees (HESA, 2012).

Appendix 21 What other datasets are used in policy making in England? (The Labour Force Survey)

This section provides further details about what datasets are utilised in policy making in England with special attention to the Labour Force Survey and how its applicability compares to the DLHE.

Beyond the DLHE, the Labour Force Survey was mentioned in the ministerial interview at the higher education level as a dataset that is used to gain information on graduates. Whereas the DLHE is good 'if you want to know the immediate outcome of recent graduates', the LFS gives an opportunity to compare longer term labour market outcomes of graduates and it allows comparisons with those who did not go to university (Ministry 4, EN). A broader explanation by a ministerial interview follows,

(...) we tend to use it like an indicative measure of what's happening in the graduate labour market. Some of the definitions can be considered quite crude. We tend to look at recent graduates, so we identify recent graduates [...] just to see their first graduate qualification, not gone into full-time employment and is under the age 30. So we just look at a particular cohort over a year just to see how employment changed over that year and then again we tend to also look at the graduate labour market from 18 to 64 just to see employment in these notions compared to people who haven't (...) graduated. (Ministry 4, EN)

The advantages of the LFS seem to be that it provides a) a longer term perspective on a person's career, b) some limited longitudinal perspective on the labour market changes due to the LFS following the respondents for slightly more than a year c) a monitoring tool of the graduate labour market and d) the possibility to compare with the non-graduate labour market. The main disadvantage of the LFS mentioned by the interviewee(s) is that it does not contain names of universities, thus making it impossible to compare institutions. Even though the future LFS will contain the names of the universities the respondents attended, due to the methodology and the sampling 'it's going to be about 2017 before we have anything to report; before the sample sizes are too small' (Ministry 4, EN). As opposed to the DLHE where the ministerial data experts do not have access to the dataset, the LFS is available for them for analysis,

We've direct access to the data-bases, we can do our own analysis on it, so it's quite flexible in that sense as well. It's the main one, if academics are doing research into these sorts of issues, that's what they use as well.
(Ministry 4, EN)

The LFS seems to be a useful dataset, but being based on a long questionnaire, it has several issues regarding the methodology as well,

But there are issues in terms of it's such a massive questionnaire, it's a bit of a dead man's shoes now. If you put one question in, you have to take one question out. While we're quite happy how HE has taken over the LFS, when I was working in FE and skills, we had the same problem, if we increased ours, it meant the detriment of somebody else. (Ministry 4, EN)

The LFS is used for several different reasons within the HE ministry; one of the important ones is to inform the policy-making side of the ministry. Producing information circulars is partly connected to the newly published LFS figures,

We produce [these information circulars] 7 or 8 times a year, it's an internal note called graduate labour market brief. And we do one of those every quarter when the new Labour Force Survey results come out to look at the latest employment and unemployment rates of all graduates in the economy and recent graduates tracking through. And occasionally we produce other editions of that as and when something interesting comes out. And that goes to senior policymakers and ministers as well in our department, sort of to update them. (Ministry 4, EN)

Relating to informing the policy makers the LFS is used to appraise about specific topics, particularly in defence some questions they get within the parliament,

(...) the Labour Force Survey we sometimes use for parliamentary questions for ministers speeches. When they're doing speech about graduate employment they might provide the latest statistics. (Ministry 4, EN)

Sometimes the ministry commissions researchers to do some work on the LFS data to 'make it more robust' as well as do in-depth analysis on specific issues. The LFS data are also used as a sensibility check for the work commissioned by BIS conducted by researchers – whether their work provides something within the frames of the LFS data, or something different,

(...) usually if it's completely different we tend to put pressure on the academics to explain why their [outcomes are as they are] or alternatively we might use that along so we adjust our analysis to put more in line with a more robust way of doing it. (Ministry 4, EN)

The LFS data are also used to complete freedom of information requests; especially due to the increased university fee rise, the ministry received many questions from members of the public. In these cases the ministerial interviewee(s) had to 'provide some data on showing how graduates have better employment rate than non-

What other datasets are used in policy making in England? (The Labour Force Survey)

graduates and that's often from the Labour Force Survey, those sorts of comparisons' (Ministry 4, EN).

Other datasets, beyond the LFS

The ministerial interview mentions several other research programmes that deal with graduate employment; these are conducted by private organisations, asking a number of bigger employers on their plans of graduate recruitment. These research projects gather data on how many graduates are recruited, and how many vacancies are planned in the coming year. Although these organisations only ask some of the bigger employers, the picture they give is used as a barometer within the ministry,

(...) we always say they are quite good as an indicative picture, but the real, the better [sold?] information when the DLHE comes out that will tell us what new graduates are earning. (Ministry 4, EN)

The ministers are briefed on these varied research programmes to be able to answers questions in parliament and from press,

(...) occasionally there are ad-hoc surveys done that we hear about in the press and we're trying to keep in touch with those as well. There is a lot of stuff out there we can never find out about it all... which tells you something about

What other datasets are used in policy making in England? (The Labour Force Survey)

graduate destinations or about what the prospects might be in the future, we just pull all that together. (Ministry 4, EN)

