The determinates of pay inequality between men and women: Evidence from Saudi Arabia

by

Hind Abdulkarim Alsudays

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Abstract

This thesis investigates the reasons behind pay inequality between men and women in Saudi Arabia (SA), and the extent to which gender plays a role in explaining women/men pay. The main purpose is to give a clear explanation of why women in SA are paid less than men across the private and public sectors. This study differs in a range of ways from past gender pay gap studies in their investigation of the factors that may contribute to pay inequalities between men and women, specifically in Saudi Arabia (SA). Many prior studies employ survey analysis as a single research methodology, whereas this research does differently as its innovative use of mixed methods to provides a comprehensive framework that explains the existing pay gap differences in SA.

This research consists of two phases to analyze gender pay inequality in the private and public sectors in SA. The first is the quantitative phase, which entailed the collection and analysis of secondary and primary data. The secondary data were collected from: (i) General Organization for Social Insurance (GOSI) in SA, and (ii) Labor Force Survey (LFS) in the United Kingdom. The primary quantitative data were collected through questionnaires distributed to employees in a range of large, medium, and small Saudi organisations in both private and public sectors. The second phase is qualitative analysis, where semi-structured interviews were conducted with 13 male and female Human Resources (HR) managers across private and public sectors.

The results of the thesis indicate that the adjusted gender pay gap, obtained when controlling for the usual socio-economic characteristics, is close to 27%, and the unadjusted gender pay gap, calculated as the percentage difference in male and female median wages, is 45%. Gender, age, length of service with current employer, working in

the public sector, working longer hours per day, education, full-time positions, professional qualifications, nationality, and working in managerial positions all play particularly important roles in determining employees' pay. Furthermore, the findings of the interviews analysis show that the contextual factors, such as patriarchal culture and Islamic religion policies are the key factors, which have a significant role in creating the gender pay inequality within Saudi organisations. Most significantly, the results refer that there is discrimination against women in terms of their access into the labour market, managerial positions, and the segregation and concentration of women in low-paying, career-limiting positions and industries.

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Chapter 1: Introduction

1.1 Background: Gender pay inequality – Progress and continuing disparities

The gender pay gap has always been a topic of interest, where women continue to earn less than males. The gender pay gap refers as a measurable indicator of inequality between gender, which needs to be examined in the context of total gender inequality. The gender pay gap is one of the most apparent examples of structural gender discrimination resulting from labour force horizontal and vertical segmentation.

Gender pay inequality is a key measure of a society's egalitarian disposition. A significant amount of empirical research indicates that there is a pay disparity between male and female employees in many developed and developing countries. However, the entire pay inequality across economies cannot be attributed to one gender's dominance over the other. Gender pay inequality can be explained by economic rationales, or it could be based on unexplained or discriminatory societal biases by one gender over the other. Notwithstanding, gender wage discrimination, in addition to being a serious social justice issue within a society, can have a detrimental influence on the efficient and effective use of a fundamental input of production, namely human resources. Recently, under the Saudi Vision 2030, the new economic policy of Saudi Arabia (SA) is to effectively leverage the abundant human resources for rapid economic growth. Thus, using human resources efficiently/effectively and distributing the resulting gains equally to all participants would result in improved economic growth for the country and improvements in social outcomes for many.

This is happening in a context. Saudi Arabia (SA), led by Salman bin Abdulaziz, has implemented many reforms designed to improve women's rights. These include allowing tourist visas to women over the age of 25, granting women the right to drive, and allowing women to drive for ride hailing apps such as Uber and Careem. Further, Saudi Arabia (SA) is a member of the International Labour Organization (ILO) and the Convention on the Elimination of all Forms of Discrimination against Women (CEDAW), and therefore, has equal pay as part of its regulatory framework. The Saudi Ministry of Labour and Social Development issued Ministerial Resolution No. (2370/1) dated 28 Aug 2010 which states it will "prevent discrimination in wages between male and female workers from work of equal value".

According to the World bank group, (2020) Saudi Arabia (SA) is one of the economies that has made the most progress toward gender equality since 2017. The report related this improvement to increased freedom of movement and economic possibilities for women as a consequence of the changes mentioned above. Other statistics are striking. The proportion of women graduates from university education, 58.13 %, far exceeds that of men, at 36.29 % (World Economic Forum, 2022). Female labor force participation in Saudi Arabia (SA) has increased throughout the years, reaching 33.7 % (Abueish,2023). Moreover, women accounted for 6.8 % of legislators, senior officials, and managers in 2021 (World Economic Forum, 2021), a significant rise from 5.8 % in 2018 (World Economic Forum, 2018). Women also constitute about 20% of the Shura Council, the Kingdom's Consultative council (Powell, 2015). At the Misk Global Forum in 2019, Saudi energy minister Prince Abdul Aziz bin Salman stated that Crown Prince Mohammed bin Salman is offering equal opportunities to all Saudis. "We know that our women now are

enabled, they have an education program," he said. "We have equal pay for both men and women." (SINGH, 2019).

However, despite these reforms and recent laws passed, a substantial gender pay gap exists. Among Saudi families registered in the Citizen's Account Program[1], only 5% are financially supported by women. There are between 120 and 160 poor women for every 100 poor men in the Kingdom. Saudi women also have lower salaries compared to men in other Gulf countries (Toumi, 2018). More precisely in Saudi Arabia (SA), Saudi women working in the private sector received 48% less than men in 2021, where the average pay of men working in the private sector 8,486 riyals, while the average pay of Saudi women is 5,186 riyals (Sajady, 2021).This puts the Kingdom in 127th place out of 146 countries in terms of gender pay gap worldwide (World Economic Forum, 2022). There is clearly still more work that must be done where women continue to be a minority in the labor force as compared to men, where men account for 66.3 % of Saudi labor force participation.

1.2 Gender pay gap and unequal pay

Differences (disparity) in pay between men and women has attracted much attention from both academics and policy makers around the world (Altonji and Blank, 1999). According to Department for International Trade, (2017), whilst the terms 'gender pay gap' and 'equal pay' deal with the difference in wage females obtain in the workplace, they focus on two different issues:

[1] A national program created to protect Saudi households from expected direct and indirect impacts of the various economic reforms. The support is offered through direct cash transfers to beneficiaries.

(i) Equal pay is defined as the **'legal' requirement** for males and females to be paid a similar amount for implementing equal work. The nature of work is, therefore, classified as referring to equivalent work or work of equal value. This concept not only addresses wage, but it includes all contractual terms and conditions of employment, such as holiday entitlement, bonuses, pay and reward schemes, pension payments and other benefits.

(ii) The gender pay gap measures the variance between the gross hourly incomes for all males and the gross hourly incomes for all females. It is usually stated as a percentage of men's incomes.

Equal pay, therefore, deals with the pay differences between men and women who carry out the same jobs, for similar work of equal value. Most importantly, *unequal* pay is considered an illegal act. The gender pay gap, on the other hand, shows the difference between what men typically earn in an organisation compared to what women earn, *irrespective of their role or seniority*. For instance, an organisation that predominantly has men at senior levels and women in junior roles might have a gender pay gap, yet there may be no issues of unequal pay. In contrast to equal pay, the gender pay gap may be more of a reflection of workforce profile than about unequal rewards for men and women doing the same job. In that sense, gender pay gap is more likely related to the work women tend to do and the position they tend to occupy in the company hierarchy. In this thesis, gender pay gap refers to a measurable indicator of inequality between gender which needs to be examined in the context of total gender inequality. Throughout this research treats the gender pay gap as one of the most apparent examples of structural

gender discrimination resulting from labour force horizontal and vertical segmentation (The International Labour Organization, 2019).

It is, however, worth mentioning that pay inequalities are not necessarily attributable to discrimination against women. Prior studies (Akhmedjonov, 2012; Bastos, Leao and Passos, 2004; Blinder, 1973; Chevalier, 2007; Deitrick and Briem, 2009; Goldin and Polachek, 1987; Oaxaca, 1973; Santos and Varejao, 2007; Sugihashi, 2003) on wage differentials between men and women decompose the observed gender wage gap into a 'non-discriminatory' part and a "discriminatory" part. The former is attributable to differences in productivity-enhancing characteristics between men and women. The latter is an attributable to the way men and women are rewarded for these characteristics. This is a distinction that this thesis also seeks to explore.

In addition, it would be misleading to examine pay inequalities between men and women solely from a gender perspective without considering the role of other pay-generating characteristics such as work experience, job-related skills, or educational background. As Boll et al., (2016) put it, "econometric studies attempt to isolate the gender effect, usually by controlling for a large set of related variables. Despite the considerable amount of empirical work, no clear picture on direction and significance of this effect has yet emerged" (p. 26). This highlights the importance of considering the gender effect as well as the role other pay-generating characteristics when examining pay inequalities between men and women.

1.3 Calculation of the gender pay gap

The gender pay gap is calculated either on the mean hourly rate or the median hourly rate for full-time employees (Equality and Human Right Commission, 2022):

- The **mean gender pay gap** is the difference between the average (mean) hourly pay of full-pay relevant female employees, and the average (mean) hourly pay of full-pay relevant male employees, expressed as a percentage. The mean gender pay gap is calculated by (i) adding up the hourly pay of all full-pay relevant male (female) employees and dividing this figure by the total number of those male (female) employees to give the mean male (female) hourly pay rate; (ii) deducting the mean female hourly pay rate from the mean male hourly pay rate, then (iii) dividing the result by the mean male hourly pay rate, and (iv) multiplying the resulting figure by 100.
- The **median gender pay gap** is the difference between the median hourly pay of full-pay relevant female employees, and the median hourly pay of full-pay relevant male employees, expressed as a percentage. The median gender pay gap is calculated by identifying the hourly rate of pay at the midpoint of all full-pay relevant male (female) employees to give the median male hourly pay rate to give the median male (female) hourly pay rate and then calculating the percentage as in the example above.

1.4 The significance of the gender pay gap

The gender pay gap is chosen as a particularly interesting area of research for the following reasons. Firstly, evidence suggests that it has a major influence on women's

choice of employer. To illustrate, a survey by the Equality and Human Rights Commission in England discovered that 61% of women who apply for jobs take into consideration an organisation's gender pay gap (Equality and Human Rights Commission, 2018). In addition, 58% of women are less likely to encourage other women to work with their current employer if a significant gender pay gap issue exists in their organization. This survey also showed that the majority of women reported that a gender pay gap can have negative effects on them in terms of motivation in their work and commitment to their employer (Equality and Human Rights Commission, 2018). In essence, the reputation of organizations and the motivation of employees are significantly affected by the gender pay gap.

Secondly, under the regulations of the Equality and Human Rights Commission in the United Kingdom, employers need to publish their gender pay gap by analysing a set of data (mean gender pay gap in hourly pay, median gender pay gap in hourly pay, mean bonus gender pay gap, median bonus gender pay gap, proportion of males and females receiving a bonus payment, and proportion of males and females in each pay quartile).The results of gender pay gap analysis are likely to cause an issue for employers if it is higher than their competitors. They are at risk of losing out on the best talent and could suffer reputational damage if they do not take any actions to reduce it. This could put the company at a competitive disadvantage because any gender pay gap can be interpreted as a sign of problems within the firm (Equality and Human Rights Commission, 2018). This makes gender pay gaps a significant managerial issue, in addition to an individual consideration.

Thirdly, the gender pay gap is considered a fundamental issue for society due to its significant impact on women's well-being. It is crucial to recognise that there has not always been a strong correlation between wages and well-being. In fact, before the women's liberation movements of the 1970s brought the issue of women's wages to the fore, the prevalent view was that a gender pay gap, even a sizable one, was not much source of great concern (Binard, 2017). It was generally assumed that most adult women were married and adequately supported by their husbands. If this view was ever accurate, it is clearly much less so today. Most married couples are both working and earning, and both contribute significantly to the family economy. Indeed, the number of female-headed families or families fully dependent on the female head's wages or whatever other sources of income the family may have been growing rapidly (Binard, 2017).

1.5 Scope of research and research gaps addressed

In this context of change, progress, and continuing inequality, this thesis investigates issues surrounding pay inequalities between men and women in Saudi Arabia (SA). This is, as this thesis clearly shows, a uniquely interesting cultural context for this kind of research. This research also contributes to its innovative use of mixed methods. Many prior studies in this area employ only a single research methodology, usually survey analysis, whereas this research does differently, as explained below.

This thesis shows the value of two distinct phases of data collection and analysis, which occur sequentially: phase one is the quantitative phase, and the other phase presents qualitative data. The use of linked quantitative and qualitative analyses enables us to analyze the pay gap between men and women employees in all sectors, provides deeper

insights into the reasons behind pay inequalities between men and women in SA, and suggests how managers view and experience these issues.

For the quantitative analysis, this phase entailed the collection and analysis of secondary and primary data. The secondary data were collected from: (i) General Organization for Social Insurance (GOSI) in SA, and (ii) Labor Force Survey (LFS) in the United Kingdom. The primary quantitative data were collected through questionnaires distributed to Saudi employees in the private and public sectors. This phase employed (i) the Ordinary Least Squares (OLS) regression, (ii) Oaxaca-Blinder decomposition, and (iii) Recentered Influence Function (RIF) regression decomposition method. Through the use of the quantitative phase the researcher is able to evaluate the factors that influence gender pay inequalities in SA.

The researcher has also undertaken semi-structured interviews with Saudi HR managers, which is the second phase of research. This is important to gain an in-depth understanding of the managerial motivations and explanations that surround gender pay inequalities issue in Saudi companies. By conducting interviews with key decision makers, this allowed the researcher to confirm, corroborate, or reinterpret the findings of quantitative analysis, thereby improving the accuracy of the results. By combining quantitative and qualitative data, the findings of this study created a layered analysis providing statistical information as a first step, then delving deeper into understandings of the phenomenon in second step.

It is critical to clarify how the research goes beyond earlier research and what research gaps it attempts to fill. The first empirical gap identified is that there has been very few previous genders pay gap studies published that employed interviews as a method to

examine HR managers' experiences with, and explanations for, the gender pay gap. Numerous studies, for example (see Ahmed and McGillivray, 2015; Chzhen and Mumford, 2011; Costa Dias et al., 2020; Grimshaw, 2000), have presented quantitative analysis to investigate the issue of the gender pay gap, without taking into account different HR managers' perspectives on the factors that influence the existence of the gender pay gap. In addition, these studies focused on certain sectors and have not extended to other sectors, which may have a greater or lesser gender pay gap. They therefore provide a less than comprehensive picture across multiple sectors of the reasons of why women are paid less than men. For instance, Jamali et al. (2008) used interviews with quantitative analysis to examine the gender pay gap in Lebanon, but this research has made interviews with HR mangers from specific sectors, such as banking and healthcare. Similarly, Healy and Ahamed (2019) also combined quantitative analysis with interviews to examine the gender pay gap in the UK. However, the researchers concentrated solely on British financial services without taking into consideration other sectors. Therefore, combining a quantitative data with interviews from a range of sectors is necessary to provide a comprehensive and deeper understanding of the phenomenon of the gender pay gap.

The second research gap identified is that there are very few prior studies published which examine the gender pay gap, or gender pay inequality matters, in Saudi Arabia (SA), and those which are published are limited in their scope. Using Saudi Arabia (SA) as the research base for this thesis addresses a gap in the literature by examining the country in regard to the gender pay gap issue. Of course, it would be inappropriate to choose Saudi Arabia (SA) as the study site solely on the basis of its under-researched status.

The main reason for choosing Saudi Arabia (SA)for this study is because, while there is a temptation to have a one-dimensional view[2] of Saudi Arabia (SA), as Lawson (2011) observes, “(a)mong the Arab states of the Middle East and North Africa, Saudi Arabia (SA)is at once paradigmatic and exceptional” (p. 737). Saudi Arabia (SA) is the birthplace of Islam, as well as the location of Mecca, Islam's holiest city. In addition, it is considered one of the most conservative and orthodox Muslim countries in the world (see, for example, Lobo and Elaluf-Calderwood, 2012).

The kingdom was founded in 1932 by King Abdelaziz Al-Saud, who merged four formerly independent provinces with tribal roots; hence its history as a unified Kingdom is relatively new. Oil was found in 1938, and the economy still depends on oil revenues. At the beginning of 2021, Saudi Arabia (SA) was the third biggest oil-producing country in the world, behind Russia and the United States (World Population Review, 2021), and it had the world's 19th largest economy by GDP (World Population Review, 2021). However, despite having a substantial economy and being a member of the G20, Saudi Arabia (SA) is classed as a developing nation by the International Monetary Fund (IMF), because of its lower economic performance.. Saudi Arabia (SA) is strategically important to the United States and other Western nations in terms of their Middle East policy (Ayoob, 2021). As a result, Saudi Arabia (SA) has enormous importance and influence in the Gulf area, the Middle East, and beyond. All of this says that Saudi Arabia (SA) deserves to be explored.

[2] Lawson portrays this one-dimensional view as follows: “The kingdom epitomizes what every schoolchild knows about this part of the world—limitless deserts, camel-herding nomads, oil wells, jet-setting princes, reactionary religious authorities, severely restricted gender relations—all in one neat package.” (Lawson, 2011, p. 737).

Consistent with the second research gap, the third gap, as Si, Nadolnyak and Hartarska, (2021) observe, research on the gender pay gap in developing countries more generally is extremely limited and uncommon. This rationale therefore speaks a call for further research into developing countries, which is consistent with the purpose of this thesis, as it provides a comprehensive and in-depth analysis of the gender pay gap issue in Saudi private and public companies.

Fourth, little prior literature considers contextual factors on the gender pay gap in their studies. For example, as Jamali et al. (2008) show in relation to their analysis of the gender pay gap in Lebanon, they make no reference to the role of contextual factors, such as a patriarchal culture or the Islamic religion. This means that rich contextual information is missing. As mentioned above, there are aspects unique to Saudi Arabia (SA) that must be integrated into this research to adequately address the research issues given below. Moreover, this study is not trying to repeat previous research in the 'Western literature'. The employment of the contextual factors of gender pay gap is one way in which it differs. To address these research gaps the thesis has the aims and objectives described in the next section.