Appendix 22 Institutional and financial background of the YCS

Table 14-10: Sponsors and Principal investigators of YCS studies

Name of research	Sponsor(s)	Principal Investigator(s) *Data collector(s) for last two cohorts
Youth Cohort Study of England and Wales, 1985 1987; Cohort One, Sweep One to Three	Employment Department. Training Agency Department of Education and Science	Courtenay, G., Social and Community Planning Research
Youth Cohort Study of England and Wales, 1986-1988; Cohort Two, Sweep One to Three	Employment Department. Training Agency	Courtenay, G., Social and Community Planning Research
Youth Cohort Study of England and Wales, 1987-1994; Cohort Three, Sweep One to Four	Employment Department. Training Agency Department of Education and Science	Courtenay, G., Social and Community Planning Research
Youth Cohort Study of England and Wales, 1989-1991; Cohort Four, Sweep One to Three	Department of Employment Department for Education	Courtenay, G., Social and Community Planning Research
Youth Cohort Study of England and Wales, 1991-1993; Cohort Five, Sweep One to Three	Employment Department	Courtenay, G., Social and Community Planning Research
Youth Cohort Study of England and Wales, 1992-1994; Cohort Six, Sweep One to Three	Employment Department	Courtenay, G., Social and Community Planning Research
Youth Cohort Study of England and Wales, 1994-1996; Cohort Seven, Sweep One and Two	Employment Department	Courtenay, G., Social and Community Planning Research
Youth Cohort Study of England and Wales, 1996-2000; Cohort Eight, Sweep One to Three	Department for Education and Employment	Finch, S.A., Social and Community Planning Research McAleese, I., Social and Community Planning Research Russell, N., Taylor Nelson Sofres Nice, D., Taylor Nelson Sofres

Name of research	Sponsor(s)	Principal Investigator(s) *Data collector(s) for last two cohorts
Youth Cohort Study of England and Wales, 1998-2000; Cohort Nine, Sweep One to Four	Department for Education and Employment	Finch, S.A., Social and Community Planning Research La Valle, I., Social and Community Planning Research McAleese, I., Social and Community Planning Research Russell, N., Research Surveys of Great Britain Nice, D., Research Surveys of Great Britain Fitzgerald, R., National Centre for Social Research Finch, S.A., National Centre for Social Research
Youth Cohort Study of England and Wales, 2000-2002; Cohort Ten, Sweep One, Two and Three	Department for Education and Employment	Fitzgerald, R., National Centre for Social Research Finch, S.A., National Centre for Social Research
Youth Cohort Study of England and Wales, 2002-2005; Cohort Eleven, Sweep One to Four	Department for Education and Skills	Jarvis, L., National Centre for Social Research Exley, S., National Centre for Social Research Park, A., National Centre for Social Research Phillips, M., National Centre for Social Research Johnson, M., National Centre for Social Research Robinson, C., National Centre for Social Research
Youth Cohort Study of England and Wales, 2004-2007; Cohort Twelve, Sweep One to Four	Department for Children, Schools and Families	TNS Social Research GfK NOP
Youth Cohort Study: England, Cohort Thirteen, Sweeps One to Four, 2007-2010	Department for Education	British Market Research Bureau

(Source: *ESDS, 1993b, ESDS, 1993c, ESDS, 1993a, ESDS, 1993d, ESDS, 1996b, ESDS, 1996a, ESDS, 1996c, ESDS, 1999a, ESDS, 1999b, ESDS, 2003, ESDS, 2006, ESDS, 2008a, ESDS, 2008c*)

Appendix 23 Cohorts and sweeps of the YCS and the LSYPE

Table 14-11: YCS cohorts and sweeps; the last YCS cohorts' connection to the LSYPE cohort

Cohort/Year	1	2	3	4	5	6	7	8	9	10	11	12	13	LSYPE
1985	16													
1986	17	16												
1987	18	17	16											
1988		18	17											
1989			18	16										
1990				17										
1991				18	16									
1992					17	16								
1993					18	17								
1994			23			18	16							
1995														
1996							18	16						
1997														
1998								18	16					
1999									17					
2000								20	18	16				
2001														
2002										18	16			
2003										19	17			
2004											18	16		Year 9
2005											19	17		Year 10
2006												18		Year 11
2007												19	16	Year 12
2008													17	Year 13
2009													18	1 st yr of HE
2010													19	2 nd yr of HE

(Adapted from: Carpenter, 2007, Baker et al., 2012)

Appendix 24 Sample size of the last six cohorts of the YCS

Table 14-12: Information available on sample size and method of data collection of YCS, cohorts 8-13

YCS Cohort 13
Number of Units:
Sweep One: 7,525;
Sweep Two: 6,297;
Sweep Three: 5,411
Method of Data Collection: Face-to-face interview; Telephone interview; Email survey
YCS Cohort 12
Number of Units:
14,003 (obtained) Sweeps One to Four
Method of Data Collection: Telephone interview; Postal survey; Computer Assisted Telephone Interviewing (CATI); the postal questionnaire was also available for completion on the internet.
YCS Cohort 11
Number of Units:
16,707 (obtained) Sweeps One to Four
Method of Data Collection: Telephone interview; Postal survey; Computer Assisted Telephone Interviewing (CATI); the postal questionnaire was also available for completion on the internet
YCS Cohort 10
Number of Units:
13,698 (obtained) Sweeps One, Two and Three combined
Method of Data Collection: Telephone interview; Postal survey
YCS Cohort 9
Number of Units:
(A) 22,500 (target) 14,662 (obtained);
(B) 14,662 (target) 9,710 (obtained);
(C) 9,710 (target) 6,304 (obtained);
(D) 4,806 (obtained)
Method of Data Collection: Telephone interview; Postal survey; CATI
YCS Cohort 8
Number of Units:
(A) 24,500 (target) 15,899 (obtained);
(B) 15,899 (target) 10,130 (obtained);
(C) 10,130 (target) 5,796 (obtained);
Method of Data Collection: Telephone interview; Postal survey; as complementary mode for non-responders to postal survey (sweep two and three)

(Source: ESDS, 2008d)

Appendix 25 Sample size of the LSYPE

Table 14-13: Information available on the number of units in the sample, LSYPE

15,770 households at Wave One
13,539 households at Wave Two
12,439 households at Wave Three
11,449 households (plus 352 households in ethnic boost sample) at Wave Four
10,430 households at Wave Five
9,799 households at Wave Six
8,682 households at Wave Seven

(Source: DfE, 2011)

Appendix 26 Learners Destinations survey information

Figure 14-11: Learner Destinations, response rates for year 2010/11

Table 7: Response rates based on all in-scope learners from FE providers:
known/eligible sample

Detailed known/eligible sample (in-scope FE providers)			
Outcome	Total	% of all	% of known/eligible
Completed interview	186,356	12.9	55.2
Respondent refused	94,048	6.5	27.8
Closed at Q1 (not happy to take part)	1,406	0.1	0.4
Other refused	0	0.0	0.0
Closed at Q1a	102	0.0	0.0
Respondent moved	31,063	2.2	9.2
Soft appointment	179	0.0	0.1
Not available during fieldwork period	8,981	0.6	2.7
Interview quit or abandoned	7,753	0.5	2.3
Away at University	1,476	0.1	0.4
Wrong language	4,447	0.3	1.3
Referred elsewhere	-	-	-
Hard appointment	1,413	0.1	0.4
Tel number on Do not call list	-	-	-
Wants personal/postal	-	-	-
Closed at Q1b	436	0.0	0.1
Stopped interview	78	0.0	0.0
Total eligible	337,738	23.4	100.0

(Source: Ivins, 2012: 47)

Appendix 27 Background to the case study on Finland

Population and economic background in Finland

This introduction to the Finnish case provides some contextual information about Finland in general and the educational system more specifically. Finland has a population of 5.4 million inhabitants according to the Eurostat (2011a). The country is a member of the European Union since 1995. The official languages are Finnish and Swedish; 91.2% of the population speaks Finnish as their mother tongue, whilst 5.4% of the population is Swedish speaking (Eurydice, 2010a). This section uses data from the Eurostat; the data terminology is provided in **Error! Reference source not found..**

In Finland 4.2% of the population was foreign born in 2010 (EUROSTAT, 2011a, Tanner, 2011). The two main migrant groups are Russians and Estonians, 18.6% and 13.2% of the migrant population respectively in 2010; they are followed by groups of Swedish, Somalians, Chinese and Iraqis with 3-4% of the migrant population (STATISTICS FINLAND, 2012f). Although Finland has a long history of migration both abroad and receiving migrants from Europe and Russia, in the second half of the 20th century the influx was much lower than to the other Nordic countries. However, since the early 1990s the figures grew rapidly to more than 155.000 foreign born residents (Tanner, 2011). The integration of migrants started to be an issue in recent Finnish political debates and as Green et al. (2008: 17) states, the 'social democratic welfarism appears unusually dependent on solidaristic national identities

which are relatively intolerant of ethnic and cultural diversity and which define the limits of social cohesion in Europe's most cohesive states'.

Life expectancy in 2010 was at the level of the EU average with 76.9 years for males and 83.5 years for females (EUROSTAT, 2011a). The proportion of the population at risk of poverty after social transfers was 13.1% in 2010, slightly below the EU average.

The employment rate was somewhat above the EU average with 68.1% for Finland in 2010; the unemployment figure for 2011 was 7.8%, below the EU average (EUROSTAT, 2011a). In the beginning of the 1990s, after the collapse of the Soviet Union Finland experienced an abrupt increase in the unemployment rate – the number of unemployed was twice as much as the current rate (STATISTICS FINLAND, 2012c). Due to the economic depression of the 1990s the level of social security in Finland dropped compared to that of the neighbouring countries and 'social policy never returned to its former state' (Antikainen, 2010: 540).

Whereas the unemployment rate of those without post-basic qualification was fluctuating between 12-16%, the same range for upper-secondary school leavers was 7-10%, for higher education leavers was 3-5% recently. As for the main industries present in Finland, in recent years the 'proportion of agriculture and

manufacturing has declined and, in the last two decades, electronics has become the success story of Finnish exports' (Kyrö, 2006: 8).

Esping-Andersen (1996) categorizes Finland a social democratic regime-type, in which the notion of equity and equal opportunities set by the state are strong. The Nordic-regime type is an important frame to understand the characteristics of the Finnish educational system: the free and equal comprehensive primary and lower-secondary schooling; the academic and vocational strands at upper-secondary level both providing the possibility to go on to higher education; and the higher education sector being free of charge for students (Esping-Andersen, 1996).

Education in Finland

In 2009 the percentage of the GDP spent on education was 6.5% in Finland (STATISTICS FINLAND, 2011a). Finland spends at the OECD average on its primary and secondary education and spends somewhat more on the higher education than other OECD countries (OECD, 2011).

The number of educational institutions in 2007 was as follows: 3263 comprehensive schools; 449 general upper-secondary schools; 303 vocational upper-secondary schools; 30 polytechnics and 20 universities. Especially for the lower levels of the educational system the goal is to reach the rural areas as well. However, through the declining student numbers this is less feasible in recent years. Since the end of the