1.6 Research aims and objectives

This study therefore differs in a range of ways from past gender pay gap studies in their investigation of the factors that may contribute to pay inequalities between men and women, specifically in SA. The study's major goal is to give a clear explanation of why women in SA are paid less than men across the private and public sectors. The key objectives of the study are:

- To determine which socioeconomic characteristics appear to have the most influence on women's pay.
- To examine how gender might explain the pay inequality between men and women employees.
- To identify the contextual factors relevant to Saudi Arabia (SA) which influence women's pay.

1.7 Research questions

The following research questions are investigated:

- What are the factors affecting the pay of women employees in the private and public sectors in SA?
- To what extent does gender explain the pay inequality between women employees' pay?
- What contextual factors influence pay inequality?

1.8 Structure of the thesis

This thesis contains eight chapters, with chapters five, six, and seven containing the empirical results. This is chapter 1; it is followed by:

Chapter 2 provides an overview of the studies of the determinants of gender pay gap. It begins with focusing on gender pay gap studies in developed countries. Then it discusses the studies of gender pay gap in developing countries. These studies investigate the pay gap between women and men, by estimating monetary returns to factors such as age, education, schooling quality, work experience, and occupation.

Chapter 3 then proceeds to explain why this research on gender pay inequality is needed and why it is crucial in the Saudi context. Saudi Arabia (SA) is an important global context that has not received much attention in our field. In doing so, it first presents an overview of the Saudi political and economic context. It then discusses the Saudi labour market context, including discussions of oil, law, and the beginning of women's employment. Finally, this chapter considers the employment of women today, which includes three aspects: (i) Saudi culture, (ii) religion, and (iii) education.

Chapter 4 summarizes the research methods used in the study. The research strategy and methodology are presented, as well as the rationale for using quantitative and qualitative methodologies. The chapter discusses and defends the use of surveys and semi-structured interviews. The data collecting and analysis processes are then outlined. The research design's limitations are noted. Finally, the research's reliability and validity are reviewed before concluding with a discussion of ethics, which includes ethical risks and approvals.

Chapter 5 is the first empirical chapter which sets out the findings and analyses the gender pay gap of the sample Saudi companies in the private sector. It attempts to provide an answer to the first research question of this study on the determinants of the pay gap between men and women in the Saudi private sector labour market. In order to give these Saudi GPG statistics some perspective in terms of international comparison, this chapter conducts a similar analysis using the UK Labour Force Survey (LFS) for the same period of 2018, with additional controls for socio-economic and demographic characteristics of employees. This comparison emphasises the importance of such characteristics when modelling wage formation. The LFS analysis show that many

employee characteristics are important in determining UK wages, and this may be the case for SA too.

Chapter 6 continues to further investigate the first research question for the thesis of Chapter 5. It discusses the relative importance of a wide variety of socio-economic factors that can affect the gender pay gap in the Saudi private and public sectors, using self-report questionnaires distributed across Saudi private and public companies of all sizes. This chapter considers various socio-economic factors that may influence the level of earnings for Saudi employees in SA such as, education, tenure, number of children, training, or marital status.

Chapter 7 builds on the insights developed in chapter six on the socio-economic factors that influence the gender pay gap in the Saudi private and public sectors. This chapter focuses on the description and interpretation of the results of interviews with HR managers in both sectors. It contributes to the achievement of the study's primary aim by exploring the causes of the Saudi gender pay gap and relevant effect changes by adding HR managers' viewpoints to the examination of the Saudi gender pay gap.

Chapter 8 draws together the essential elements of each chapter, summarizes the investigation's results, and examines the main implications that can be drawn from the thesis. The study's contributions are highlighted once more. The research results' implications are identified. The limitations of the study are discussed, as well as how these limitations were addressed. Finally, this chapter provides recommendations for future research.

2 Chapter 2: Context of the study

2.1 Introduction:

Given that this study was conducted in the unique context of Saudi Arabia (SA), it is important to explain why this research on gender pay inequality is needed and why it is crucial in the Saudi context. Saudi Arabia (SA) is a context that has not received much attention in management research. However, it is one that is intriguing since study in unfamiliar contexts may reveal institutional aspects of practice that do not exist or that operate differently from those in more common Western contexts, where Saudi Arabia (SA) has a significantly different culture and political structure.

Thus, this chapter begins with an overview of the Saudi political and economic context in section 2.2, moving on to the Saudi labour market context in section 2.3. This is followed by a discussion of the factors affecting female employment in section 2.4, in order to further understand the obstacles that women face. Lastly, section 2.5 concludes the chapter.

2.2 Overview of Saudi Arabia and the introduction of the Saudi Vision

The Kingdom of Saudi Arabia (SA) was created in 1932 by Abdulaziz bin Abd al-Rahman Al Saud. According to the Kingdom's Basic Law, the country's monarchy is male primogeniture hereditary, with succession passing to his male descendants. In recent years, Abdulaziz bin Abd al-Rahman Al Saud’s son, King Abdullah bin Abdulaziz Al Saud, was appointed regent in 1996 during the period of King Fahad’s illness. After the death

of King Fahad, King Abdullah headed the country officially from 2005 until his death in 2015 (Humphreys, 1979). The brother of King Abdullah, Salman bin Abdulaziz Al Saud, was crowned King of Saudi Arabia (SA) in 2015, and Mohammad bin Salman Al-Saud as son of King Salman became the Crown Prince. In Saudi Arabia (SA), the King holds several positions: Prime Minister, head of state, head of government, and commander in chief of the military (Humphreys, 1979).

In Saudi Arabia (SA), legislation is enacted either by royal decree or by ministerial decree. According to Metz, (1993), "all legislation was enacted either by royal decree or by ministerial decree, which had to be sanctioned by the king" (p.194). Sharia laws[3] are the Basic Law of Governance which come from the interpretation of Sharia that was established by royal decree in 1992. The latter demonstrated the government's rights and responsibilities. As Saudi Arabia (SA) is an Islamic state, the Holy Quran has been adopted as the constitution of the country (Abeng, 1997;Alfalih, 2016).

In relation to the economy of Saudi Arabia (SA), the economy developed significantly after the discovery of oil in Jabal Dhahran in 1933. In 1948, centred on the Eastern province of Al-Hasa, the Ghawar oil fields were discovered. They are considered the biggest oil fields in the world (Ulrichsen, 2011). After that, the Arabian American Oil Company (Aramco) was created to benefit from the resources found at Ghawar and other places in the country (Jones, 2010). According to Ayoob (2021), Saudi Arabia (SA) owns around 20% of the world's oil reserves, considered as the greatest oil production capacity in the world. This has allowed Saudi Arabia (SA) to become a member of the G20 group.

[3] Sharia law directs all aspects related to Muslim life, such as family and religious commitments, financial processes, and daily routines.

While the country’s economy has been based on oil for a century, Saudi Arabia (SA) has also been working on developing a range of other industrial sectors to avoid full dependence on oil stocks. The government has invested some profits from the country’s oil output to support the expansion of other industries and to provide higher quality of life for its citizens (Alfalih, 2016). As Kéchichian and Joseph A. Kéchichian., (2013) states that since the Kingdom accession to the World Trade Organisation (WTO) in 2005, it has been pressing ahead with some of economic reforms. For example, opening its doors to private sector investment, and commencing construction on a series of economic megacities that will reshape the Gulf region's landscape. As part of this, the Saudi government has begun to emphasise the development of the workforce as a top priority.

According to the Saudi New Vision, “We will continue to develop their talents, invest in their productive capabilities and enable them to strengthen their future and contribute to the development of our society and economy” (Saudi Vision 2030, 2016,p.37). Essentially, for this thesis, the Saudi government has recently begun to pay particular attention to increasing the participation of women in the labour market. This could have a role in increasing the country's economy; again, according to the Saudi Vision 2030, “Saudi women are yet another great asset, adding that more than 50 percent of its university graduates are women” (Saudi Vision 2030,2016, p.37). These are strong and unusual statement: “We will continue to develop their [women’s] talents, invest in their productive capabilities and enable them to strengthen their future and contribute to the development of our society and economy” (Saudi Vision 2030,2016, p.37).

2.2.1 Women's status in Saudi Arabia: Reform and development

There is of course a history to the New Saudi Vision. During King Abdullah's reign (2005-2015), Saudi Arabia (SA) began to go through notable reforms, particularly in terms of women's status. For example, in 2009, women occupied the position of the deputy minister of education and vice-chancellor for Princess Noura bint Abdul Rahman University (Alfalih 2016). King Abdullah also introduced new laws that support women and provide them with more rights. These rights enabled women to stand for election in the Chamber of Commerce and the engineers' and journalists' unions, and to occupy new positions in passport administration, civil defence, the state human rights commission and the Ministry of Trade and Industry. Interestingly, on the 25th of September 2012, King Abdullah issued a command that enabled Saudi women to participate in the Consultative Council (Majlis Ashura) and to be nominated in municipal elections. This decree was one of a series of transformational royal decisions made by King Abdullah (Alfalih, 2016).

The Saudi government launched the Saudization program in order to increase opportunities for Saudi nationals in both the public and private sectors (Koyame-Marsh, 2016). This program was launched in the 1990s to combat high levels of unemployment among Saudi citizens (Koyame-Marsh, 2016). However, no specific policy for Saudi female employment was implemented at the time.

In April 2016, Saudi Crown Prince Mohammed bin Salman unveiled the ambitious Saudi Vision 2030, which aims to transform Saudi Arabia into a knowledge-based economy. One key goal of this vision is to increase women's economic participation by increasing their workforce participation rate from 22% to 30% (Vision 2030, 2019). Many government initiatives involving the 'feminization' of specific jobs and sectors (that is, jobs restricted

specifically for women) and mandatory segregation (where employers are required to provide segregated physical spaces for their female employees in accordance with Islamic principles of modesty) were implemented (Naseem and Dhruva, 2017). Government initiatives have increased the total number of working women, particularly in private mixed-gender organizations (a 152% increase in women working in the private sector, for example) (General Authority for Statistics Kingdom of Saudi Arabia, 2018).

Despite the government's efforts to improve women's status and minimise gender pay gap, conservative segments seek to confine women to the domestic sphere as representatives of family/tribal honor (Syed et al., 2018), and see gender equality initiatives as endangering the family unit and traditional Islamic identity.

Nonetheless, institutionalised gender inequalities persist and influence gender regimes within organizations (Acker, 2006), resulting in context-specific forms of gender-specific schemata for employee sorting, allocation, and valuation. Saudi women, for example, work primarily in the segregated public sector (primarily education and social care), which is considered 'gender appropriate' (Syed et al., 2018). Furthermore, patriarchal attitudes impede women's career advancement (Hennekam et al., 2017), where male supervisors' traditional attitudes are seen to limit women's work autonomy and ability to fulfill job responsibilities (Elamin and Omair, 2010). As a result, the government's initiatives have had only a slight effect on the gender pay gap over the last five years, indicating the dominance of patriarchal attitudes toward women in Saudi society. Those areas are discussed in greater detail in Chapters 6 and 7.

Furthermore, under King Salman's leadership following the death of King Abdullah, the Saudi government continued to propose significant political, social, and economic reforms, with women's rights reforms at the forefront. For instance, King Salman introduced a royal decree on September 26th, 2017, which enables Saudi women to have a driving license (Hubbardm., 2017). Similarly, in 2017, the Kingdom passed an order allowing women to receive government services without the agreement of a male guardian. The Women in the Workplace program was launched in January 2019, requiring equal pay for women among other things (Rizvi and Hussain, 2021). In the same vein, on February 23rd, 2019, King Salman selected Princess Reema Bint Bandar Al Saud as the first female ambassador to the United States (Griffiths, 2019). In keeping with these developments, the government approved three legislations relevant to the male guardianship system in July 2019. The first declares that all residents are entitled to labor without regard to gender, disability, or age. Employers were no longer allowed to demand the consent of a male guardian before hiring a woman (Human Rights Watch., 2019). Another law granted women the ability to register their child's birth at the civil status office, as well as to notify the office of death, marriage, and divorce (Human Rights Watch, 2019). The third legislation concerned travel, allowing women over the age of 21 to get passports without the consent of their male guardian; later, in mid-August, women were allowed to travel without the permission of their guardian (Human Rights Watch, 2019). More recently, in February 2020, the Kingdom introduced a female football league, and in July 2020, the court declared that Saudi women living alone should not be penalized (Sports for All., 2020).

However, despite all of Saudi Arabia's recent reforms focusing on women's rights and female labor-force participation, gender wage disparities have received less attention than other issues. As a result, the problem does not appear to be adequately discussed. Saudi Arabia (SA) is rated 127th in the World Economic Forum's Worldwide Gender Gap Report 2022, from 146 countries, recording a rating of around 68% (i.e. women can expect to be paid only 68% of what men are paid.

2.3 The Labour market context

2.3.1 Oil and Saudi labour market

The discovery and exploitation of oil in the 1930s has had a wide-ranging impact on the Kingdom of Saudi Arabia. When compared to the pre-oil era, Saudi Arabia's economy grew at one of the quickest rates in the world in the post-oil era (Alkhathlan, 2013). However, the discovery of oil has had a significant negative impact on the Saudi labor market. According to an analysis of Saudi Arabia’s labour market by Pakistan’s Trade Development Authority, Saudi Arabia (SA) has encountered a lack of skills required by the labour market since it began to generate and export oil in the 1930s. The reason for poor skills appears to be caused by low investment and development of education and training (Trade Development Authority of Pakistan., 2013). Furthermore, the 1970s the expansion of education was unrelated to the labour market. Saudi women were segregated from men which seems to have caused them to be excluded from both education and the labour market (Ibid). As a result, the Saudi labour market has suffered from various structural imbalances such as dependence on foreign labour, a gender gap in the supply of labour, increased pay disparity between similarly educated Saudis and

non-Saudis, and rising unemployment of Saudis, particularly for youth (Al-Dosary and Rahman, 2005, 2009; Fasano and Goyal, 2004).

According to Fasano and Goyal, (2004), the structural imbalances that Saudi Arabia (SA) has faced can also be traced to the country's rise in dependence on foreign labour, which constitutes roughly 80% of the labour force. In their words:

> The continued large expatriate presence in [Saudi Arabia] is also reflected in a segmentation of the labour market in terms of wages, skills, and sectors of employment for national and non-nationals. Underlying this segmentation has been the (implicit) guarantee of employment in the government sector extended to nationals, who prefer to work in this sector because of relatively high wages, job security, social allowances, and generous retirement benefits (Fasano and Goyal, 2004, p. 2).

These structural problems produced pressure on the Saudi government to create plans to encourage private-sector employment of Saudi nationals. Thus, Saudi Arabia's Council of Ministers adopted the Saudi Employment Strategy in July 2009 as a response to that pressure. This strategy aimed to increase the percentage of Saudi nationals employed in all sectors through reducing the unemployment rate and providing a sufficient number of opportunities at attractive terms of pay and conditions (Fakeeh, 2009).

Al-Dosary, (2004) displays 17 factors which are believed to be the major causes of decreased Saudi participation in the labour market. Some of these factors are language skills, reduced wages, benefits, and inflexibility of movement for Saudi women. Around 93% of Saudi companies in the private sector face difficulty in finding skilled employees, both male and female, and 50% of graduates of Saudi universities are graduates of theoretical specialisations, which leads to a large gap between market requirements and graduate specialties (Naeimah., 2019).

Therefore, while it can be argued that the discovery of oil had an influence on men's working lives, it is even more significant for women's labour-force participation. To

illustrate, an important study by Ross, (2008) explored the relationship of the oil industry to women. Ross's argument suggests that there is an opposite relation between oil and women's social and political opportunities. He argued that the lack of women's rights and equality in the Middle East is not caused solely, or even mainly, by the legacy of Islamic culture; rather, it is connected to oil in context. The author concluded that the idea that "development leads to equality" was not applicable in all cases, but might rely on the kind of development. A development that mainly depends on oil and mineral revenues appears to allow for the maintenance of patriarchal norms, laws, and institutions within a society.

In addition, some of the findings of his study show that other oil-rich countries such as Nigeria, Russia and Chile, demonstrate a similar effect of oil on the status of women. Ross includes statistical data, for example, that presents the relationship between oil and women's socio-economic positions and their opportunities to obtain political positions. The data reveals that the appearance of oil in Saudi Arabia (SA) led directly to a drop in the number of women participating in the labour market and in decision-making. This seems to differ from the pre-oil era where women were considered as the main contributors to agricultural production and commerce, and were less socially isolated. Furthermore, Ross (2008) states that "in general, the states that are richest in oil (Saudi Arabia, Qatar, United Arab Emirates, and Oman) have the fewest women in their non-agricultural workforce" (p. 116).

As noted above, the Saudi government started to initiate reforms that seek to diversify Saudi economy and reduce its dependence on oil (partly through legislating for a change in the status of women). This is planned through increasing women's participation in the private sector as well as encouraging equal opportunities. The Saudi government has

also involved the private sector to create programmes for both men and women, called the Hafiz and Liqaat programmes. The Hafiz programme is a scheme that aims to assist Saudi men and women to find a job with favourable incentives and high-quality training. Additionally, this programme provides financial support for job seekers until they obtain employment. The Liqaat programme provides an appropriate environment that allows for exchange and networking between male and female job seekers and national companies and institutions. As part of this the National Observatory of the Workforce began to provide statistics on the labour market (Alfalih, 2016). However, despite these initiatives, the participation rate of Saudi females is still low compared to men, which may of course in turn can have an influence on pay differentials in the Saudi labour market.