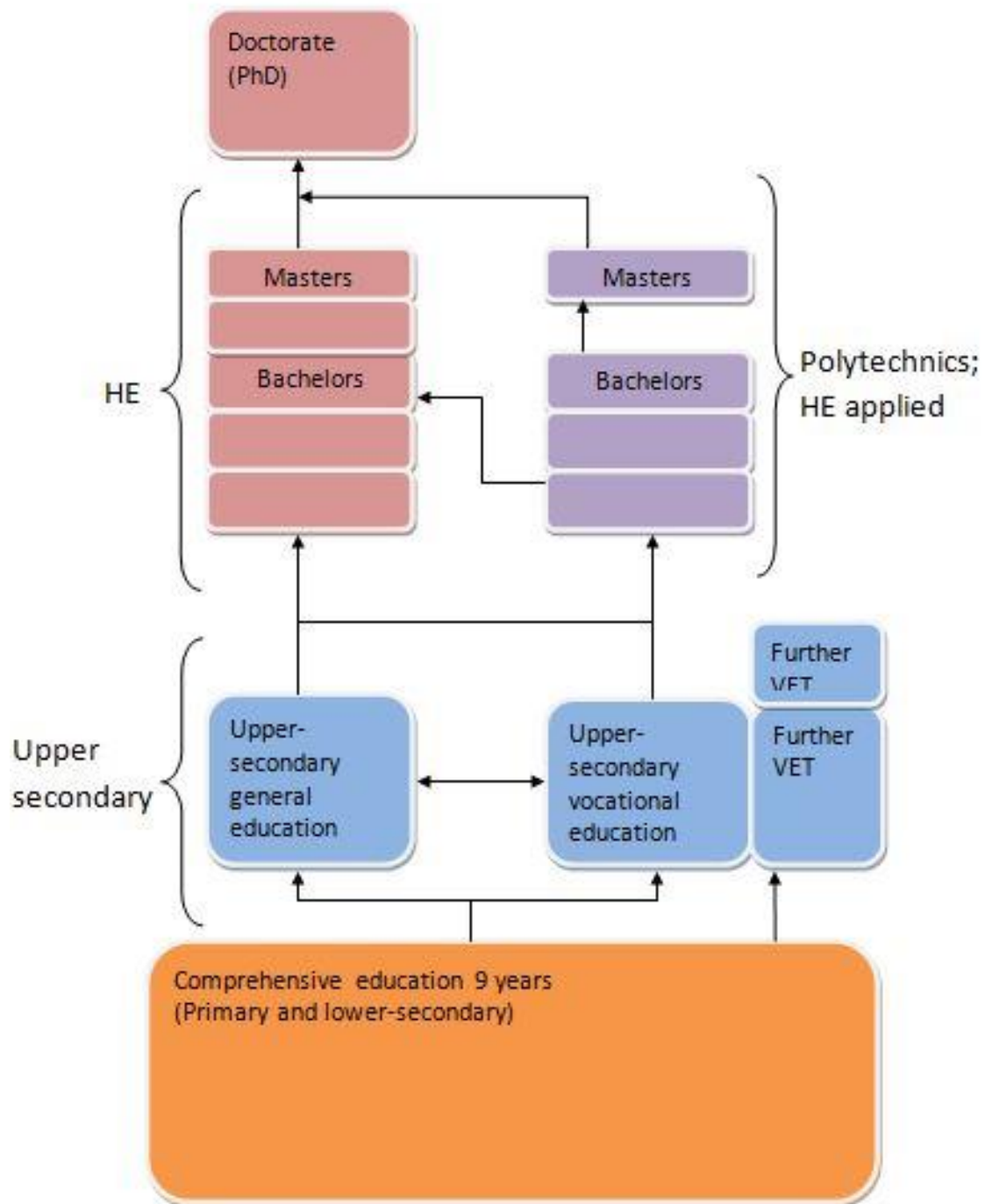
1990s there has been a huge decline in the number of institutions; with regards to the comprehensive basic level this mainly meant school closures whereas at the vocational upper-secondary level school mergers happened (STATISTICS FINLAND, 2009).

As for 17-18 year olds, more than 93% of these age groups were enrolled in education in 2007; for young people between the ages 19 and 24 this percentage was slightly above half of the cohort. A third of the 25-29 year cohort was enrolled in education in 2007 and so was every 7th person of the 30-39 age group (STATISTICS FINLAND, 2009).

Drop-out, or as the official statistics regard it, 'discontinuation' has relatively low levels when compared with other European countries. However, there are differences between the two strands of the upper-secondary education. Whereas in the general strand the proportion of discontinuation was only 4% out of which 2% left education and 2% changed the sector in 2010, in the vocational sector from the 9.1% of pupils discontinuing only 1% changed sectors, 8.1% left school without qualification (STATISTICS FINLAND, 2012a).

Structure of the educational system in Finland

Figure 14-12: Finnish educational system



(Source: MinEdu, Date unknown)

The Finnish education system has a clear structure: after the 9 year long comprehensive education (orange colour on *Figure 14-12*) pupils chose either the general upper-secondary or the vocational upper-secondary education (blue colour on *Figure 14-12*). Both of these give the opportunity to go on to one of the sectors of the equally dual-structured higher education (purple and red colour on *Figure 14-12*). The higher education institutions can be universities or universities of applied sciences (UAS), these latter are sometimes referred to as polytechnics. Compulsory schooling lasts from the child's 7th birthday until the compulsory education curriculum is completed or for 10 years (Eurydice, 2010a). The majority of the schools are run by municipalities; the central government interacts with school providers, not the institutions themselves (STATISTICS FINLAND, 2011b).

The historical background of the current comprehensive educational structure, the folk school system of Finland was founded in 1866; the first rules on compulsory education came into force in 1921 prescribing 6 years of basic education (Eurydice, 2010a). The main reform that gave shape to the current structure of the Finnish educational system took place between 1972 and 1978 with the establishment of the comprehensive system: the 'previous folk school, civic school and lower secondary school were replaced by a nine-year comprehensive school offering general basic education' and the upper secondary level was separated from other school types (Eurydice, 2010a: 54).

According to the Eurydice (2010a) the attempt to form a comprehensive system stirred many political debates; the change was supported by the left and the centre. The main reason for the change was that 'learning and skills potential was wasted in a system which separated pupils into different education paths' (Eurydice, 2010a: 54). The outcomes of the comprehensive system were debated for a long time, which criticism was diluted by the good results of Finnish pupils in OECD's PISA tests causing a positive PISA-shock in Finland (Eurydice, 2010a, Aho et al., 2006). As Aho et al. (2006: 65-66) conclude it,

'The main goal of comprehensive school reform was achieved: all children now had an equal right to good quality basic education and access to upper-secondary studies based on their choice. The integrated and inclusive structure of the education system did not decrease the level of knowledge as was dreaded. (...) Though the financial status of families no longer was a decisive condition for educational success, the importance of family circumstances remained an important factor in determining a child's future educational path.'