2.3.2 The Legal Framework of the Saudi Labour market

Saudi labour law governs private sector companies and commercial government-owned corporations in Saudi Arabia (SA). Employment in all firms is based on personal contracts created between the employer and the employee; collective negotiations in relation to contracts and conditions of work are not permitted. This means there is wide variation of pay and conditions among workers in the Saudi labour market even for the same work. The way of making a complaint by the employee against the employer's decision in Saudi Arabia (SA) is usually done through the Labour Settlement Dispute Committee.

Regarding legal working hours in the private sector for both male/female employees, article 98 in Saudi labour law demonstrates that an employer in the private sector has no right to make full time employees work more than eight hours per day if employers adopts the daily standard, or more than forty-eight hours per week if they adopt the weekly

standard (Full time). With respect to part time employees, they have the right to work for less than eight hours per day, or less than forty-eight hours per week.

Other laws have been introduced specifically in relation to women, such as limiting ability to work under certain conditions considered damaging to their health or morals in the workplace. Such limitations, which reflect common cultural ideas of family life and gender roles, may have the influence of limiting job opportunities for women in practice. Women, for example, must not work during the night, between the hours of sunset and morning, unless they are performing health, charity, or educational work, or if the facility employs only family members, in circumstances of emergency, or in specific defined settings (Ministry of Labour, 2013). In terms of pregnant employees in the private sector, article 35 in Saudi labour law indicates that a female worker is entitled to full-pay maternity leave for a period of ten weeks, distributed as she wishes, from a maximum of four weeks before the anticipated date of delivery, which shall be determined by a health authority approved by the establishment or under a medical certificate certified by a health authority. It is prohibited to ask the female worker to work during the six weeks following giving birth. In a case of a sick child or a child with disabilities, the female worker is entitled to one month's leave at full pay beginning after the expiry of the period of maternity leave, extendable for one month without pay. A male employee, according to Article 31, is entitled to a full pay leave for a period of three days for the birth of his child.

Article 154, notes that when a female worker returns to work following maternity leave, she is entitled to take a period or periods of rest not exceeding one hour per day in addition to the rest periods granted to all workers. Such period or periods shall be calculated as part of the actual working hours and shall not entail any reduction in pay. Furthermore,

in the case of a husband death, article 31 of the legislation states that a Muslim female employee has the right to leave with full pay for five months and ten days, while a non-Muslim female worker is entitled to fifteen days leave with full pay. A male employee on the other hand is entitled to five days leave in the event of the death of his wife, an ancestor, or a descendant.

It is noteworthy that Saudi employment law reflects a specific concern for women's virtue and chastity in the shape of restrictions that prohibit or rigorously limit interaction between the sexes in the workplace. However, the labor law (as well as its implementing regulations) ended the provision on the inadmissibility of mixing (which was contained in the previous labor law's section related to the employment of women), and this was replaced by a general article that applies to all (men and women), which is article 4 of the labor law, which states that "the employer and the worker must, when applying the provisions of this system, comply with the requirements of the provision of Islamic Sharia". Therefore, an employer must offer privacy for women employees to be in line with the requirements of the provision of Islamic Sharia. Where women working in institutions and corporations, for example, must work either in a completely different building from men, or in a department within the same company or institution building that satisfies the standards listed below:

- There must be a special section for women
- The women's section must be separate from the men’s section
- The women's section must be self-contained, with its own Mosque, rest room, toilets, and any other additional service arrangements.

This may help to explain why women are commonly employed in areas such as education, which provide a single-sex environment.

In order to create a unique legislation and regulations for women working in the private sector, some previous limitations have been lifted by the Ministry of Labour. For example:

- It is not necessary for women to obtain a permit from the Ministry of Labour or any other entity if they are working in a special section.
- There should be no wage discrimination between men and women workers for work of equal value.
- A guardian’s consent for women's employment is not required.

In terms of legislation related to wages, in 2013 the Ministry of Labour in Saudi Arabia (SA) announced a major step forward in creating a ‘wage protection program’, which collects data on wages paid to all male and female workers in the private sector (both Saudis and expatriates). This program aims to create a continually updated database with information on payment of workers in the private sector. The wage protection program began in June 2013, covering only larger enterprises (3,000 employees or more) in a trial period. In August 2017, the program extended further, to cover establishments with 60 employees or more (International Labour Organisation., 2021)

Despite the fact that Saudi Arabia (SA) now provides some protection for women's rights at work, many Saudi men still hold some negative perceptions of Saudi women in the workplace. The findings from Moaddel, (2006) study indicates clearly that the majority of Saudi men have a stereotypical view of women, and practice discrimination against Saudi women in different management situations. Men appear to agree with the following assumptions: (i) if a position is rare, men have the right and the priority over women to

obtain it, (ii) males are more suitable for being political leaders than females, (iii) it is more important for boys to enrol in universities than it is for girls.

2.3.3 The employment of women in specific sectors

In Saudi Arabia (SA), the idea of women working outside the home was unusual throughout most of the twentieth century after the discovery of oil reserves, with few women were employed prior to the start of girls' education in 1960. Perceptions only altered somewhat after people were introduced to the idea of women teaching during the 1960s. More women were encouraged to enter the workforce, mostly as teachers, as this specific profession received strong support from the government and from society. This was mainly because it was straightforward for women to work in settings where they didn't interact with men. The majority of female-dominated government employment is still found in the education sector, but the number of new teaching jobs is now fewer. Additionally, some women work in colleges as administrators and professors, but they solely work with female students (Al-Shetaiwi. and Abdullah S., 2019).

Besides women's working as teachers, women in Saudi Arabia (SA) also work in nursing for the Ministry of Health. In 1962, Riyadh's first medical school for women opened its doors with only four students (Al-Baker, 1997). This relates to the fact that nursing was not, and is still not, a common career choice for Saudi women. This could be because society views nursing as unsuitable employment, such that many families would find it challenging to support their daughter in such a career. For instance, it might be challenging to maintain gender segregation in a hospital setting, where women have to interact with their men colleagues. Due to this kind of cultural and social influence,

women's choices and employment opportunities therefore remain limited in Saudi Arabia (SA) society. According to Al-Bakar, (1990), Saudi Arabia's segregated culture, which enforces sex segregation in educational, employment, and social institutions, has had a major impact on women’s employment. Female employment has of course been made possible in settings where segregation is practiced, such as girls' schools, some social services, women's branches in banks, and other establishments that cater specifically to the needs of women.

There are, however, additional factors that mean women have fewer and more limited career choices in the private sector too. Firstly, employing women in the private sector is difficult, as most women prefer not to work in mixed-gender environments (Metcalfe, 2011). The public sector has a better reputation for ensuring that women's workplace environments are not compromised, by providing women with gender-separated workspaces and development opportunities (van Geel, 2016). According to the literature, Saudi women often choose jobs in the public sector for both practical and cultural reasons, particularly the higher probability of working in a reliably gender-segregated setting, which explains why more than 95% of Saudi female employees are in the public sector (Alothman, 2017). However, there are many additional factors - women's access to employment in the private sector is constrained, for example, by lacking the necessary education and training for many jobs, with a mismatch between their credentials and the skills needed for the job vacancies.

Furthermore, obviously, Saudi Arabia (SA) maintains a very patriarchal culture, which in turn explains why there are so few women working in the Saudi labor market (Alfalih,

2016). According to Al-Rasheed, (2013), while there are more and more women working in Saudi Arabia (SA), participation is limited and hampered by restrictive rules that effect their lives in the public arena. Saudi women live in a patriarchal society (Alkhaled and Berglund, 2018), a society where men dominate and where women have restricted responsibilities in society at large (MELLAHI and BUDHWAR, 2006). Finally, women's engagement in the workforce is restricted by the importance placed on the family and assumptions about women's responsibilities for family.

However, as noted throughout this chapter, significant initiatives to advance equal opportunities for women in education in Saudi Arabia (SA) have been developed (Al-Dehailan, 2007). It is possible to say that the Saudi government currently provides formal equal opportunity for men and women to advance their education; hence Saudi women tend to be well-educated but continue to have fewer and more limited career choices than men in the Saudi labour market (Al-Dehailan, 2007; Alfalih, 2016; Alothman, 2017). This ultimately results in a sizable population of highly educated, unemployed Saudi women, numbering around six million (Alshehry, 2009). As a result of this, the Saudi government has started to intervene to increase employment opportunities for women. The majority of these jobs are still in the public sector, which experiences less discrimination historically and benefits from additional incentives including workplace privacy and gender segregation. Therefore, the literature implies that it is more difficult to hire women in the private sector than in the public sector due to this spatial dimension, paradoxically (Yusuf, 2014).

Moreover, in spite of the fact that women are now at least formally able to work in a wider range of jobs than ever before, they continue to have limited access to jobs in senior

management in particular (Al-Asfour et al., 2017). This is despite the fact that many women today work for pay to support their families, which in turn creates a struggle for them to balance work and family obligations. Along with managing their employment responsibilities, women remain typically responsible for managing demanding household chores including cooking, cleaning, and childcare (Al-Asfour et al., 2017).

Evidence suggests that organisations commonly lose female employees in high positions because of the long working hours associated with these positions (Alselaimi and Lord, 2012). As a result, employers are hesitant to hire women in the private sector for senior positions. The demographics of the Saudi population is also noteworthy, since it currently has a relatively large proportion of young people, which in turn creates high levels of competition for jobs. Because of this, the majority of jobs that women can obtain in the private sector are low-status and low pay jobs, such as receptionist positions that pay around SR 2000 per month (Alfarran, 2016). As a result, the vast majority of women prefer to have a government job (with education as the primary example), due to greater flexibility in the number of working hours compared to private sector positions (Al-Asfour and Khan, 2014); Jiffry., 2014). All of this leads some observers to attribute Saudi women's limited participation in the labour market to women's preferences (Alfarran, Pyke and Stanton, 2018; Young,2016)

2.4 Factors influencing Women's life and work: The intersection of religion and tradition with education

In Saudi Arabia (SA), women's work opportunities and experiences are clearly determined by religiously and culturally defined roles and expectations. Where Saudi society is a mixture of religion and traditional culture and this has led to powerful attitudes toward women, guided by both religion and culture. Saudi culture is exceptionally conservative in these respects. Further, the intertwining of tribal and Islamic connections results in a distinct and complicated culture, making it difficult to distinguish between Islamic injunctions and traditional practices. Hence, to fully understand the issue of gender in Saudi society, it is necessary to consider the role of tradition and religion, as well as the history and development of female education, as these factors have a more significant impact on shaping Saudi society than other factors.

2.4.1 Culture

As this chapter has shown throughout, social and cultural practices must be considered when discussing Saudi women in general and in the workplace in particular, and the barriers that affect women’s progress in both. Saudi Arabia (SA) is a conservative and patriarchal country, in which women’s roles, including employment, are governed by specific social constructions of gender (Alotaibi, Cutting and Morgan, 2017). Gender stereotypes in SA society are based on an assumption of biological difference between sexes, and related assumptions about the mental and emotional differences between men and women. Women are seen primarily as wives, mothers and caregivers, perceived or expected to be gentle, nurturing and submissive (Alotaibi et al., 2017).The differing distributions of women and men into social roles (including work roles) in Saudi Arabia

(SA) is supported by requirements regarding the provision of exclusively female working environments, and through women being systematically excluded from employment in certain sectors such as construction and engineering, which are traditionally dominated by men (Elamin and Omair, 2010).

Men on the other hand, are culturally expected to provide for their families financially, acting as the family's leader, and guarding the family (Metcalfe, 2011). In this culture, all major choices must be made by a man because he is the family's defender, and his wife's opinion is rarely taken into account. For instance, while rules prohibiting women from travelling alone have recently been overturned in Saudi Arabia (SA) in 2019, in reality, women are still required to ask their husbands or guardians for permission before leaving the country (AlOmran, 2019).

Furthermore, these cultural attitudes have contributed to women being discouraged or even excluded from the full utilization of educational opportunities. For example, Saudi women have been restricted to studying certain subjects (e.g., humanities, natural sciences and teaching), and the cultural preference has been for women to study close to home, which limits their choice of institutions and programmes (AlAlhareth et al., 2015).

These cultural practices have clearly contributed also to gendered work relations in Saudi Arabi (SA). Metcalfe (2011) pointed out that women in Saudi Arabia (SA) were not permitted to work night shifts, except in hospitals, in shops selling women’s merchandise, in retail as cashiers, or in emergency situations, which reduced their employment opportunities. Saudi female employees prefer positions in the public sector for cultural and social reasons (Alothman, 2017); mainly, to the greater likelihood of working in a gender-segregated environment, which is why more Saudi female workers are centered

in the public sector. In addition, women in Saudi Arabia (SA) have until recently had to get a male family member's approval in order to work outside the home (Alqahtani, 2012). Although the requirement to obtain permission from a male guardian before a woman accepts any job offer ended in 2014, some Saudi families still refuse to permit women to work, as 'a woman's place is at home' and 'women will be women'. As this chapter has described, Saudi women's employment is impacted by local interpretations of Islam, the main cultural and political ideology in the country, and Saudi gender culture, both of which have shaped women's status in the workplace (Alqahtani, 2012). However, this patriarchal influence differs from one environment to another, depending on the level of male control, family background, and adherence to tradition. As Alwedinani, (2016) argues: "Women who come from traditional families are more likely to accommodate the patriarchal influences, whilst those who come from non-traditional families are more likely to bargain or negotiate with the patriarchal system" (Alwedinani, 2016, p.2). It is important to highlight that men's workplace communication with women is shaped by social and traditional norms, particularly in patriarchal societies where men get leadership roles and independence while women remain dependent (Elmain and Omair, 2010). For instance, cultural norms are factors that have contributed to employers' preference for hiring men for managerial positions. In addition, in patriarchal societies, a typical lack of training and professional development prevents women from achieving high-level positions in the labor market (Al-Asfour et al., 2017). In other words, social influences dictate that a woman's primary role is to care for her family. As a result, men's lack of trust in women's professional abilities has a negative impact on women's roles in the workplace, resulting in a lack of organizational support for women at work (Al-Asfour et al., 2017).

Therefore, it is important to understand Saudi Arabia's traditions and cultural norms when discussing Saudi women in the workplace and the associated barriers affecting women, as these differ from those of other contexts, in that more consideration is given to norms for female workplace participation (Al-Asfour et al., 2017).

In order to fully understand the role of gender in Saudi Arabia (SA), it is important to consider the religion factor, as the Saudi society is largely shaped by religion, which is presented in the next sub-section.

2.4.2 Religion

Saudi Arabia (SA) is categorized as an Islamic monarchy where Islam, and Islamic law, known as Sharia, govern daily life. In addition, Islam is highly significant in the personal and professional life of its believers (Tlaiss, 2014), and therefore its effects on the socio-cultural values and traditions on Saudis, particularly women, should not be underestimated.

Religious inequality is often based on a specific interpretation of a famous Quranic verse: "And they [the women] have [rights] like [the obligations] they are under with beneficence, and men have a degree above them" (Qur'an, Al-Baqarah: 228). Many have observed that the meaning of a greater 'degree' of rights and responsibility here does not imply any sort of inequality or dictatorship, and that equality needs to be clearly differentiated from sameness. Rather, it indicates that men are required to bear a major responsibility of earning for the family. In other words, a man is responsible for the financial support of his wife, his daughters until they are married, his sons until they are able to support themselves, his parents in case of need, and other close relatives in case of need.

Interpretations of this famous verse seem to have led many Saudi men to understand this idea of a greater ‘degree’ of rights and responsibilities as an advantage for them. Many men appear keen for their role to lean towards domination and control over their family members, and they therefore prioritise obtaining higher pay since they believe they are the main family breadwinner, compelled to create a house, marry, and therefore obtain better paid employment than women.

However, it seems equally incorrect to claim that a woman’s role is limited to staying at home (AlMunajjed, 2006). As Badawi, (1980) argues, these stereotyped perceptions against women have been derived from a specific cultural and political interpretation of some verses of the Qur'an. Some readings of Islamic texts suggest that women are entitled to social and economic rights. To illustrate this, it is notable that women in Islam have the right to maintain wealth in their own name, inheriting as well as bequeathing property (Esposito and DeLong-Bas, 2001).

In relation to Saudi women being unable to take part in political life until very recently, supporters of this situation refer to an authentic saying of the Prophet Mohammed that claims, "A people will not prosper if they let a woman be their leader". Taking this into account, religious councils in Saudi Arabia (SA) have claimed that women are therefore not able to work in powerful military and political positions due to essentially emotional and physical natures that are different to those of men. Indeed, Badawi (1980) argues that this form of exclusion is not a way to dishonour women; rather, it is based on observations of the biological and physiological difference between men and women. In summary, Islamic rulings and Saudi cultural values seem to complicate the issue of women working considerably. In the eyes of Islam, man and woman are not duplicates,

but complements, with each having undeniable biological differences that lead to the natural separation of occupationes. This division of labour allows one sex's weaknesses to be compensated for by the other's strengths (Khan, 2001). As a result, there is no doubt that the Quran promotes gender equality. The Quran provides great honour to the entire human race, including both sexes. It advocates for women's equal rights. The Quran not only creates a belief in women's rights, but it also clearly states that they are equal to men in terms of rights. According to the Quran, women's religious status, like their social status, is equal to that of men (Mernissi, 1991).

To fully understand the issue of Saudi female employment in the Kingdom, it is critical to consider the history of women's education in Saudi Arabia (SA)

2.4.3 Education

Education is regarded as one of the most important contributors to economic growth; it is critical for preparing future generations, and the government is determined to do so with diligence and care. Investing in girls' education provides significant economic and social benefits to individuals, families, and society as a whole. Of course, the increased wages and productivity that come with additional education benefit the community and society as a whole. Investment in girls' education has also been shown to increase the productivity of women working in the non-formal sector, yielding significant environmental benefits through intergenerational educational benefits. Education improves women's ability to manage natural resources efficiently and increases their likelihood of adopting new, more effective, environmentally friendly technologies.

The education of Saudi women has faced several transformations throughout time. For instance, formal education before 1959 was available only in the form of private tutoring (katatib) where they (women) "retain all aspects of their Muslim identity" (Jamjoom and Kelly, 2013,p.119). However, in the 1960s, Crown Prince Faisal and his wife produced an agenda which supported women's education (Weston, 2008). In 1964, when Prince Faisal became King of Saudi Arabia (SA), the first government school for girls was established. This was considered as a notable reform for the education of Saudi women (Weston, 2008). By the mid-1970s, statistics showed that approximately 50% of Saudi girls attended public schools (Al dan-Rasheed, 2002).

More interestingly, the number of women's institutions raised from just 50 in the 1960s to 155 during the 1970s (Hamdan, 2005). In relation to the number of Saudi women enrolled in Saudi universities, the years from 1991 to 2009 were characterised by an increase in female enrolments. By the end of that period, women represented 60% of the total number of university students in Saudi Arabia (SA) (Jamjoom and Kelly, 2013). More importantly, the Saudi women's enrolment rate at the graduate studies level is considered as one of the highest in the world, at 48% (Jamjoom and Kelly, 2013). In more recent statistics, the proportion of women who graduate from university education continues to exceed men, with 58.13% of women graduating compared to 36.29% of men (World Economic Forum, 2022).

As mentioned in previous sections, Saudi Arabia (SA) has a very patriarchal culture, promoted by cultural norms and traditions but also through educational policies. Saudi Arabia's educational system maintains distinct social patterns in which women and men are encouraged to study specific courses and engage in specific activities that are 'in

keeping' with the societal expectations of men and women (Baki, 2004). The patriarchal system, for example, has an impact on higher education since it demands that men and women are assigned different roles, with women serving as mothers and wives and men serving as breadwinners. As a result, the topics accessible to women in higher education differ from those available to men; for example, aviation and chemical engineering are limited to men, while Saudi women are overrepresented in humanities, religious sciences, and medical sciences (Ayalon, 2003; Barone, 2011;Lorz and Volery, 2011; Parker, 2012). As a result, this in turn limits women's access to the job market by restricting their access to specific jobs (Baki, 2004). It is fair to say that women's participation in the labour market is limited because the Saudi education system does not prepare its women for the global, or indeed any, economy (Ibid). As a result, Saudi women are concentrated in middle-to-low-paying occupations, whereas their male counterparts are concentrated in higher-paying occupations.

2.5 Conclusion

This chapter provides an overview of Saudi Arabia's complex, fascinating, changing context as a place to live, learn, and work. The preceding discussion has concentrated on the unique socio-cultural and economic conditions that Saudi Arabia (SA) provides. The chapter identifies a large number of contributory factors to women's employment, such as social constructions of gender and associated gender role expectations, the patriarchal structure of society, the centrality of women's family obligations, and discrimination in work opportunities. Such factors contribute to the underrepresentation of women in many workplaces and working roles, particularly in the private sector.

Women are often positioned as unsuitable (in view of social constructions of gender) for many jobs based on essentialist understanding of physique and abilities, capability to work long hours, or an inability to cope with unsegregated workplaces. Saudi culture holds on tight to many religious and traditional values that make a clear gender distinction between appropriate roles for women and men, which in turn affects women employees' pay levels. The next chapter will present a literature review of socio-economics factors that determine pay inequality between men and women across the world. The focal point will be on identifying the gap in knowledge that necessitated this study.

3 Chapter 3: Literature review

3.1 Introduction

Understanding the factors that affect the pay employees receive is a key objective of labour economics; this process can assist in allocating public and private resources to the areas that will increase worker incomes and boost the economy. Mincer and Polacheck (1974), in particular, provided the analytical foundation for empirically investigating the pay gap between women and men, by estimating monetary returns to factors such as age, education, schooling quality, work experience, and occupation. Since then, numerous studies (e.g., Ahmed and McGillivray, 2015; Healy and Ahamed, 2019; Kunze, 2000) have been carried out for a variety of reasons, including assessing the returns to productive factors like education and experience and estimating the degree of discrimination in a labour market due to factors like race and gender. Their key motivation to consider these factors was to produce robust explanations of pay gaps even though this task is often complicated by data inadequacies.

The main purpose of this chapter is to provide an overview of the studies of the determinants of gender pay gap. It begins with section 3.2 which focus on gender pay gap studies in developed countries. Then section 3.3 discusses the studies of gender pay gap in developing countries. Finally, section 3.4 concludes the chapter.

3.2 Gender pay gap studies in developed countries

The relationship between gender/race pay inequalities has been widely investigated (Sanborn, 1964; Oaxaca, 1973; Blinder, 1973; Jolliffe, 2002; Bertrand, Goldin and Katz,

2010; Boudarbat and Connolly, 2013). One of the earliest empirical studies examining gender pay gap was Sanborn (1964) who examine the average extent of pay discrimination against women in the United States (USA) in 1950s. He finds that women, on average, earned only 58% as much as men earned because “men tend to be in higher-paying occupations than women” (pp. 534).

Using the 1967 Survey of Economic Opportunity, Oaxaca (1973) jointly examines the wage gap in relation to gender (male vs female) and race (fair vs dark) and find evidence that “discrimination accounts for 58.4% of the logarithmic wage differential for whites and 55.6% for blacks” (pp. 704). Similarly, Blinder (1973) investigated the white-black and male-female wage differentials in the USA and finds similar evidence to the ones presented by Oaxaca (1973), who demonstrates that 40% of pay inequalities between white and black workers was attributed to the effects of race discrimination. It was also found that 30% of the pay inequalities between men and women is explained by men’s productivity-enhancing characteristics, leaving about 70% to be attributed to the effects of sex discrimination. The Oaxaca – Blinder approach has, however; been criticised by a number of researchers. For instance, Madden (1999) argues that Oaxaca – Blinder analysis lacks complex elements as it only focuses on general differentiation in the labour market. It thus seems to ignore differences in labour market endowments or rewards (e.g., women’s access to higher education).

In the Bulgarian context, Jolliffe (2002) investigated the extent to which gender wage differentials in Bulgaria are attributable to sex discrimination, using data from the 1995 Bulgaria Integrated Household Survey (BIHS). Their study shows evidence that men, on average, receive 24% higher salary than women. He also finds that the majority of pay

differences (more than 86%) is attributable to discrimination, and more specifically to differences in the ways that women and men are rewarded in the labour market for their human capital characteristics. (e.g., education, experience).

In a similar vein, Bertrand et al. (2010) examined the role of gender in determining MBA students' wages after their graduation. Bertrand and his colleagues provide evidence suggesting that the existing pay gap between male and female MBA graduates is mainly attributable to three factors: (i) training opportunities provided prior to MBA graduation; (ii) the nature of occupation disruptions; and (iii) the number of weekly working hours. In a Canadian context, Boudarbat and Connolly (2013) also investigate pay inequality between men and women employees after few years of their graduation. Using the National Graduates Survey during the 1988-2007 period. The study generates empirical evidence that women in general are paid 6-14% less than men with an 8 percent increase in the average gender gap in the years following their graduation.

Numerous studies have attempted to explain the importance of occupational choice and work preferences in the explanation of wage inequalities between men and women (see for example Daymont and Andrisani, 1984; Goldin and Polachek, 1987). Firstly, by applying data from the 1972 National Longitudinal Studies of the High School Class, Daymont and Andrisani (1984) investigate the wage differentials amongst college graduates after three years of their graduation. The findings show that both (young) men and women have preferences for particular occupations and major subjects in college. Moreover, these preferences accounted for only one to two-thirds of the wage inequalities between graduate men and women. Their measure of wage differential does not,

however, take into consideration graduates' occupational preferences, preferences which may change from time to time.

Secondly, Goldin and Polachek (1987) investigated the earnings gap by gender across six occupational categories using data spanning 80 years from 1890 until 1970. Their research indicates that the female-to-male (full time) earnings gap increased by 30% across the entire economy from 0.46 to 0.60 over the 80-year period. These findings are, however, sensitive to the distribution of occupations between men and women. It was found that earnings gap is significantly higher between men and women employed in professional and clerical occupation groups. This indicates that "the distribution of occupations between men and women is the major determinant of the gender gap in earnings and that changes in the occupational distribution provide the primary way of altering relative earnings" (pp. 146). More importantly, their empirical results reveal that 21.5% of the earnings gap between men and women is explained by education (14.3%), experience (9.5%) and home-time (i.e., working hours - 2.3%).

Various studies demonstrate that gender differences in human capital is considered as a determinant of gender pay gap (Gronau's, 1988; Wood, Corcoran and Courant, 1993; Blau and Kahn, 2017). For example, Gronau (1988) examined the factors contributing to wage differentials between men and women, taking into consideration career breaks, training, race, marital status, and union membership. His study reveals that "women [on average] earn less than three-quarters of men's hourly wage" (pp. 279, emphasis added), and two-third of female-male wage differentials are solely explained by on-the-job training and job requirements of men and women. As Gronau (1988) explains, "if women had on-

the-job training and if they got jobs that require the same training as men's jobs, the wage gap would shrink to 10%" (pp. 279).

Notwithstanding, it is difficult to precisely control for or measure all workers' qualitative characteristics such as the quality of education/training. In order to account for gender differences in human capital, Wood et al. (1993) investigated the pay differences between law graduate man and women with virtually identical human capital development after their graduation from law school. Their findings indicate that the bulk of the gender pay gap can be explained by human capital factors. Specifically, they found that female lawyers with child rearing responsibility have lower work experience and develop fewer job-related skills than men have. Their results show that childcare responsibility accounted for 41% of male-female pay differences, leaving an important part of these differences to be attributed to unmeasured differences between men and women.

More recently, Blau and Kahn (2017) examined the trends in gender pay gap in the United Satiates between 1980 and 2010, using Panel Study of Income Dynamics (PSID) microdata. Their findings suggest that human capital attributes, such as level of education, are playing a large and important role in closing the gender pay gap rather than explaining it due to higher educational attainment among women. In contrast, their analysis shows that gender differences in employment by occupation and industry are the most economically important factors that explain existing gender pay gap.

Productivity has been identified as a major contributing factor for explaining wage differences between men and women (Fields and Wolff, 1995; Hellerstein, Neumark and Troske, 1999). Using data from the March 1988 Current Population Survey (CPS), Fields and Wolff (1995) examined the inter-industry wage differentials for men and women in

the United States after controlling for employees' productivity-related attributes. Their findings show that the average female worker earn only 65 percent as much as the average male worker. More importantly, the study indicates that the portion of the overall gender wage gap (0.35) that is explained by differences in industries wages varies from 12% to 22%, whereas the portion of the overall gender wage gap that is explained by differences in the distribution of male and female workers across industries varies from 15% to 19%.

In contrast, Hellerstein et al. (1999) found different results from those of Fields and Wolff (1995). Using a different theory of female-male wage differential determination (productivity-based versus nonproductivity-based), they examine wage differentials between men and women using the Worker Establishment Characteristics Database (WECD) data which combines detailed (demographic) data on workers and employers. They hypothesise that wage differentials vary not only across workers with different demographic backgrounds (e.g., gender, age, experience, education, and marital status), but also vary with productivity differentials. Their results show that wage differentials vary with productivity differentials across all different groups of workers, except those married. More specifically, married workers appear to have received higher wages compared to their non-married counterparts. This evidence is not necessarily consistent with wage discrimination against non-married workers, but rather consistent with their proposition that "marriage makes workers more productive" (pp. 443). Their research also found evidence for discrimination in labour markets against non-white workers (but not against women in particular) especially in manufacturing industries. Yet, no evidence was found

in support of human capital theory (age or experience). That is, workers' wages tend not to rise or fall with their productivity.

In the Japanese labour market, Miyoshi (2008) analysed the reasons behind existing pay disparities between men and women by employing data from the first wave of the Keio Household Panel Survey (KHPS) conducted by Keio University in early 2004. His conclusion reveals that the major causes of the gender wage gap return to the following reasons. First, full-time work experience and seniority which have highly impacted wages where participation of women in the labour market is shorter and less continuous as a result of their family responsibilities comparing to their men counterparts. Therefore, women receive a lower wage. Second, there are important variances in terms of evaluation of full-time experience between men and women.

Chen and Crown, (2019) investigated the gender wage gap by employing salary and human resources data from the Ohio State University, covering the period 2006–2016. Their results revealed that after controlling for experience, clinical appointment, fiscal year, and department fixed effects, there is a gender pay gap of 11% at the Ohio State University. Most notably, over one-quarter of the difference in pay between male and female faculty are due to discrimination, such as discrimination in appointment type or faculty rank.

Using a cohort study of young adults between the ages of 15 and 30 from Switzerland (TREE 'Transitions from Education to Employment' 2000–2014), Combet and Oesch, 2019) tested whether family roles play a part in gender pay gaps (i.e., the differential investments of fathers and mothers into paid work and their household), or whether other factors (e.g., educational ability, field of study, intellectual ability, occupation, experience,

and social origin) also play a role. Their analysis reveals that human capital and labour market behaviour differs slightly between men and women born in the 1980s before they have children, which results in the fact that young women earn lower wages than young men with the same characteristics before they have children. Therefore, Combet and Oesch fail to identify evidence that supports the idea that the gender pay gap is solely determined by family formation. They, however, find that the gender pay gap persists at the start of a career, and that neither qualifications nor labour market preferences demonstrate this variance. In particular, they found a gender pay gap of 4.7 per cent in favour of men when introducing the length of work experience as a measurement; the variance then expanded after 2 years of work experience and became statistically significant but fell after 4 years in line with different ages, different educational degrees and different work experience.

Moreover, Stinebrickner, Stinebrickner and Sullivan, (2019) examined the role of gender differences based on two factors, job tasks and cumulative experience job tasks, using longitudinal data provided by the Berea Panel Study (BPS). Their main findings showed that the career gender pay gap widens by around 38 % in years 7 and 8 of the sample, then decreases slightly by 35% in years 9 and 10. They found that the substantial widening of the wage gap refers to gender differences related to the time spent on performing highly skilled information tasks. Moreover, they demonstrated that regardless of whether men and women have the same college major, a substantial difference in job tasks among men and women leads to the existing gender pay gap. More specifically, 33% of males were more likely than their female counterparts to specialize in highly skilled tasks (i.e., data analysis), while 40% of females were more likely than males to specialize

in low skilled tasks (i.e., customer service). Stinebrickner et al. also found strong evidence that variance of gender in tasks was not related to labour market discrimination. By controlling the job task experience variable, their results indicate that men invested 19% of their time performing highly skilled tasks 9 to 10 years after college graduation, while women invested 23% of their time performing low skilled tasks. The authors conclude that both current tasks and task-specific experience play a considerable role in diminishing the gender wage gap by 45%.

Furthermore, Costa et al. (2019) analysed the gender pay gap in the UK over the 1991-2016 period using the UK Household Longitudinal Study (UKHLS) data and examined the effect of numerous disparities in work patterns between men and women, as well as how they alter with the arrival of the first child. Their results revealed that work-related experience capital explain a considerable portion of the gender pay difference, including how it grows across the life cycle; differences in experience between men and women reduced the gender gap in wages to just below 9 log points. More significantly, their empirical findings show that the wage gap gradually increased after childbirth, eventually reaching roughly 30% of male pay.

In an Italian context, Castagnetti and Giorgetti, (2019) examined wage differentials between men and women employees in the private and public sectors from 2005 to 2010. The authors found that the public sector has a smaller but still significant gender wage gap (GWG) than the private sector, and the GWG grows along the pay distribution in both sectors. Their additional tests show that the gap widens as wages increase (a glass ceiling mechanism); this tendency is considerably more visible in the public sector. However, the GWG is higher at the bottom of the distribution in the private sector (i.e., it

suggests a sticky floor). Overall results indicate that there is GWG in both sectors, however the GWG in the private sector is significantly greater than in the public sector. The lower GWG in the public sector may be attributable to different hiring-selection procedures and putting more effort into the implementation of gender equality regulations.

The above findings are consistent with an earlier study by Mandel and Semyonov, (2014), who analysed the sources of the convergence in men's and women's earnings in the public and private sectors, using data from the Integrated Public Use Microdata Series (IPUMS) between the years 1970 and 2010. The authors found that although there was a reduction in gender-based wage inequality in both sectors, the gender pay gap was significantly bigger in the private sector than in the public sector. Their further analysis reveals that women's high levels of education do not contribute to decreasing the pay gap in the private sector; rather, education suppresses male wage advantages because women are overrepresented in fields such as education, administration, and social science, while men are overrepresented in engineering and technical fields. Jones, Makepeace and Wass, (2018) also investigate the influence of public sector employment on the gender pay using the Labour Force Survey in the UK, from April–June 1997 to October–December 2015. These authors provide further evidence suggesting that the gender pay gap is lower in the public sector compared to that in the private sector; the gender pay gap is 0.311 log units (or 36.5 percent) in the private sector and 0.219 log units (or 24.5 percent) in the public sector.

Using status characteristics theory (which proposes that gender has a substantial impact on the pay of recently hired and long-time employees alike), Kronberg, (2020) examined whether gender differences in merit rewards narrow with increasing firm tenure or whether

they remain constant across employees' firm-internal careers (with biases affecting employees during their entire firm-internal career) using the longitudinal personnel records from 2005 to 2014 of a large private U.S. employer, B2G, located in the service industry. The analysis showed that there is no evidence indicating that the impact of gender on pay decreases when employees stay with a firm longer, either among professional or non-professional employees. However, the researcher found strong evidence for a notable increase in the gender pay gap at a constant rate among professionals and at an accelerating rate among non-professionals. More specifically, the average gender pay gap differed considerably according to professional status, with professional males receiving on average 14% more than their female counterparts. The gap initially narrowed slightly among professionals before expanding again after year 6. The process occurred in the opposite direction among non-professionals, with newly hired males receiving on average 8% less than non-professional females; these disparities remained steady over time, excluding year 6. These results indicate that men enjoy a pay advantage in professional jobs, compared to the greater pay disadvantages experienced by women in similar jobs. Performance is more difficult to assess than in non-professional jobs, and therefore the gender pay gap among non-professionals favours women over men. Kronberg also shows that the gender pay gap among professionals and non-professionals rises significantly when supervisors act independently, and that these differences are statistically important 5 years after hiring. The researcher concludes that the gender pay gap among non-professionals is more related to race were jobs favour black women.