By law, Finnish parents can choose a different school for their children than the one assigned to them by the local authority; choice is limited in rural areas and happens more in the southern urban territories. School choice is more common when

transferring to the last phase, the last three years of the comprehensive school. School choice to some extent raises equality issues, as 'choices were more commonly made by the upper- and upper-middle class students' (Antikainen, 2010: 537). Even thus, the between-school differences in terms of results in the PISA research are low compared to other countries (OECD, 2011).

Enrolment to upper-secondary post-compulsory education happens through an integrated system, based on admission criteria set by the institutions. It is possible to continue into higher education from both the general and the vocational upper secondary schools; therefore in contrast to other Germanic systems the vocational strand is not a dead-end qualification (Eurydice, 2010a).

The ratio of adult learners across Finland is well above the OECD average both for non-formal education and job-related non-formal education; liberal adult education accounts for the highest number of adult learners (OECD, 2011, STATISTICS FINLAND, 2011e). A strong adult education sector is a specific Nordic phenomenon that evolved from the 1960s (Rubenson, 2006).

An interesting approach of educational planning is calculating and thus anticipating the quantitative skills and competences for the vocational sector; it 'has been used to forecast vocational training needs for 2001-2010 derived from the forecasts of changes and natural wastage in the total labour force' (Kyrö, 2006: 44).

Finnish secondary education: general and vocational strand

Although there are policy discussions and attempts to bring the two different strands of the upper-secondary level closer, the separation seems to preserve. As for instruction in both sectors,

‘Students determine their own learning plans and pace, choosing courses from the school’s offerings, which can include vocational studies. Because the syllabus is module-based, subjects are divided into courses taught over five to six terms or periods during the year.’ (Aho et al., 2006: 21)

The proportion of students continuing their studies in the general upper-secondary sector was much higher before the vocational educational system was reformed in the 1990s (Eurydice, 2010a). The reform of the vocational education system of both the secondary and the tertiary level caused the sector to gain higher student numbers in the recent 10-15 years (STATISTICS FINLAND, 2011f). Whereas in 2000 the size of the two types of upper-secondary education was virtually the same with around 130,000 students in both, in 2007 the vocational sector had 40,000 more students than the general sector which difference grew to 60,000 by 2011 (Eurydice, 2010a, STATISTICS FINLAND, 2012d). The matriculation exam is not exclusively for the general strand, virtually everyone finishes the upper-secondary studies by taking this test (Eurydice, 2010a).

Prior to the reforms the vocational education consisted of two tracks that were available in the same institutions: one provided school-level studies, varying from six months to two years, the other offered college-level education in three or four years (Aho et al., 2006). The vocational upper-secondary studies are mainly completed in school-based educational programme with strong emphasis on work-based learning; alternatively there are opportunities to complete vocational education in apprenticeship training (Kyrö, 2006).

Finnish tertiary education

The dual structure of the higher education was developed in the 1990s, when former vocational post-secondary institutions were combined into polytechnics or universities of applied sciences, first on a temporary, then on a permanent basis. The sector experienced a huge growth in the last 20 years; in 2011 there were 27 institutions having 148,600 students enrolled (STATISTICS FINLAND, 2012d). The polytechnics give mainly Bachelor's-level certificates; the Master's-level within these institutions can be attended with at least three years of work-experience. The vocational strand of the higher education aims to 'respond to labour market needs' (Eurydice, 2010a: 102), therefore they have close links to working life. Note that there is a difference in the use of the terminology; UAS/polytechnics regard themselves as 'universities of applied sciences', whereas the official statistics, the ministerial accounts and usually universities call them 'polytechnics'.

The university sector of the dual HE system 'concentrate on academic and scientific research and education' (Eurydice, 2010a: 102). In 2011 there were 16 universities with 168,300 students enrolled (STATISTICS FINLAND, 2012d). Although Finland applied the Bologna-process creating the two-cycle higher education from the former 5 year system, almost all students continue their studies from the Bachelor's-level to the Master's-level as their enrolment is guaranteed when entering the university.

A crucial problem of the Finnish higher education enrolment is that there are not enough places, therefore a substantial proportion of the each cohort has to apply two or three times to university; out of the newly matriculated cohort in 2010 only 18% entered university education and 17% entered polytechnic education the same year (STATISTICS FINLAND, 2011f).

Another current policy debate is around completion times: as tertiary education is for free and a substantial proportion, nearly two-thirds of the student work during their studies, the average time taken to finish is much higher than the theoretical length of the courses (STATISTICS FINLAND, 2012b). Only every second student finished their university education after 5.5 years having started in 2005 and only 40% of the polytechnics students who started in 2006 finished their degree in 4.5 years (STATISTICS FINLAND, 2012h).

Appendix 28 The case of Wales – further investigation of ‘space’

Introduction

Wales was included in this research in order to gain information on whether and how the YCS Cohorts 1-11 covering both England and Wales were utilised by policy makers within the Welsh context. However, information finally collected on Wales for the purposes of this research provides much more detail on the Welsh situation, thus a more complete case description is provided here.

As outlined regarding the space and time frame of the English case study in Section 9.2, the geographical coverage of the SLGIS of England is different for all educational levels and sectors and also has changed over time. The Welsh devolution of educational policy matters, more than 12 years ago, brought diverging trends in the three different sectors of educational policy, general education, further education and higher education. Accordingly, diverging trends in the approach of collecting school leavers’ and graduates’ data also are visible.