By touching on a sub-set of the wide range of issues covered by Blau and Kahn (2017), Meara, Pastore and Webster, (2020) studied the significant interactions between gender and other relevant characteristics (i.e., parenthood, part-time working, unionization and age), using two cross-section samples taken from the monthly US Current Population Survey (CPS). Using the inverse probability weighted regression adjustment (IPWRA) matching estimator, the authors found that indicating a single uniform gender pay gap was less beneficial than understanding how gendered wage rates were shaped by various influences. For example, the gender pay gap between male and female full-time employees was 14% in both samples, compared to the pay gap between part-time women and full-time men, which was around 27% for the first sample and 28% for the second. More interestingly, Meara et al. identified that the gap in hourly pay between full-time and part-time males was around 24% in both samples, while it was 15% in the earlier sample and 16.5% in the latter for female part-time and full-time workers. This evidence indicates that part-time male employees receive substantially lower wages than their female counterparts (both part and full time), and therefore the impact of working part time is much higher than for females. In addition, they found that the gender pay gap between non-unionized females and males was around 14% in the earlier sample and 15% in the later one, while the gender pay gap between female and male union members was around 13% in the first sample and 16 % in the second. This shows that a union wage premium assists in minimizing the overall pay gap for women but does not eliminate it. The results also show the role of parenthood as a source of wage disadvantage for women, whereby the effect of being a female parent compared to a male one was estimated at 14.2% for the first sample and 14.7% for the second. This evidence therefore suggests the

significant role of parenthood in maximizing the gender pay gap. Finally, Meara et al. studied the relationship between gender and youth, and identified a gender pay gap for those aged 25 or above of around 12% in the October 2011 to March 2012 sample, and of 12.5% for the October 2017 to March 2018 one, compared to those aged under 25 years, for whom the gender pay gap was around 3% in both samples. For young men the gap was estimated at around 25% and 22% in the second sample; while for young women the gap was around 21% in the earlier sample and 20% in the later one, given that being young and female means lower hourly wages. For young females and older males, the gap is about 27% and 25% in the later one. However, for all the previously mentioned fascinating results, the sample for this study suffers from some limitations; for example, it includes non-responses and individuals who were not in employment at the time.

In the German labour market, Schrenker and Zucco, (2020) analysed the gender pay gap using Structure of Earnings Study (Verdienststrukturerhebung, SES) dataset for 2014. Their analysis revealed that the gender pay gap significantly increases beginning at age 30, the average age at which a woman has her first child. Their additional test showed that this is linked to the different development of part-time work between men and women; while the share of men working part-time barely changes with age, the share of women working part-time begins to increase significantly at age 30 and remains at a consistently high level until old age. Thus, the birth of children is strongly linked to women's professional development; in contrast, it seems to barely influence men's careers. As part-time work is, on average, less well paid, this discrepancy leads to a further increase in existing wage inequalities over time. As a result, the gender pay gap triples over a period of 20 years between the ages of 30 and 50.

Drawn upon the male breadwinner model (MBM), Lang and Groß, (2020) investigated the just gender pay gap (JGPG) using a factorial survey experiment conducted with a population-representative sample in Germany (SOEP-Pretest 2008, 1066 persons, 26,650 vignette ratings). Their findings revealed that the MBM does explain the JGPG in Germany; a JGPG of approximately 8 % exists for vignette persons with children, but not for childless persons. The authors also compared the JGPG between the eastern federal states and western federal states of Germany, and found no evidence of substantial JGPG in the eastern federal states, compared to a JGPG of approximately 6% in the western federal states.

Using Amazon Mechanical Turk and Cloud Research data, from an online microtask platform connecting employers to workers who perform research-related tasks, Litman et al., (2020) examined the gender pay gap on the platform across an 18-month period, during which close to five million tasks were completed by over 20,000 unique workers. Their results revealed that on average women's hourly earnings were 10.5% lower than men. However, their further analysis showed the earnings gap between men and women was attributable to the gender differences in task selection. Specifically, they found that women tend to select tasks that have a lower advertised hourly pay; tasks completed by women were advertised as paying 28 cents ($0.25-$0.31) less per hour (5.8%) compared to tasks completed by men. Interestingly, the pay differential in tasks selected by men and women decreased with age and was more pronounced among single versus currently or previously married women. In particular, the advertised pay gap was the highest among the youngest workers ($0.31 per hour for workers aged 18–29), and decreased linearly with age, declining to $0.13 per hour among workers age 60+. These results should be

interpreted with caution, and require much further testing – for example the speed with which workers complete tasks may be highly significant, because workers have the ability to accept multiple Human Intelligence Tasks (HITs) at the same time and multiple HITs can sit dormant in a queue, waiting for workers to begin to work on them.

3.3 Gender pay gap studies in developing countries

Several studies investigating human capital attributes (e.g., education, experience, etc.) have been carried out in developing countries. For example, Ahmed and Mcgillivray (2015) empirically investigated the trend in gender wage gaps in Bangladesh in the period between 1999–2009. After controlling for differences in human capital attributes (e.g. education), their study shows that women are still paid less than men. The disparity in pay is larger in the low wage quartiles compared to the top wage quartiles. Their findings, however, show that there has been a 31% decrease in the average pay difference between men and women in Bangladesh in this time period. The decrease was attributed to two factors: (i) an increase in women's higher educational attainment; and (ii) a decrease in wage discrimination/bias against women.

Using the National Sample Survey (NSS) Fourth Quinquennial Survey of Employment and Unemployment collected during 1987- 1988, Kingdon and Unni, (2001) investigated the extent to which education factor affects the reduction of women participation in the labour force and wages in comparison to men in India during 1987-1988. They also examined whether education might contribute to the gender wage differentials and how this is explained by men and women’s differences in educational endowments or by labour market discrimination. Their findings suggest that women in the Indian urban labour market encounter high levels of wage discrimination, and that education

contributes very little to this discrimination. Their findings show evidence that the number of Indian women who return to education is significantly higher relative to men. This indicates that each extra year of schooling leads to 8% and 10% increase in wages (or productivity) for men and women, respectively.

Other studies have also included human capital attributes to examine gender pay gap issues in the Global South. For instance, Biltagy (2018) examined pay disparity between males and females in Egypt to understand the determinants of the gender pay gap, using Egypt Labour Market Panel Surveys compiled between 2006 and 2012. Their analysis reveals that wage differentials between women and men is related to differences in their characteristics (e.g., education, experience, marital status, and sector of employment). Other differences are, however, related to discrimination against women (as well as other unobservable differences).

In another study, human capital factors, employment sector, discrimination and other factors are examined in the Lebanese context. Jamali et al. (2008) investigated the salience of a gender pay gap in three sectors in Lebanon (i.e. banking, nursing and higher education sectors), using mixed methods: a) questionnaires completed by 168 employees from three major banks; and then b) interviews with three female managers. Their analysis reveal that the gender wage gap persists significantly in the Higher Education (HE) sector relative to banking and nursing sectors. Their results indicate that wage discrimination is particularly salient in the educational sector. In addition, their qualitative analysis confirms the findings/inferences obtained from their quantitative analysis. Finally, Jamali and her colleagues concluded that the introduction of a grading compensation scheme can help close the gender pay gap, thus alleviating feelings of inequity.

The effect of occupational sorting on gender pay gaps associated with education has been further examined in an international/African context. Fafchamps, Söderbom and Benhassine, (2009) investigated whether job sorting exists in North African countries (Algeria and Morocco) and in nine Sub-Saharan African (SSA) countries (Burundi, Cameroon, Cote d'Ivoire, Ethiopia, Ghana, Kenya, Tanzania, Zambia and Zimbabwe) over a period of more than a decade. Their research indicates that a large proportion of the education wage gap is attributable to selection into low-wage occupations and firms. In particular, 'highly' educated workers tend to work in larger, more productive, high-wage occupations and firms in which they are more effective at performing complex tasks. This indicates that workers tend to select jobs that require high levels of education. This was not however the case for Morocco wherein educated women work in textile and garment sectors, where the use of sophisticated machinery is rare.

In a similar vein, Pastore, Sattar and Tiongson, (2013) analysed the earnings differentials between men and women in their early labor market experience in Kosovo, using data from the school-to-Work Transition (SWT) survey compiled between 2004 and 2006. The authors failed to find evidence of agender wage gap among Kosovo's employed men and women in early career; however some evidence suggests that a gender wage gap does begin to emerge among the young adults (age 20–25) compared to teenage workers (age 15 to 19). Interestingly, they found that women tend to have lower education attainment not only in the mature adult population, but also among those in the youngest age group. However, this educational disadvantage disappears when one considers only employed men and women. Specifically, employed women in Kosovo are much better educated (at the same level or more than their men counterparts), and have higher than average

productivity characteristics. Their additional results show that greater educational attainment of employed women, among other characteristics, tends to fully offset the gender wage gap, as it tends to compensate for the higher average number of working hours of their male counterparts.

In a Chinese context, Xiu and Gunderson, (2014) analysed how the male-female pay gap in China varies across the pay distribution and provide evidence on the factors that influence that gap. The authors found evidence of a sticky floor (large pay gaps at the bottom of the pay distribution) and some limited and weaker evidence of a glass ceiling (large pay gaps at the top of the distribution). This pattern of larger pay gaps at the bottom of the pay distribution and to a lesser extent at the top, occurs largely because that pattern prevails in the coefficients or unexplained differences across the distribution of pay distribution. These coefficient differences not only generally account for a majority of the overall pay gap (averaging 63% across the different deciles), but they also vary more across the pay distribution, in contrast, endowment differences account for less of the pay gap (averaging 37% across the deciles) and they do not change much over the pay distribution. The variation highlights considerable heterogeneity in the Chinese labour market with respect to how pay is determined, and different characteristics are rewarded.

In the Indian context again, Duraisamy and Duraisamy, (2016) analysed the gender wage gap across different areas of the labour market and wage distribution using national-level representative data from 1983 to 2012. Their findings revealed that the gender wage gap reduced throughout the sample period; the female to male real wage ratio rose from 0.49 to 0.69, but the difference remained significant. They also found that the unexplained or discriminatory component of the mean pay difference widened with time; in particular, the

gender wage gap is higher at the bottom of the wage distribution than at the top, reinforcing the prevalence and persistence of pervasive gender discrimination in all sectors of the Indian labor market. Crucially, this indicates that low-wage earners encounter more discrimination than high-wage earners, lending credence to the sticky floor hypothesis.

In a similar vein, Pastore et al., (2016) analysed wage differences among young people in Azerbaijan, using the ILO's School-to-Work Transition (SWT) survey on a sample of young workers aged 15 to 29. Their analysis provides evidence that new labour market entrants begin with little or no gender differences in earnings, but a wage gap gradually emerges over time closer to the childbearing years. The gender wage gap grows from virtually zero, or even a small positive gap in favour of women, until age 20 years, to about 20% two years later and even more than 30% at age 29 years. The gap in labor supply rises from almost zero to about 20 percent during the years from 19 to 22, while the gap in hours worked falls from positive (up to six hours per week more than their male counterparts) to negative (up to five hours per week less) over the same period in the life cycle.

Another stream of research in India has examined the relationship between wage distribution and gender pay gap. Using representative data from the Employment–Unemployment Surveys in 1999–2000 and 2009–2010, Deshpande, Goel and Khanna, (2018) examined gender wage gaps among Regular Wage/Salaried (RWS) workers in India. both at the mean as well as along the entire wage distribution to see ‘‘what happens where”. Their results show that there are notable gender gaps among RWS workers which contribute about 17% of the Indian labour force. In relation to the gender log wage

gap, the mean is 55% in 1999–2000 and 49% in 2009–2010. In 2009–10, the gap is at its highest point at the first decile at 105%; it then decreases to about 10% at the ninth decile, demonstrating that result in both years. This again suggests existence of a ‘‘sticky floor” where gender wage gaps increase among low-wage earners and decrease for high-wage earners. More importantly, these authors concluded that over the ten-year period, their findings show that the sticky floor became ‘‘stickier” for RWS women in particular. Machado–Mata–Melly decompositions indicate that in both years (i.e. 1999–2000 and 2009–2010) women at lower wage distributions encounter higher levels of discrimination, while women at the upper end seem to face less discrimination.

Using data from Vietnam Household Living Standards Surveys (VHLSS), Hong Vo et al., (2021) have recently explored the income inequality between men and women in Vietnam during the 2004–2016 period. Their initial results showed an average pay gap of 0.250 unit of log income between men and women in Vietnam. Their analysis also showed that there was reduction in the income inequality between men and women from 2014, and this was in part due to the consistent efforts of the Vietnamese government, and in part due to the higher educational levels that Vietnamese women obtained, which helped them not only to narrow gender income inequality but also to combat discrimination and to promote equal opportunity in the workplace. Importantly, the analysis also showed that education, ethnicity, economic sectors, and geographic areas are significant determinants of the gender pay gap in Vietnam. In particular, ethnic minority workers received 10% lower than the majority Kinh. Moreover, workers in Southeast areas received higher wages compared to their counterparts in Northern Uplands and North Central Coast areas, which largely depend on agricultural business. Finally, the authors

found evidence that the gender pay gap was higher at both ends of the quantiles, suggesting that “gender pay inequality is larger in the low-paid and high-paid than the average-paid jobs” (p. 17).

Finally, in the Nigerian context, Aderemi and Alley, (2019) examined the gender wage gap in the private and public sectors and investigated the role of discrimination at workplace in influencing the gender gap. Using 2009 Harmonized Nigerian Living Standards Survey conducted by the National Bureau of Statistics (NBS), these authors find evidence of larger gender wage gap in the private sector, compared to the public sector (a gender wage gap of 5 log wage points is recorded in the public sector and a higher gap of 28 log wage points in the private sector). Contrary to the widely held belief of low discrimination in the public sector, their findings show a significant unexplained component of the wage gap in both sectors. Discrimination in the private sector is, however, appears larger, estimated at 126%, compared to the public sector which is estimated at 97%. This indicates that wage discrimination against women is persistent in both sectors in the employment. Overall, irrespective of gender, public sector workers earn more than private sector employees.

Overall, after reviewing gender pay gap studies mentioned above, it is critical to clarify how the research goes beyond earlier research and what research gaps it attempts to fill. The first empirical gap identified is that there has been very few gender pay gap studies published that employed interviews as a method to examine HR managers’ experiences with, and explanations for, the gender pay gap. Thus, combining a quantitative data with interviews from a range of sectors is necessary to provide a comprehensive and deeper understanding of the phenomenon of the gender pay gap. The second research gap

identified is that there are very few prior studies published which examine the gender pay gap, or gender pay inequality matters, in Saudi Arabia, and those which are published are limited in their scope. Using Saudi Arabia as the research base for this thesis addresses a gap in the literature by examining the country in regard to the gender pay gap issue. Consistent with the second research gap, the third gap, as Nadolnyak and Hartarska (2021) observe, research on the gender pay gap in developing countries more generally is extremely limited and uncommon. This rationale therefore speaks for further research into developing countries, which is consistent with the purpose of this thesis, as it provides a comprehensive and in-depth analysis of the gender pay gap issue in Saudi private and public companies. Fourth, little prior literature considers contextual factors on the gender pay gap in their studies (religion, gender stereotypes etc). This means that rich contextual information is missing. Therefore, there are aspects unique to Saudi Arabia that must be integrated into this research to adequately address the research issues given below.

3.4 Conclusion

In conclusion, this chapter has discussed prior studies of the gender pay gap in both developed and developing nations. The chapter has explained the factors affecting employees' pay, such as education, age, tenure, number of hours worked, working in the public sector, having children, and managerial position. The purpose of reviewing the studies mentioned above is to identify the socioeconomic factors that have led to the existence of the gender pay gap across the world, and attempt to apply them in a different context, namely SA. Most importantly, while gender pay gap studies have been examined in this chapter, it has been noticed that there is a shortage of Saudi research published

in this area. Saudi studies that are published do not take into account the socio-economic factors that may be the cause to the existence of the gender pay gap in SA. By taking SA into consideration when studying the gender pay gap, the thesis aims to present a deep and comprehensive explanation of the reasons of the gender pay gap in SA informed by data and explanations from these other countries. The next chapter discusses and explains the methods that employed in the study to achieve this.

4 Chapter 4: Research methodology

4.1 Introduction

Chapter 2 discussed the significance of the Saudi context in relation to the gender pay gap in SA. Chapter 3 discussed the meaning of the gender pay gap, and the reasons suggested in the literature for the gender pay gap, such as the socio-economic factors. This chapter is important for the reader to understand how the study has been designed to address the research questions; it discusses the research approach and methods chosen, as well as the limitations of these methods. The researcher's philosophical perspective is specified so that the reader is aware of the assumptions that have been made in respect to the selection of the research methods. Furthermore, the approaches, difficulties, and obstacles in collecting research data are highlighted, including disruption caused by the COVID-19 pandemic and how this affected the research design.

This research consists of two phases (which occur sequentially): the first is the quantitative phase, and the second the qualitative phase; the quantitative analysis precedes the qualitative analysis, and the findings of the initial analysis informs the subsequent phase. The combined use of quantitative/qualitative analyses enables us to analyse the pay gap between male and female employees in the private and public sectors and provides deeper insights into the reasons behind pay inequalities between men and women in SA. The chapter starts by re-stating the research questions in section 4.2 and then outlines the philosophical assumptions underpinning this thesis in Section 4.3. This is followed by section 4.4, which provides a detailed description of the research design and methods used. Section 4.5 and 4.6 discuss the limitations of the research

design as well as the reliability and validity of the research. Section 4.7 considers the ethical risks and ethical approval. Section 4.8 summarizes and concludes this chapter.

4.2 Research objective and research question(s)

The principal objective of this thesis is to investigate the reasons for the pay inequalities between men and women in the private and public sectors in SA. In addressing this objective, the following questions were posed:

i. What are the factors affecting the pay of male and female employees in the private and public sectors in SA?
ii. To what extent does gender explain the pay inequality between male and female employees' pay?
iii. What contextual factors influence pay inequality?

4.3 Philosophical assumptions

A research philosophy is a set of beliefs about how evidence regarding a phenomenon should be gathered, analysed, and used. These philosophical views, whether explicit or implicit, shape the researcher's worldview and the way the social world is investigated (Burrell and Morgan, 1979). Johnstone, (2004) and Bryman and Bell, (2019) suggest five types of philosophical assumptions, ontological, epistemological, axiological, rhetorical, and methodological.

First, ontology is related to the nature of reality (Saunders et al., 2012). According to Collis and Hussey, (2009), positivists consider social reality as objective and independent of social variables, and thus rely on quantitative research and statistical analysis to measure

objectivity (Molina-Azorin, 2012). A positivist researcher might develop hypotheses based on existing theory. These statements provide hypothetical explanations that can be tested and confirmed, in whole or in part, or refuted, leading to the development of theory, which can then be tested through additional research. Indeed, the original positivists emphasized the importance of inductive research due to the importance of empirical data, despite the fact that positivist research nowadays tends to be deductive. The hypotheses developed would lead to the collection of facts (rather than impressions) that would serve as the foundation for future hypothesis testing (Saunders et al., 2012). Interpretivists, on the other hand, argue that social reality is subjective since it is constructed within a social context. As a result, there are many realities in a situation, such as the researcher's and the interviewee's (Creswell, 1994). This research is being undertaken in a specific business context and Saudi culture. This environment has an integrated structure that includes regulators, legislation, businesses, and stakeholders. One important part of this research is to explore the factors that influence pay inequality between men and women in the Saudi corporate context. As a result, a quantitative method is utilized to identify the determinants of gender pay inequality across private and public sector. In contrast, key HR managers' perspectives are necessary to understand the data findings by assessing the level of awareness and comprehension of the reasons for the gender pay gap in SA. As a result, semi-structured interviews are considered suitable to enhance the quantitative results. As the level of knowledge, we have about this area of management and economy is so limited in SA, this context-sensitive mixed method approach provides a range of data that enables a high level of ontological flexibility.

Second, the epistemological question addresses what is (or should be) acceptable knowledge in a discipline (Bryman and Bell, 2019); epistemology provides links between the belief about reality, the researcher and the subject of study. Epistemology is concerned with knowledge assumptions - how we know what we say we know, what constitutes acceptable, valid, and legitimate knowledge, and how we can communicate knowledge to other humans. What kind of contribution to knowledge you can make as a result of your research is determined by the epistemological assumptions the researcher makes (Saunders et al., 2012). In addition, epistemology seeks to produce a data-driven, quantitative, and, most importantly, interpretable description of the process by which humans form and adapt their beliefs and understanding of the world (Saunders et al., 2012).As Creswell, (2009) asserts that the researcher in this paradigm should be independent of the topic under investigation. Thus, quantitative researchers attempt to minimize any sort of bias that might be raised by employing an appropriate sampling strategy and being impartial in carrying out the research process, such as data collecting and analysis. In contrast, interpretivism reduces the gap between the researcher and the subject of the investigation (Collis and Hussey, 2009). Hence, qualitative research differs from quantitative research, where qualitative research allows for deeper connection with people's lived experiences in the social setting, as well as long-term observation of social processes. In this research, the determinants of gender pay inequality in SA are empirically explored employing questionnaire analysis, which enables the researcher to be objective about what is being studied. In addition to testing the factors that affect the pay equality between men and women in SA, exploring and understanding the reasons for gender pay inequality in SA from managers' perspectives is also essential.

Third, axiological premises emphasize the importance of values in social research. According to (Saunders et al., 2012), researchers display axiological abilities by expressing principles as a foundation for making judgements about the study they are conducting and how they plan to conduct it. Positivists believe that their research efforts have no influence on the persons under investigation. Interpretivists, on the other hand, feel that researchers should demonstrate ethical and moral beliefs (Collis and Hussey, 2009). As a result, qualitative research is more value-laden and takes research ethics into account significantly more than quantitative research (Creswell, 2009). This study was constructed to investigate the level and meaning of gender pay inequality across private and public sectors. Therefore, the findings of this estimation are expressed in both numbers and narratives. Other areas of the study further investigated the level of understanding of the reasons for gender pay inequality among key HR managers, and these findings are reported descriptively rather than numerically by interviewees.

Fourth, in terms of rhetorical assumptions, this research recognizes that research languages can be different across paradigms. The positivist paradigm is often presented in impersonal and formal language based on established words such as relationships and variable comparisons, where ideas and variables are explicitly specified (Creswell, 2009). Collis and Hussey (2009), on the other hand, argue that the interpretative design favours a writing style that reflects the immediacy of the study and the researcher's engagement. This research seeks a balance between these two approaches in its presentation of analysis.

The fifth assumption links how research should be conducted, including the theoretical and philosophical framework and its consequences for the methodologies employed

(Saunders et al., 2012). Before beginning their research, positivists define the concepts, variables, and hypotheses in an attempt to establish generalizability, which assists in the discovery of unambiguous predictions, explanations, and understandings of some facts. This requires that the data and instruments are valid and reliable (Johl, Bruce and Binks, 2012). Interpretivists, on the other hand, often employ an inductive approach in which knowledge is derived from groups within data. This gives a wealth of data and hypotheses that help in the interpretation of social phenomena (Liew, 2007; Collis and Hussey, 2009; Johl, Bruce and Binks, 2012). Therefore, this research investigates the impact of gender on pay equality between men and women in SA using the deductive approach augmented by an inductive approach. The following sections discuss the research design and method employed in this thesis now in more detail.

4.4 Research design and method: Rationale and explanation

This study employs an explanatory sequential design, which is also called a two-phase model (Creswell and Clark, 2011). Quantitative data are collected first and are analysed, followed by a qualitative analysis to help explain and interpret the quantitative results, especially in the case of unexpected results (Morse, 1991; Tashakkori and Teddlie, 2003). Accordingly, the study first emphasises the statistical analysis of quantitative data on workers' pay and characteristics. This is followed by interviews to explore managers' explanations of the reasons for pay differences between men and women in the private and public sectors.

This design is regarded as one of the most straightforward among the mixed methods approaches. In that sense, the sequential explanatory approach combines both quantitative and qualitative designs yet gives more priority to the quantitative (Creswell et

al., 2003). Unlike the sequential 'exploratory' design, which is better suited to exploring a phenomenon and testing elements of 'emergent' theories, the sequential 'explanatory' design is more appropriate when testing the applicability of theories or testing hypotheses that are 'deductively' derived from theories (Morgan, 1998). As the purpose of this study is to test, rather than develop, a theory that explains wage inequality between men and women, a 'deductive'4 approach has been chosen.

Bryman and Bell, (2019, p. 26) point out that "quantitative research can be characterised as a linear series of steps moving from theory to conclusions". "It is concerned with the numerical attributes of an individual or objects" (Collis and Hussey, 2003, p.153). The quantitative approach helps to measure variables and is associated with deductive approaches (Collis and Hussey, 2003). Quantitative methods of measurement are used for three reasons: generalisation, replication and causality (Bryman and Bell, 2019).

On the other hand, qualitative methods rely heavily on non-numerical attributes. It is explained by Bryman and Bell (2019, p.21) as "a research strategy that usually emphasizes words rather than quantification in collecting and analysis of data, and that rejects the practise and norms of the natural scientific models". It is associated with the interpretive philosophy. It facilitates the collection of rich data on participants' thoughts, feelings and experience, and the meanings they attach to them. In this respect, it is useful for gathering information about the meaning of social phenomena.

[4] In deductive reasoning, the researcher moves from general ideas (theory) to specific reality (data), whereas inductive reasoning is the other way around, i.e., the researcher moves from the specific to the general (Saunders et al., 2019).

Given the above discussions, in order to address the research questions posed in section 4.2 above, this thesis employs a mixed methods research design. First, the main investigation relies on surveys to evaluate the factors that influence pay inequalities of male and female employees working in the private and public sector. Second, semi-structured interviews were conducted to develop deeper insights into the reasons for pay inequalities that the regression model has not accounted for (religion, gender stereotypes). As a result, integrating quantitative and qualitative methodologies in a single study is a beneficial strategy to provide the researcher with an accurate picture of the study's scenario, filling gaps that one methodology may overlook. The utilisation of quantitative and qualitative complement one other (Howe, 1988), and enable confirmation or collaboration of each other via triangulation, thereby providing richer detail and fresh insight (Rossman and Wilson, 1985). In this thesis, the use of surveys and semi structured interviews can increase the credibility and validity of the findings; and these two methods are discussed in the next sub-section.

4.4.1 Quantitative phase

Applying quantitative methods in research has various advantages for researchers. For example, the nature of such methods enables them to develop hypotheses and therefore test theories (Whitfield, 1998). Quantitative methods employ “the use of standardised measures so that varying perspectives and experiences of people can be fit into a limited number of predetermined response categories to which number are assigned” (Patton, 2002, p.14). One important feature of quantitative techniques is that the process of data collection becomes distinct from analysis (Easterby-Smith et al., 2012). However, we also

know that quantitative methods are mostly concerned with the production of relatively narrow empirical snapshots of isolated phenomena at fixed points in time and do not do complete justice to the nature of subjects as social phenomena. Though they may play a role in analysis and understanding of the process of social change, its use is much more restricted in subjectivist positions (Morgan and Smircich, 1980).

In particular, this study uses surveys, which are powerful tools that help researchers to collect data in relatively short time, with less cost and on a large scale. Also, surveys maintain the anonymity of participants and provide an opportunity for them to answer questions in their own time (Bryman and Bell, 2019). Furthermore, surveys are a favoured approach in business and management studies, enabling researchers to obtain a large amount of data at little cost by employing a questionnaire tool distributed to a large sample of people, which ultimately should lead to better results (Saunders et al. 2012). As such the quantitative method is helpful in answering the question of what factors impact pay inequality between men and women in SA.

The quantitative phase involves the collection and analysis of secondary and primary data. The secondary data were collected from: (i) the General Organization for Social Insurance (GOSI), and (ii) the Labour Force Survey (LFS). The primary data were collected through questionnaires distributed to Saudi employees in the private and public sectors.

4.4.1.1 Models

In order to investigate the determinants of employees' pay in SA, this study employed (i) the Ordinary Least Squares (OLS) regression, (ii) Oaxaca-Blinder decomposition, and (iii) the Recentered Influence Function (RIF) regression decomposition method.

(i) OLS regression

The OLS estimation method is given as the equation (1) below:

$$ln\, w_i = X'_{ij}\beta_j + \varepsilon_i \qquad (1)$$

where i denotes an individual worker, $ln\, w_i$ is the natural logarithm of his or her monthly pay. Explanatory variables (X'_{ij}) indicate the individual/job characteristics that contribute to monthly pay that they received (e.g., *Gender*, *Tenure*, *Age*); β is the represents the change in the dependent variable value for every unit change in the independent variable value; and ε_i is the error term. All variables are defined in Appendix I,III, and V.

(ii) Oaxaca-Blinder decomposition

The pay equation above can give us a summary of the gender pay gap differentials but does not show the extent to which each characteristic contributes to the pay differentials between men and women. The latter could be derived by the use of the Oaxaca-Blinder decomposition (OB), which enables us to decompose the gender pay gap into that explained by to gender differences in attributes and that which cannot be explained. That is, the use of the OB decomposition enables us to answer the interesting question of how much of the pay gap is due to discrimination, which the wage equation given above cannot answer. Therefore, this model provides a beneficial statistical technique, which aims to assess the degree to which individuals with comparable characteristics are paid

differently and whether the difference is correlated with gender/sex, which is usually termed “discrimination”.[5]

The OB decomposition method splits the gender pay gap into two parts:

(i) The first indicates the appearance of the gender pay gap because of the disparity in characteristics between men and women.

(ii) The second denotes the gender pay gap as caused by different rewards for women and men with similar characteristics. This concept is known as `discrimination’, whereby women earn less than men, because these characteristics are given a different value by the market.

To understand the underlying causes of the gender pay gap, we undertake an OB decomposition at the mean (see Healy and Ahamed, 2019). First calculated D_t, which is the deference in the expected value of male and female (log) hourly pay in period t (raw difference), by estimating equation (1) separately for males and females. D_t can be decomposed into two parts: the first part corresponds to the raw difference attributable to differences in observed characteristics or endowments; the second part corresponds to the raw difference attributable to differences in coefficients. This can be written as:

$$D_t = \overline{\ln w}_{mt} - \overline{\ln w}_{ft}$$
$$= \underbrace{(\bar{X}_{mt} - \bar{X}_{ft})'\hat{\beta}_{mt}}_{\text{Endowment effects}} + \underbrace{\bar{X}'_{ft}(\hat{\beta}_{mt} - \hat{\beta}_{ft})}_{\text{Discrimination Effect}} \qquad (2)$$

[5] The Oaxaca-Blinder decomposition has, however, been criticised by a number of researchers. For instance, Madden (1999) argues that such analysis ignores differences in terms of labour market endowments or rewards (e.g., women’s access to higher education), and can only capture wage discrimination in the labour market, which in turn underestimates the gender wage gap.

where $\hat{\beta}_{jt}$ is the estimated value of β_{jt}. The first part of equation (2) is the endowment effect i.e., the explained part of the gender pay gap that is due to the differences in observed characteristics at the mean, which is weighted by the coefficients attributable of men. The second part is the unexplained component of gender pay gap that arises due to the differences in pay between genders attributable to the gender differences in coefficients including intercepts.

(iii) Recentered Influence Function (RIF) regression decomposition method

To understand the gender pay gap across the pay distribution, this study uses an unconditional quantile regression based on the Recentered Influence Function (RIF). This can decompose the gender pay gap at quantile q as follows:

$$D_t(q) = \underbrace{(\bar{X}_{mt} - \bar{X}_{ft})'\hat{\beta}_{mt}(q)}_{\text{Endowment effects}} + \underbrace{\bar{X}'_{ft}(\hat{\beta}_{mt}(q) - \hat{\beta}_{ft}(q))}_{\text{Discrimination Effect}} \qquad (3)$$

where the first part represents the endowment effects, that is, the explained portion of the gender pay gap at q^{th} quantile, and the second part represents the discrimination effect, that is, the unexplained portion of the gender pay gay at the q^{th}quantile, which estimates the gender differences attributable to the returns to labour market characteristics. The main advantage of the unconditional quantile regression is that the explanatory variables can be interpreted as the marginal effects on the targeted unconditional quantiles of the variable of interest, which is particularly interesting for policy implications. Using RIF method(Firpo et al., 2009) illustrate the application of Oaxaca-Blinder decomposition of the mean to quantiles in two steps. First, the RIF for a statistic, for example a quantile, is a transformation of the outcome variable. Second, using the RIF unconditional quantile

regression, the pay gap is decomposed at different quantiles that are attributable to the gender wage differences in endowment effects and discrimination effects.

4.4.1.2 Data sources

4.4.1.2.1 GOSI (Saudi based data)

(i) Data and sampling

Data collection methods enable the achievement of research objectives and hence, should be carefully selected as they can enhance the research value (Collis and Hussey, 2009). This study makes use of the GOSI database for 2018 to analyze the applicability of socio-economic factors (gender, age, job tenure, industry, occupation) in explaining pay inequality between men and women in the Saudi private sector. GOSI is a state sponsored organization characterized as administratively and financially independent, which performs its activities through the Head Office and 21 field offices located in different regions and governorates in SA. The social insurance scheme is considered as a key aspect of social cooperation and solidarity which society provides for its citizens. GOSI contains an overview of active (non)Saudi companies registered in GOSI in all regions within SA, which are categorized based on the number of employees (Small: 1-5, Micro: 6-49, Medium: 50-249, Large >= 250). The industries contained in the GOSI dataset are finance, insurance, real estate, and business services, electricity, gas and water, manufacturing industries, agriculture and fishing, community and other social services, mining and quarrying, construction, commerce, and post and telecommunications. These can be used to capture the effect of industrial segregation on earnings.

Moreover, occupational information contains categories such as lawmakers, directors and business managers, specialists in professional, technical, and humanitarian fields, technicians in professional, technical and humanitarian fields, clerical, sales, and services occupations, occupations in agriculture, animal husbandry and fishing, occupations in industrial, chemical operations and food industries, and ones supporting basic engineering. They are used to capture the effect of occupational segregation on earnings (GOSI statistic report, 2018). As highlighted earlier, GOSI is a state agency in SA that has responsibility for social insurance. GOSI implements social insurance rules, collects contributions from employees and employers, and pays benefits to entitled insured persons and eligible family members. Therefore, GOSI is responsible for multiple tasks. First, GOSI maintains records of all GOSI subscriptions. Second, it keeps employee records, updating for all new hires and terminations. Third, it verifies accuracy of employee information on GOSI and company records, and it registers new employees for GOSI. Finally, GOSI works on update salary information for employees.