One of the interesting differences between Wales and England is that in England the diverse provision of SLGIS does not tend towards a more coherent and comprehensive data collection approach for the future, yet in Wales this is profoundly different. The interviews conducted in Wales for this research suggested an increased interest to link different datasets from across all the educational levels and sectors resulting in a system level picture. One of the main underlying differences

between England and Wales beyond the scale of governed institutions is that in Wales the civil servants working within different sectors of the educational system seem to be less disconnected from each other. This, in itself can create the need for a more holistic picture of the educational system. This section details the different provisions of school leavers’ and graduates’ data available in Wales. Then it outlines the current plans for combining different data sources and how the Welsh plans are different from the rest of the UK in this regard.

Leavers’ information within general education

This section details how the interviewees in Wales recall the YCS as well as what information they use instead or alongside it to gain school leavers’ data.

Whereas the YCS was originally designed to include Wales in the data collection, the last of the thirteen cohorts did not gather data on Wales. Three cohorts starting after devolution in 2000, 2002 and 2004 still contained data on England and Wales. The LSYPE, as the name already suggests, was set up as an English cohort study programme. The ministerial contacts in Wales asked about the YCS did not remember using it but they recalled the data collection process itself,

I don’t think we’ve ever made any use of [that] information... (Ministry interview 11, WAL)

I remember supplying school names and things... (...) And I don't know anything about the decision that it should be [?] England only. It probably just came with the devolution. (Ministry interview 11, WAL)

The majority of the England-based and initiated research programmes consist of low numbers of Welsh domiciled respondents unless additional funding was provided for a boosted sample on Wales. Recently, more emphasis has been placed on gaining a sufficient sample size,

(...) a lot of the surveys that were commissioned prior to devolution didn't have decent Welsh samples. Some of them still don't. We do boost samples, as I said the Millennium Cohort study and PISA. (Ministry interview 11, WAL)

As for the separate Welsh information systems, Careers Wales have been collecting destinations data from leavers from general education since the mid-90s. This data collection exercise is financed by the Welsh Government. Careers Wales used to consist of six separate semi-private organisations working on career guidance issues in the different regions of Wales. However, in 2013, they were merged into one organisation, called Career Choices Dewis Gyrfa, under the brand name Careers

Wales (Research institute 13, WAL). The destinations data collection is carried out by the personnel of Careers Wales along the guidelines set by the Welsh Government,

(...) what we collect is determined by the Welsh government, and we do it on their behalf. And they actually tell us what categories they want recorded.

(Research institute 13, WAL)

The categories of the destinations data collections are set by the Welsh Government every year. There are slight changes in how the data are recorded over time which might affect comparability,

The categories of the data collection have been tweaked in line with the government categories of the different sets of people (...). For example we've reported on young people who decided to take a gap year, that was previously included in the combined figure, but we've now actually separated out that.

(Research institute 13, WAL)

The destinations data collections provide information on year 11, 12 and 13 school leavers' and their destinations immediately after leaving. The main categories are: continuing education at further or higher education level, training, employment or not in education, employment or training (NEET). The main reason for this data collection

is to identify those young people who are not in education, training or employment, NEET (Ministry interview 11, WAL; Research institute 13, WAL). The recent changes to Careers Wales's organisational structure and aims are due to the 're-focusing on getting a grip on the NEET cohorts', recently dealing more with the 18-24 age groups rather than the 16-18 age groups (Ministry interview 11, WAL).

The majority of the destinations information was gathered through contacting schools for information on students who have gone back to study, or through gaining data from colleges where the students have registered. The ratio of unknown destinations has declined from 2.4% in 2007 to 1.1% in 2011 (CAREER SWALES, 2012b),

(...) there is quite a lot of tracking going on with individuals. So phone calls are made, and we even have people knocking on doors where they don't get responses. (Research institute 13, WAL)

The process aims to capture students almost immediately after leaving their secondary school,

(...) from the end of August we start work and our staff are actually logging the destinations of all the young people what routes they have taken after leaving

school. So that's pupils in year 11, year 12 and year 13; but schools, not colleges. (Research institute 13, WAL)

The main gap in this sort of data collection is that of college leavers; sub-section 0 details the historical reasons for this.

Careers Wales uses the destinations data to plan their provision and beyond that 'it also helps advisors informing young people about what career choices they might want to make or what routes they're following now' (Research institute 13, WAL). The interview with Careers Wales pointed out that this sort of information leaves plenty of room for interpretation; currently, the data can be used to illustrate the different routes taken, rather than understand young people's motivations for career choices,

What is missing from our survey at the moment is the reason why people may chose and make these decisions. We don't actually have the resources to be able to go out and do a survey which asks people those questions. We are just recording their destinations, we are not recording the [subtlety?] which is why I made that choice, what made me decide to stay in school or go to college, we're not actually asking them that. (...) we are not actually resourced to do a wide enough survey to collect that. (Research institute 13, WAL)

Careers Wales provides destinations information on their website; the analysed data are displayed at national level, currently going back to 2003 (CAREER SWALES, 2012a). The website also contains local authority level breakdown of the data, however, 'that isn't analysed, so that's raw data, so you do have to be little bit careful about making comparisons with our analysed survey' (Research institute 13, WAL).