The GOSI database does not, however, provide all the necessary information required to draw inferences about the pay gap between men and women in the Saudi context. For example, Peck, (2017) was not able to examine expatriate employment in the private sector in 2011 due to the absence of data on expatriate workers in the same year. In addition, in the study of the economic trends of diversification vs. specialization of the Saudi urban system over the last eighteen years of analysis (1992 to 2010), the details of industrial sectors of employment at urban levels were not available. However, the researcher used nine major economic sectors (i.e., Mining and Petroleum, Agriculture, and Fishing, Manufacturing, Electricity, Construction, Trade and Hotels, Transport and

Communication, Financing and Real Estate, Community and Social Services) to capture the specialization or diversification of Saudi urban economies (Alhowaish and Al-Shehri, 2014)

Nevertheless, the GOSI dataset has been used to some extent. For instance, Peck, (2017) studied the effects of quota-based labour regulations on firms in the context of Saudi Arabia's Nitaqat program. Moreover, Alhowaish and Al-Shehri, (2014) investigated the economic trends of diversification vs specialization of Saudi urban system over the last eighteen years of analysis (1992 to 2010) utilizing the GOSI database. Also, De Bel-Air (2014), examined demography, migration and labour market in SA using the GOSI database. Additionally, Alshehry (2009) used GOSI to explore the perceptions of Saudi business and the workforce on the Saudization programme in the private sector. Also, Clingan, (2019) examined the size and causes of the gender wage gap among Saudi and non-Saudi workers in the private sector.

There is restricted access to the GOSI dataset; researcher of this study therefore has followed set procedures to obtain permission to access data. These are complicated and time-consuming. The first step was to contact the Research & Studies Department in GOSI by email, with an explanation of the requested dataset that will serve the thesis, and in-depth explanation of the aims of the study and how obtaining the data will assist this project to have better understanding of the causes of pay disparity between men and women in the Saudi context. The second step is the request from GOSI to fill in the 'Data Request Template' form and return it. The last step is approval to get the data requested from GOSI, which took around three months.

With regard to accessing the data, there is restricted access to the GOSI dataset, however, the researcher of this study has followed the set procedures to obtain permission to access the data. These was complicated and time-consuming. The first step was to contact the Research & Studies Department in GOSI by email, with an explanation of the requested dataset that will serve the thesis, and in-depth explanation of the aims of the study and how obtaining the data will assist this project to have better understanding of the causes of pay disparity between men and women in the Saudi context. The second step was the request from GOSI to fill in the 'Data Request Template' form and return it. The last step was approval to get the data requested from GOSI, which took around three months.

As noted above, the GOSI database does not, however, include all information needed to understand the determinants of wages (e.g., *Education*, *Training*, *Married*, and the *Number of young children* in the household) perfectly. This, in turn, makes it difficult to draw reliable inferences about how much variations in wages are explained by gender (due to the lack of control variable data). As Rees, (1998) states, "it is important to disaggregate statistics, not simply by gender, but by gender cross-tabulated with other variables to reveal the structural disadvantages experienced by smaller units of analysis" (p. 193).

To demonstrate the importance of controlling for the impact of socio-economic factors (e.g., *Education*, *Number of children* etc.), this study therefore extends GOSI's analysis by using the LFS data for the same period of 2018. This allows us not only to provide a comprehensive and rounded perspective of the determinants of the gender pay gap, but also to compare the gender pay gap in SA and the UK.

(ii) Variable measurement-GOSI

The dependent variable used in the GOSI analysis is the natural log gross pay per month calculated for full time working employees *Monthly pay (in log)*. The main independent variable is *Female*, which takes the value of 1 if the employee is a female and 0 otherwise. The analysis controlled for job tenure or seniority *Tenure*, which is measured as the number of months of employment with current employer.6 The longer the years of service with a firm, the more workers may be expected to acquire firm-specific skills, which, in turn, should have a positive effect on wages. One of the major insights of Human Capital Theory is that individuals can increase their productivity not only through their investment in formal education but also by learning important work skills while they are on the job. Workers benefit from the informal instruction of their supervisors or co-workers and grow proficient at their jobs through repetition and trial-and-error (Sugihashi, 2003). The *Tenure²* captures the declining effect of work experience on wages after a certain point in time as wages increase with experience until a peak point at which wages start to decline (Sugihashi, 2003), creating an inverted U-shaped pattern.

In addition, the GOSI analysis included fifteen dummy variables to control for *Industry*-specific differences, which may affect wage differences between the genders. Many studies have examined wage differentials across various industries (e.g., Reilly and Zanchi, 2003; Benito, 2000; Gannon and Nolan, 2004; Gannon et al., 2007; Arbache,

[6] Following previous studies (Blau and Kahn,2017; Litman et al, 2020), this study controls for total work experience using the age of employees (*Age*) (and their squared terms - actual wage rates tend to rise with age until the mid-forties, fifties, or sixties, and then begin to decline) instead of their tenure period with their current employers. Age is an essential factor in determining the wage level, especially because age reflects not only the life cycle but also the consumption level of employees (Joshi and Davies, 2002). It is suggested that earnings rise with age, and employers pay higher wages to older employees because they have greater financial responsibilities (Ibrahim, 2017).

2001; and Erdil and Hakan Yetkiner, 2001), and found that employees with the same amount of human capital are rewarded differently depending on the industry in which they are employed. Specifically, industrial and building & construction are mainly dominated by men (Øvensen and Sletten, 2007). Women, on the other hand, are highly represented in low productivity activities, such as agriculture and services, which offer lower wages (Islam and Abdel-Fadil, 2005). It is also suggested that highly capitalised industries such as finance and insurance and real estate offer much higher earnings than labour-intensive industries such as personal services. In both Japan and Britain, for example, women tend to be concentrated in relatively poorly paid industries such as service and wholesale and retail (Sugihashi, 2003).

Following the literature, the wage equation is augmented with twelve dummy variables to control for *Occupation*-specific differences. Different occupations require different levels of skill and working conditions, thereby offering different wages. It is suggested that the occupational distribution is quite different between men and women, and this has been found to contribute substantially to the gender wage gap (Sugihashi, 2003). This may be true for at least two reasons. First, pay differences arise from the concentration of men and women in different occupational groups, such as clerical occupations for women and engineering occupations for men (i.e., horizontal segregation). This type of occupational segregation influences the gender pay gap because female-dominated occupations are paid less regardless of their actual value or contribution to the firm. Several studies (see, for example, Watts, 1998; Bayard et al., 2003;Manning and Saidi, 2010; MacPherson and Hirsch, 1995; and Fortin and Huberman, 2002) suggest that the gender pay gap is more pronounced in female-dominated jobs, i.e., jobs with lower status, lower wages, and

temporary position. The second reason is related to segregation within occupational groups (i.e., vertical segregation). Under-representation of women at higher occupational levels also contributes to a gender pay gap. Both these types of segregation lead to pay differences between men and women. Appendix I provides a detailed description of each variable used in GOSI analysis.

4.4.1.2.2 LFS (UK based data)

(i) Data and sampling

In addition to GOSI, this study used data obtained from the Office for National Statistics Quarterly Labour Force Survey (QLFS) for the period (October – December) in 2018 for full-time employees in the private and public sectors across different firm sizes (small, medium, and large). It is the most recent data available at the time of analysis, and it is consistent with the sample period for the GOSI dataset. The QLFS is a survey of 86,585 cases across individuals and families/households in the UK, which is designed to examine a variety of aspects of labour market behaviour. It can thus serve as an appropriate data source for the analysis of gender wage differentials (ONS, 2020).

The LFS has been collected since 1973 under a regulation derived from the Treaty of Rome. Its primary aim is to provide information on the UK labour market for international comparisons, and it also contains detailed questions of national interest. It is carried out by the Social Survey Division of the Office for National Statistics in Great Britain and the Central Survey Unit of the Department of Finance and Personnel in Northern Ireland, on behalf of the Department of Economic Development. The LFS was conducted biennially from 1973 to 1983 (for the UK), and annually from 1984 to 1991 for Great Britain (England, Scotland, and Wales), and from 1984 to 1994 for Northern Ireland. Since the spring of

1992 for Britain and from the winter of 1994/95 for Northern Ireland, it has been conducted quarterly (HSE, 2020).

In addition, a quarterly sample in the LFS database is made up of five waves. Respondents are interviewed for five successive waves at 3-monthly intervals, and about 20% of the sample is replaced every quarter (ONS, 2017). The method of data collection is a face-to-face interview and a telephone interview. The first interview is conducted face-to-face, and subsequent interviews are held by telephone where possible. To keep more respondents participating in the survey, proxy responses are accepted if they are unavailable. Proxy data are less accurate than data collected directly from the subject, particularly where questions require detailed information (Ibid).

Moreover, the quarterly LFS questionnaire comprises a set of 'core' questions which are included in every survey, together with some 'non-core' questions, which vary from quarter to quarter. The questionnaire can be split into two main parts. The first part contains questions on the respondent's household, family structure, basic housing information and demographic details of household members. The second part contains questions covering economic activity, education, and health, and may also include a few questions asked on behalf of other government departments (e.g., the Department for Work and Pensions and the Home Office). Since 1993, detailed questions on income have also been included in each quarter. The basic questionnaire is revised each year, and a new version is published, along with a transitional version which includes details on the changes from the previous year’s questionnaire (ONS,2017).

Furthermore, the LFS collects data on all members of the household, which allows analysis at the individual and/or household levels. General information about the

household, family and demographic characteristics is also collected from all members of the household. Each adult (aged over 16) of the household is asked detailed information on economic activity, main job, secondary job, unemployment, under-employment, benefit entitlement, education and training, health, and income (ONS,2017).

The LFS dataset is an essential source of earnings information; from 1997, the LFS includes questions on earnings (e.g., gross pay, overtime, bonuses, and tax) in both the first and fifth interviews. Before that, earnings questions were only asked in the fifth interview because there was a concern that an income question might lead to a higher non-response rate in later interviews. However, ONS found no evidence to support this and thus decided to include questions on income in the first and fifth interview from spring 1997 onwards (Sugihashi, 2003).

Several studies have examined the reliability of the LFS data by comparing them with the New Earnings Survey, which has been the main source of earnings in the UK (e. g. Laux and Marshall, 1994; Wilkinson, 1998). Although the LFS earnings data is proved to be somehow more reliable than the New Earnings Survey, its self-reporting tends to underestimate, especially in reporting by proxy respondents. Proxy respondents tend to misreport earnings, for example, by giving the amount after deduction of income tax, instead of their gross income (Wilkinson 1998). However, although self-reporting may include overtime pay or sometimes contain underestimates, the LFS is still an important source of earnings for gender pay gap studies that need information on labour market status characteristics and family circumstances. It allows us to relate earnings to employee, job, employer, and family characteristics. It also helps investigate the impact

of age and education as well as the impact of demand-side factors on wage and gender wage differentials.

Several studies (see, for example, Leaker, 2008) have lent support for using LFS data for earnings analysis over other databases such as the Annual Survey of Hours and Earnings (ASHE) which does not include information on individual characteristics. Importantly, the LFS dataset has been widely used in gender pay gap studies. For instance, Sugihashi (2003) used it to explore male-female wage differentials by comparing the earnings differentials between full-time working women and men. Besides, Machin and Puhani, (2003) used the data to examine the effect of the subject of a degree in explaining wage gaps between male and female university graduates. Joss, (2005) also examined the potential for Equal Pay Audits to identify the causes of unequal pay in an individual organization in the United Kingdom's finance sector. More recently, Fortin, Bell and Böhm, (2017) employed the LFS dataset to investigate the effects of the under-representation of women in top jobs for the overall gender pay gap. With its large sample size, the LFS provides comprehensive information on the labour market and characteristics of employees, jobs and employers, which overall means it should always be considered when analyzing gender pay gaps.

(ii) Variable measurement-LFS

The dependent variable is the natural log gross pay per hour worked (including overtime) *Hourly pay (in log)*. The main independent variable is *Female*, which takes the value of 1 if the employee is a female and 0 otherwise. The LFS analysis presented in this thesis included eight dummies to capture the work experience of employees with their current employer (*Tenure*— the reference category is those with less than 3 months), the age of

employees *Age* and the *Age²,* as well as the number of hours worked per week *Hours*. It is suggested that women, on average, work fewer hours than males, which may in turn affect pay inequalities between the genders (see Mandel and Semyonov, 2014). The analysis also included a dummy variable for having training (*Training*— no training is the reference group). Several studies (e.g., Polavieja, 2008; Grönlund and Magnusson, 2016) suggest that training is an important factor that determines the employees pay and also contributes to the gender pay gap. Research indicates that although training is more beneficial for female than male workers in full-time employment, women are less likely than men to take part in job training (Evertsson, 2004)

In addition, the analysis includes six dummies for education (*Education*— no qualification is the reference group). Many studies have shown that people with greater education levels receive better salaries, are more productive, and have higher employment rates than their less-educated peers (see Card, 1999; Psacharopoulos and Patrinos, 2004; Khan, 2017). To control for unobserved differences across occupations, industries and regions, the analysis includes fixed-effect dummy variables. A discussion of the effects of *Occupation*- and *Industry*- specific differences on the wage gap is provided in the GOSI section above.

With regard to the effects of *Regions* on pay/gap, it is often argued that pay varies across geographic regions because there are significant differences between regions in the sectoral and establishment composition, resulting in various regional job opportunity structures for men and women (Hanson and Pratt., 1995; Nisic, 2017; Perales and Vidal, 2015; Petrongolo and Ronchi, 2020). One possible reason for these spatial differences is agglomeration effects which raise productivity and, consequently earnings, by enhancing

the quantity and quality of matches between employees and businesses in dense labour markets, where men and women are affected by them in different ways. (Glaeser and Maré, 2001). For example, due to more and better job opportunities in dense agglomerations, women may experience a lower wage depreciation resulting from time out of employment than women in rural areas (Phimister, 2005). Another possible reason is related to the decreased spatial mobility of women, which limits their job search to a limited area and prevents them from obtaining better employment and better pay in other areas (Crane, 2007; Petrongolo & Ronchi, 2020). Appendix III provides a precise definition of the variables used in the LFS analysis.

4.4.1.2.3 Survey/ questionnaire

(i) Data and sampling

The data in this phase were collected through questionnaire using a survey website, Qualtrics. This website provides online survey tools that allow researchers to build surveys, and distribute surveys from one online location. The primary data collection for the present study was carried out between July 2020 – April 2021 across eight industries in the public sector and four industries in the private sector in SA with varying sizes (i.e., large, medium, and small). According to Gay and Airasian, (2003), a questionnaire is used to investigate an issue in terms of assessing beliefs, attitudes, opinions, preferences, and practices. Busha and Harter, (1980, p.56) state, “a population is any set of persons or objects that possesses at least one common characteristic.” As populations can be large, researchers focus only on a sample of the population. According to Rea and Parker,

(2012, p.4) “accurate representation of information” refers to “accurate generalization” about the attitudes, opinions and ideas on issues concerned by a large population by studying only a small part. This strategy is therefore appropriate for this study, as it seeks to elicit and assess the opinions, perceptions, preferences, and attitudes of the respondents in order to assist in achieving the research aim. Data were gathered from a sample of the population in order to represent the wider population accurately.

The questionnaire was gathered through a 20-minute online survey, in either English or Arabic. The “back translation” technique was used to check the accuracy of the translation (Chapman and Carter, 1979). Therefore, the survey was translated from English into Arabic by a native Arabic speaker, and then back translated from Arabic to English by an English native speaker, to avoid any misunderstanding in meaning between the two languages. The survey was promoted as a survey on “pay inequality”, and all participants were aware of its objectives.

The survey asked participants about their individual characteristics and job characteristics. These include the gross monthly pay for male and female employees *Monthly pay (in log)*, *Saudi*, *Region*, *Age*, *Gender*, *Married*, *Children under 16 years*, *Occupation*, *Tenure*, *Managerial*, work intensity (*Full-time* versus part-time), *Education* and *Training*, average *Hours* worked per day, and length and type of *Career breaks*. Participants were also asked about the industry they were working in. The survey began with informed consent and requested all participants to submit their informed consent to participate by clicking the "Next" button. Appendix VI contains the survey information that was delivered to participants to guarantee informed consent. Apart from the consent

question, respondents had the right to withdraw at any point during the survey, for any reason, without prejudice, because their participation in this study was voluntary.

Regarding the description of the study population for the public sector, Saudi National Portal for Government Services contains a published list of all the government organisations in SA, which comprises 254 organisations (The Unified National Platform, 2021). This indicates that they had 1,627,858 employees at that moment, which includes Saudi and non-Saudi men and women across the entire kingdom (General Authority for Statistics, 2020). These employees were involved in 15 economic activities: Municipalities, Governorates, Universities, Diwans, Presidencies, Funds, Forces, Colleges, Corporations, Councils, Directorates, Centers, Hospitals, Authorities, and Ministries (The Unified National Platform, 2021). Data analysed in this thesis come from 2,274 of these employees, and eight of the fifteen economic activities: Authorities, Corporations, Funds, Hospitals, Ministries, Presidencies, and Universities. Respondents reported a wide range of age, regions, nationalities, professions, and type of employment.

In terms of the description of the study population for the private sector, this sector includes eight industries based on the General Organization for Social Insurance, with 8,026,901 employees that also includes Saudi and non-Saudi men and women across the entire kingdom. Workers in the private sector were involved in nine economic activities: finance, insurance, real estate, and business services; electricity, gas, and water; manufacturing industries; agriculture and fishing; community and other social services; mining and quarrying; construction; commerce; and post and telecommunications and other activities (General Authority for Statistics, 2019). Data presented in this thesis come from1,733, working in four out of the nine economic

activities: finance, insurance, real estate, and business services, electricity, gas and water, mining and quarrying, and post and telecommunications. Again, respondents reported a wide range of ages, nationalities, professions, occupational status, and regional locations.

To increase response rates, the researcher directly contacted a number of HR managers in the private and public sector, who agreed to circulate the survey link to their employees (by email). The employees were then asked to fill in the questionnaire; importantly, their responses were not seen or shared with company management. Instead, responses were submitted directly to the survey website. This means employers were not able to see the responses of their employees at any stage, or even to know who had responded.