The data gathered is approved by the ministry's statistical directorate; the ministry receives the full datasets to analyse. One of the ministerial interviews suggested that the Careers Wales data are 'signed off as national statistics' and are used in statistical bulletins and other reports on school leaving (Ministry interview 11, WAL). From the ministry's viewpoint the destinations data collection was explained as follows,

[The Careers Wales data are collected] from schools as part of the remit letter that we give to Careers Wales and we [the ministry] ask them to conduct this survey each October so looking at the destinations of those who were in year 11, year 12 and year 13 in the previous academic year. They do that (...) from the contact they're having with young people. If they haven't got information, then they use a variety of methods to trying to follow up people's... (...) And then they publish that information on LA [local authority] and Wales level and we just get involved with the quality assurance role and the specification of the

survey. One of the issues with it is (...) that you're looking at those in schools, so you're missing the FE sector. (Ministry interview 11, WAL)

Schools also receive the destinations data from Careers Wales; they are sent the institutional level data on spread-sheets without detailed analysis. The schools do not get the data for other schools; they can compare themselves to the national or the local authority average. The interview at Careers Wales indicated, in relation to the institutional utilisation of the data,

(...) I think they [schools] look at how they are performing in terms of retaining people in learning, and they look at where pupils have gone. And obviously [...] whether they stayed at school, gone to college or done something else. They would be using that then to inform their own planning really and budgeting. (Research institute 13, WAL)

A ministerial interview suggested that some of the schools are publishing their destinations data on their websites, but at national level there is no website or publication that would allow comparability. Thus no league tables are created based on the Welsh destinations information.

Further education – data gaps

The main data gap in Wales is the lack of data on college leavers and their labour market outcomes. According to a civil servant, it is not possible to answer the following question through the data available: 'we funded these X thousand learners in 2011-2012, let's see what happened to them 6 months on' (Ministry interview 12, WAL). The individual level data collection filled in by the colleges 'should pick up' destinations information, as there is a field on where students have gone to (Ministry interview 12, WAL; Ministry interview 11, WAL). However, there is a huge amount of data missing. One of the interviews suggested that this is partly due to the high respondent burden,

To be fair to the colleges, the coding book (...) is a massive book. (...) It's understandable that there are some errors in it. It's not the most reliable source of information on destinations I have to tell you. (Ministry interview 12, WAL)

The lack of data beyond the huge amount of missing information, 'it's really to do with the way colleges have to report [to government] and the lack of a standardised system really for colleges' (Research institute 13, WAL).

Higher education – same as England?

Welsh higher education institutions – universities and colleges having higher education remit – similarly to those in other home-countries conduct the DLHE and take part in the DLHE longitudinal. A ministerial interview in Wales pointed out their concerns with regards to the DLHE,

We're not sure about the quality of it. Partly because it's the universities, the way they rely on the collection of the destinations data, I think it's through the survey of students after 6 months. And so, if you go back to students after they've left university, you're relying on them being found (...). But that's all we've got to rely on. And of course the universities use that data themselves, often to promote themselves, when they get good results. (Ministry interview 11, WAL)

Another interview referred to the analysis of the DLHE data by experts of the Welsh Government; the aim would be to answer the following questions: 'what happens to people at the end of their degrees? And what are the returns to learning? What is a degree worth in terms of income? Is there a wage premium?' (Ministry interview 12, WAL). Using the DLHE data to answer these questions is explained as follows,

(...) one of the ways that we looked at that in the past has been to look at the destination of leavers' survey. And you see there is an issue with reliability,

coverage etc., so colleagues are looking at doing some data linking there between the HESA records and records held by the department of work and pensions. I know that there are a lot of practicalities around that at the moment, so it's a work in progress. (...) At the moment we look at destination of leavers of HE, but we also analyse, we look at the Labour Force Survey (...) that's always been one of the big surveys we've looked at, which looks at people's earning and their qualifications. (Ministry interview 12, WAL)

The DLHE data and especially the format HECSU produce were mentioned in the Careers Wales interview,

Obviously we have the annual leavers' survey, 'What do graduates do?' and the information that is available on the Prospects website. Our advisors would look at that quite extensively, in advising young people about higher education courses then and the outcomes. (Interview with Researcher 7)

The main data gap identified in relation to higher education is similar to the one pointed out by the English users of the DLHE data: there is little space to uncover the motivations of young people when choosing educational courses and their career decisions.

Where is Wales heading?

Linking different administrative datasets is a United Kingdom-wide project. The Administrative Data Taskforce is the current initiative that works on the ethics and the practical application of this type of data collection (ESRC, 2012). As stated in a ministerial interview, the different home-countries are planning their own initiatives within this 'taskforce',

It all started with health informatics, so in England, that's very much where they're at. They're not really expanding beyond health informatics. In Scotland there are some pilot projects that are linking things like housing, so health and housing. But basically the Scottish government agenda is to promote and support and coordinate work that academics are doing, whereas in Wales we're a bit more hands on and we're trying to work with our health informatics unit (...). To expand more broadly to cover these other socioeconomic topics. (...) And obviously because there is devolution, people do have their different priorities, so their administrative datasets collect different things because what we're interested in is different. Just automatically the solutions we come up with are going to be slightly different across the UK as they are internationally. (Ministry interview 12, WAL)

The Welsh data available on school leavers and graduates used to be similar to the English data: a) the Careers Wales data resemble the Connexions data on NEETs,

b) a national level picture can be analysed on leaving through the different cohort studies, c) there are issues around the information for further education and d) the HESA DLHE collects the information on graduates from HE. As pointed out earlier, currently, Wales does not have a comprehensive picture on its school leavers and graduates, thus a comparison across the educational system is not possible.

The individual learner numbers are implemented within the Welsh system (WelshGovernment, 2012), as throughout the whole of the United Kingdom. Linking up data from different datasets, like schools, FE and HE due to not having a common identifier can be pursued through 'statistical matching' at the Wales-level (Ministry interview 11, WAL). Through linking up these datasets, attainment data are obtained. As one interview pointed out, the individual learner number is applied only from the age of 14 and beyond; however,

The relevant issue for us has been how we've got slightly different systems for different ages and how do you track individuals through that in terms of having an individual learner number. There are some pressures [from England?] to unify the system, but we're not clear about what the real benefits or value of doing that are. When you have the ability to identify people through linking data anyway. (Ministry interview 11, WAL)

Data linkage allowing the general monitoring of the system is thought to reduce costs,

(...) it is about maximising what we get for our money. So it is reducing... the surveys are so expensive, it's reducing the amount we have to spend on surveys from the public purse. (Ministry interview 12, WAL)

Data linking is an unobtrusive method as it provides information without contacting the individuals,

There is also that [aim of] reducing respondent burden. It's difficult to get people to take part in surveys; we're getting lower and lower response rates. (Ministry interview 12, WAL)

Combining different datasets seems to be desirable for two different levels of policy making; as one of the ministerial interviews indicated,

(...) I just want to link everything under the sun together, because I want to be able to answer any question... (...) I'm about developing an infrastructure that means that if a minister has a question, if a policy colleague has a question,

they have a way of getting at least an indicative estimate to answer that question really quickly. (...) For these guys [from the education department], they will have specific priorities around in what they want to find out about. (...) But for me, I'm pushing to achieve a function that can be rolled out for all our topics and answer basically any question we might have about the people of Wales. (Ministry interview 12, WAL)

Combining data to obtain destinations and labour market outcomes information should be possible in the future,

(...) what we're going to try to achieve in the long run is not just the national pupil database, but [linking up] the further education and higher education and destinations data, and then we can analyse it all which should be really excellent, very useful. (Ministry interview 12, WAL)

Some of the more specific data-needs that emerged throughout the discussions were identifying and gaining data on marginalised groups, such as black and minority ethnic groups or children with learning difficulties, who are 'such a small group that you really need to look at the whole [group] of them' (Ministry interview 12, WAL). Another aim of combining datasets is to identify people at the risk of becoming NEETs. A ministerial interview explained the current project to build a model of the process and the predictive measures of people becoming NEETs,

I'm working on trying to find variables which will predict young people – so from the literature that I've read, attendance, attainment and behaviour are the key variables. (...) And will be linking that with Careers Wales data, which has the destinations of young people, so whether or not they've gone on to college, whether or not they're unemployed or whether they're in web-based learning, or whether they're in employment. So we can historically look at those young people who are now NEETs and look at what variables can predict and how accurate they are. (Ministry interview 12, WAL)

Several issues emerged with regards to linking different administrative datasets identified in the interviews. One of the biggest problems mentioned by the interviewee(s) was the ethics of data linking,

[Whether you can] do it within the information governance framework which is collected. The first question is actually: is it an illegal thing to do? In some cases it requires you to get a permission. And some cases it's possible to get permission. (Ministry interview 12, WAL)

But then in other cases there is a public interest argument you can make, whereas it's practically impossible to seek consent. It's possible to make the argument that in the public interest we can link without permission. (...) There is lots of problems, but I think the added value that it brings is so significant,

that we can't afford to [? not do it], we've got to [make] every effort to overcome every problem that anybody throws in our path really... (Ministry interview 12, WAL)

A second concern, along with ethics, is whether it is in the remit of the data collectors to provide the Welsh Government with the data; as one of the ministerial interview suggests,

I think that [linking up datasets within education] is very doable, because education is a devolved matter for Wales. Trying to then link to information about benefits and taxation, which is obviously the employment side of things – is a great deal more of a challenge. Because these are not devolved issues and DWP and HMRC are... well. DWP have issues around releasing data at all, because they had data losses in the past, they are very-very strict on their information security. HMRC are, like the Welsh Government a creature of statute, which means that they're not able to release data, because it's not within they're statute to do so. (Ministry interview 12, WAL)

A third major issue is the purpose of the actual data collection: the data are not collected for the specific purpose the civil servants are aiming to use it for. The majority of the school administrative data are collected for funding purposes,

(...) is actually set up for funding purposes, so we do have a little bit of an issue here that it was set up for one thing and we're trying to use it for lots of other things. From as researchers, one of the things we tried to use it for is as a sampling frame if we wanted to do surveys; which it totally wasn't set up to do. So we're always very critical of it that it doesn't give us what we want but we're often asking it to do things which it was never envisaged (...). (Ministry interview 12, WAL)

As the section on Wales indicates, devolution and the last 12 years have resulted in several changes in terms of the data collection; as one of the ministerial interviewee(s) pointed out, the main issues relating to Wales are,

(...) how things have changed or not changed since [devolution] and how that divergence in terms of policy is more pronounced having a different political party leading in White Hall comparing with England. But also the fact that Wales isn't an isolated country, it's intimately connected with what happens in the country next door to us. (Ministry interview 11, WAL)

The future of data linking is an interesting procedure to be investigated at a later date, when it is in place and data becomes available.

Appendix 29 Comparing SLGIS questionnaires regarding their main topic

Table 14-14: Questionnaire topics of SLGIS analysed in Section 9.5

Questionnaires analysed Topics	NL WO	NL HBO	UK DLHE	UK DLHE long.	UK FE	UK FE LD	UK YCS	UK LSYPE	FI SF	FI AN dest.	FI AN f-u
Demography	11	6	2	0	0	0	0	4	0	0	2
Prior education	1	1	0	0	0	2	0	1	0	0	0
Education left/ graduated from	6	8	2	0	1	0	10	38	1	0	0
Education quality	12	13	3	5	0	6	1	9	0	7	2
Further education and training, higher education	8	6	6	22	0	7	32	67	0	2	2
Labour market situation	22	35	17	27	1	23	19	78	1	17	43
Additional topics	0	6	6	7	0	2	8	190	0	1	1
SUM	60	75	36	61	2	40	70	387	2	27	50

Table 14-15: Questionnaires of SLGIS analysed in Section 9.5

Questionnaires analysed	NL WO	NL HBO	UK DLHE	UK DLHE long.	UK FE	UK FE LD	UK YCS	UK LSYPE	FI SF	FI AN dest.	FI AN f-u
Year the questionnaire was administered in	2011	2011	2012	2012	(2012)	2010	2005	2010	(2012)	2011	2012
Cohort				4			11	1			
Sweep				1			4	7			