There were clear disadvantages to being a female researcher in terms of access to potential research respondents. Hofstede and Bond, (1984) categorized Arab countries as high masculinity societies, where there is a clear hierarchical distinction between gender roles. There are certain cultural restrictions in SA on females contacting unrelated males. These factors presented the researcher with challenges regarding access. However, these challenges were overcome, largely through the collaboration of HR managers of both sectors and the researcher's own network.

In order to enrich our understanding of the gender pay gap phenomenon in Saudi context, the survey collected information on respondents' demographic characteristics (e.g., age, gender, ethnicity, location, marital status, occupation, training, experience) and their gross hourly pay. It is also worth noting that the same three models, which have been discussed above (see section 4.1.1.1), were used to analyze the survey data. These

models include (i) OLS, (ii) Oaxaca-Blinder decomposition, and (iii) RIF; and the variables used in these models are discussed below.

Despite its usefulness, the quantitative analysis of questionnaire does not include the full set of variables that explain the gender pay gap. Therefore, in order to provide an even more complete picture of the issues concerning pay inequality between men and women, the study conducted semi-structured interviews with HR managers; the interview design is discussed in more detail further on in this chapter.

(ii) Variable measurements- Survey/questionnaire

The set of explanatory variables that are used included *Female* (0= male, 1= female), *Saudi* (0= non-Saudi, 1= Saudi), and *Public* (0= private sector, 1= public sector). Prior research suggests that employees with similar productivity characteristics are paid differently in the public and private sectors due to differences in promotion and compensation determination processes (Hyder and Reilly, 2005). Notably, unusually, employees in the public sector often earn more than those in the private sector (Pedersen et al. 1990; and Gornick and Jacobs, 1998) the gender wage disparity in the public sector is smaller than that in the private sector (Rosenfeld and Kalleberg, 1991; Whitehouse, 1992). In SA, the public sector is favourably perceived by women as a more culturally suitable working environment, as employees in the Saudi public sector have more weekly and annual breaks than private sector employees. Unlike the private sector, the number of working hours in the public sector is approximately 35 hours per week (i.e., an average of 7 hours per day for 5 days per week). Additionally, the Saudi public sector is financially supported by the government, and this is a very important advantage. To explain further, in the public sector, there is a consistent pay increase every year for all employees; there

are estimated bonuses based on the number of years of service; and retirement law in government departments allows employees to receive full pension after 30 years of service (Sayidaty, 2019).

In addition, the analysis included *Age* (four categories), *Tenure* (five categories), *Education* (five categories), *Training*, *Professional qualification*, number of *Hours* worked, *Married* (0= not married, 1= married) and full time (0= part time, 1= full time). Also included is a dummy variable for *Career break* (dummy coded with 1if the respondent reported s/he had a career break, or 0 if s/he did not) because employees with career breaks tend to receive lower wages than employees who do not, with gaps in income and number of promotions widening over time (see Goldin, 2014). Furthermore, the analysis included four dummies to control for the *Number of children under 16 years of age* an employee has (*Training*— no training is the reference group). The literature suggests that married women with children earn less than married women without children (Harkmess and Waldfogel, 2003), but married males with children earn more (Polachek, 1975). It also included a dummy variable *Managerial*, which equals 1 if the respondent reported s/he has a *Managerial* position in the company, or 0 if s/he does not. This explanatory variable is likely to directly affect pay and hence the pay gap between men and women. Men are perceived to be better suited for leadership positions than women due to ascribed personal characteristics; men are seen to be leading, and dominant, while women are generally viewed as dependent, and gentle (Baron, 1994; Mensch et al., 2003), and thereby men can be expected to earn more than women (Watson, 2010). Finally, the analysis controlled for region (six categories), and industry (11 categories). Appendix V provides a detailed description of the variables used and their measurement.

4.4.2 Qualitative Interviews

Interviews are an essential technique for researchers in different ways. First, the method enables investigators to identify behavioural patterns within an organisation. They also allow researchers to identify individuals' thoughts and the rationales that shape their actions (Johnson and Onwuegbuzie A. J., 2004). While questionnaires generate general information, interviews can provide different kinds of insights that allow more space and depth of exploration (Dawson, 2007); however, the interview method cannot be generalised to the population (Whipp, 1998). Therefore, rather than relying solely on quantitative questionnaires to collect data, the researcher combined qualitative interviews to obtain in-depth understanding of the research phenomenon (gender pay gap inequalities). The use of multiple methods for collecting data, which is referred to as triangulation, can also reduce bias when analysing data (Collis and Hussey, 2009; Bryman and Bell, 2019).

More specifically, although quantitative analysis helps to evaluate the factors that influence pay inequalities, the qualitative analysis employed in this study enabled us to develop deeper insights into the reasons for pay inequalities that the regression models did not account for (such as communication/management skills). These were obtained by listening to the different perspectives of HR managers in relation to the gender pay gap. In that sense, qualitative analysis complements the quantitative analysis by reinforcing our understanding of the gender pay gap phenomenon, as well as by providing in-depth discussion about the positive, negative, and ambivalent perceptions and beliefs held by the individuals who might be affected by the gender pay gap in the private sector. By

combining quantitative and qualitative data, the findings of this study create a layered analysis by providing statistical information as a first step, then by delving deeper into understanding of the phenomenon in the second step, qualitative analysis. After a careful review of the quantitative findings, a set of questions were developed for HR mangers in order to acquire a better understanding of the causes for pay inequalities between men and women in their companies.

There are three main types of interview technique: structured, semi-structured or unstructured/open-ended. Structured interviews with predetermined questions are generally applied in quantitative studies such as large-scale surveys. Unstructured interviews allow interviewees to discuss topics without a structure, while semi-structured interviews lie in between the structured and unstructured types, and provide flexibility by changing the order of questions, modifying existing questions, and taking the opportunity to pose new questions not thought of earlier (Bryman and Bell, 2019). Consequently, semi-structured interviews were used to collect data from relevant HR managers involved in making decisions on gender pay inequalities in the public and private sectors. The section below addresses the process of conducting semi-structured interviews, including the sample decision, contacting interviewees, data collecting, interview questions, interview profile, and data analysis.

4.1.1.1 Sampling decision

In order to gain an in-depth understanding of managerial motivations and explanations of gender pay inequalities in Saudi companies, the researcher conducted 13 interviews with HR managers drawn from 8 companies from various industries, including banks, telecommunications, hospitals, and food industries, public and private sectors. Those

managers can make decisions about employees' pay, promotion, benefits, compensation, and recruitment. By conducting interviews with key decision makers, this allowed the researcher to confirm and corroborate the findings of the quantitative analysis, thereby improving the accuracy of the results. Furthermore, in order to avoid the risk of not being able to gain access to relevant decision-makers, the researcher made successful initial informal contacts with key decision-makers, where formal contacts with key decision-makers were conducted after obtaining all necessary ethical approvals.

4.1.1.2 Contacting the interviewees

Personal contact was used to recruit decision makers from sampled companies for the interviews. The researcher identified the decision makers and initially approached them via email. The email stated the research goals and objectives for conducting the interviews. Each possible respondent was given time to evaluate whether or not to participate in the study and, if required, to request clarification. Thirty emails were sent, and seven responses were received. In July 2019, the researcher called the seven interviewees to establish contact and seek assistance in recruiting further interviewees. This resulted in the recruitment of six more respondents. As a result, 13 interviews were conducted (see table 4.4).

Table 4.4 Number of selected interviewees, positions, industries, gender and age

Series	*Interviewee role*	*Number of interviewees*	*Gender*	*Age*
1	Career Development Manager	1	Male	30
2	HR operations manager	1	Male	32
3	Senior HR manager	4	Male	34
4	Human resources director	2	Male	31
5	Vice President Human resources	1	Male	45
6	Talent acquisition specialist	1	Male	40
7	HR business partner	1	Female	42
8	Human resources specialist	1	Female	29
9	Organizational Planning Specialist	1	Male	49
Total		13		

4.1.1.3 Interview procedures

Due to Covid-19 travel restrictions, all interviews in the study were conducted using online video conferencing platforms (e.g., Zoom). The interviews were held in October and November 2021. Before starting the interviews, the researcher explained the nature of the study and requested each interviewee to read the Participant Information Sheet. Furthermore, interviewees signed a consent form (see Appendix VIII). Finally, as indicated in the information sheet, all participants were reassured of their anonymity and confidentiality; it was specified that any personal identification, such as the interviewees' names and firms, would not be divulged. The 13 interviews ranged in length from 40 to 75 minutes. The researcher began the interview after presenting the research by asking each participant introductory questions such as identifying their job and the major activities and responsibilities they had/have within their organizations. This strategy resulted in a more comfortable interview environment, as well as the development of rapport and trust between the interviewer and the interviewee.

During interviews, it was critical for the researcher to remain objective and avoid inserting any personal interpretation or point of view into the argument. Follow-up questions were

asked by the researcher if responses needed further clarification. The interview subject guide was used as a check list to ensure that all subjects were covered throughout the interview. In addition, written notes were gathered throughout the recorded interviews to pinpoint relevant topics, which the researcher then utilized to analyse the transcripts. The interview approach allowed for flexibility and the investigation of additional material acquired from interview transcripts. Because the interviews were conducted in Arabic, they were transcribed by a reliable transcription service used by many academics in SA. The researcher is a Saudi native who speaks Arabic as a first language. As a result, the researcher was able to ensure that the transcripts were correct. All transcriptions, recordings, and related information were securely saved on University of Birmingham servers, with only the researcher having access.

4.1.1.4 The interview analysis

The transcript data from the interviews was not analysed using any qualitative analytic program (such as NVivo). This decision was taken because qualitative analytic tools cannot do critical thinking or generate conclusions; hence, the researcher needs to interpret the data (O'Dwyer, 2004). Instead, the researcher analysed the data using Rapley, (2011) framework analysis technique. In addition, the volume of qualitative data did not justify use of analysis software.

The researcher read and reread the transcripts several times to become acquainted with the data and referred to the notes collected during the interviews. While assuming the honesty and sincerity of the respondents' sensemaking and perceptions, the researcher attempted to uncover any hidden meanings between the lines. The interview codes were created a priori based on the literature review presented in Chapter 3. The nature of this

research requires a combination of inductive and deductive approaches, where inductive derive findings in a bottom-up manner (knowledge is derived from groups within data), while deductive approaches are more theory-driven, where this approach seeks to identify themes using existing theory as a lens through which to organize, code and interpret the data. As a result, developing codes often necessitated the researcher revisiting the literature review chapter on a regular basis. The researcher then applied codes to the raw data to see how they it support or contradict the hypotheses driving the investigation. For the empirical reporting in chapter 6 the interview data gathered was searched for the additional reasons that may contribute to the existence of gender pay inequalities in the private and public sectors, other than individual characteristics (e.g., age, tenure, and education). Therefore, the transcripts were reviewed numerous times and all statements about the causes of wage disparities between men and women were fully examined. This method yielded a number of sub-themes that illustrate additional causes of gender pay disparities. In summary, then the interviews with HR managers were used to give more insight into the hidden reasons behind gender pay inequalities.

4.5 Limitations of the Research Design

Each research design has limitations that might impact research results. Therefore, this section discusses the limitations of surveys and interviews designs.

4.5.1 Limitations of the survey

Using self-reported information collected from surveys is limited to measuring what people think, instead of considering their actual behaviour (Saunders, Lewis and Thornhill, 2012). In this regard, Bryman and Bell (2019) list three important limitations of

questionnaires. First, using questionnaires may create a problem of missing data for variables due to some questions appearing to be boring or irrelevant to the respondent, and therefore more likely to be skipped by the respondent. The second limitation is that questionnaires may provide poor response rates, which may contribute to bias in the results. Moreover, while respondents fill in the questionnaire, there is no one present to help them when they have difficulty answering a question, and hence questions may ignored if instructions or meaning are unclear.

4.5.2 Limitations of the interviews

Regardless of the importance of qualitative research, which produces a rich and diverse body of information through the use of interviews Cavana, Delahaye and Sekaran, (2001), this technique has some disadvantages. First, throughout the interviews, participants are encouraged to engage in conversations and contribute information, allowing them to express themselves in their home language and make more detailed replies (Eriksson and Kovalainen, 2015; Bryman and Bell, 2019). The researcher is aware that personal bias may affect their views and interpretation of events throughout the investigation (Bryman and Bell, 2019). Furthermore, people may contribute indirect knowledge filtered by their own perspectives. For example, Saudi HR managers may present viewpoints designed to maintain reputation, but they may also be less than truthful in their beliefs or state views that are viewed as socially acceptable (Saunders, Lewis, and Thornhill, 2012). However, during the analysis process, the researcher compared those interview findings with quantitative results, taking into account any contradicting findings, in order to present as accurate a picture of gender pay inequalities in SA as possible.

Second, participants respond to interview questions in a language other than English (for example, Arabic), and their comments are translated into English. Because there are differences between the Arabic and English languages, particularly in terms of individual word meaning, this creates a constraint and may lead to some information being misread (Bryman and Bell, 2019). The researcher reviewed and modified the translated quotes carefully in collaboration with supervisors to avoid any potential misinterpretation.

Third, while conducting interviews, the sample size is generally small, making it difficult to get a broad range of opinions (Hair et al., 2007). However, the researcher is conducting interviews to support and supplement the findings of the quantitative data, so the interviews are not the only source of information.

4.6 Reliability and validity of the research

Regardless of the ongoing discussions related to the difficulties in evaluating the validity and reliability of quantitative and qualitative research, researchers who use mixed methods must embrace strategies to ensure such reliability and validity. The concept of validity includes particular procedures to verify the accuracy of the results, while reliability concerns the consistency of the collected data. Therefore, the researcher utilized a triangulation method, a “combination of methodologies in the study of the same phenomenon” (Denzin, 1978, p.291), to ensure research validity and reliability. More specifically, this involved investigation of the issues surrounding the gender pay gap in Saudi private/public companies and obtaining different insights to allow more in-depth exploration of the gap. In this we follow (Greene, J.C., Caracelli, V.J. and Graham, 1989), who recommend use of a combination of methods, such as survey and semi-structured

interviews. Moreover, researchers must avoid any bias during data collection and analysis of the results. In addition, accurate record-keeping, explanation of a clear decision trail and ensuring that interpretations of data are consistent and transparent will reduce personal bias.

4.7 Ethical risks and ethical approval

Ethical issues are considered by researchers when undertaking research projects. At the basic level, it is vital in research to adhere to ethical norms in order to prevent falsifying, fabricating, or misrepresenting research data to promote the truth and reduce error (Bryman and Bell,2019). Furthermore, ethical norms guarantee to the public that the researchers can be held accountable and ensure that the research project will do no harm. For that reason, various government agencies and universities have embraced specific codes and policies associated with research ethics. As a PhD researcher at the Birmingham Business School, and in line with the University of Birmingham's Code of Ethical Practice, which requests that all research be approved by the Ethics Committee (EC), an ethical approval form was completed (and signed by my supervisors) to show the EC that the research was conducted in an ethically sound manner which would not contradict any of the committee's principles.

Finally, in terms of data management, the data was stored on the Research Data Store (RDS) at the University of Birmingham, which is a central storage service for active or working research data that allows me to present my data on my PC/ Mac on campus. To use this service, I submitted a request through the Service Desk, providing an overview of the project, duration and funding source, and the user list (myself and my academic

supervisors) in order to be permitted access to the project folder. I registered a new BEAR archive in order to store data related to my research project that I may need access to in the future over a reasonable length of time. My responsibility as an investigator was to create a suitable data structure and to manage the access rights (read, write, or both) for the members of the project. Once approved, my supervisors and I were able to access both questionnaire and interview data. Data and documentation files for both interviews and questionnaires were be held in separate folders, to ensure that participants' contact details remain separate from data. Data files were organised according to data type and then according to research activity. Audio recordings of the interviews were saved as MP3 files, while transcripts were created in and saved as Word documents. The interview transcript folder contained a file for each interviewee, coded to preserve anonymity, and no indicator of a person's identity was used.

4.8 Conclusion

This chapter discusses the research designs and methods that are used in this thesis, and the philosophical assumptions of this research. Questionnaire analysis and semi-structured interviews were adopted in this thesis. The thesis has used a triangulation technique, to ensure research validity and reliability. The chapter details method selection and a full discussion of how each method is deployed, as well as the constraints associated with employing these methods. The next chapter is the first of the two empirical chapters in this thesis and investigates and analyses the reasons of gender pay inequalities of the sample Saudi companies across private and public sectors.

5 Chapter 5: GOSI and LFS results

5.1 Introduction

This Chapter attempts to provide an answer to the first research question of this study on the determinants of the pay gap between men and women in the Saudi private sector labour market, using the General Organization for Social Insurance (GOSI) database. Section 5.2 presents (i) descriptive statistics and pairwise correlations, (ii) the empirical results of OLS regarding the effect of gender, tenure, and age on pays, (iii) the standard Oaxaca-Blinder (OB) decomposition technique, and (iv) the results of distributional decomposition at selected quantiles (q = 0.10, 0.25, 0.50, 0.75, and 0.90). The results of this section indicate that the 'unadjusted' gender pay gap is 51%, and the 'adjusted' one, after controlling for some socio-economic characteristics, is 14%. The empirical work in this chapter demonstrates that gender is an essential element in explaining pay variation. We find that the pay increases accrued through job tenure are greater for men than women. We also find that women face a "glass ceiling", where the greatest inequality is at the top of the pay scale, indicating that Saudi women employees, who break the glass ceiling, pay a substantial pay penalty in the private sector.

In order to give these Saudi GPG statistics some perspective in terms of international comparison, this study conducts a similar analysis using the UK Labour Force Survey (LFS) for the same period of 2018, with additional controls for socio-economic and demographic characteristics of employees (e.g., *Number of dependent children*, *Hours*, *Education*, *Married* etc), which are discussed in Section 5.3

Despite that the GOSI dataset has good coverage in terms of the number of workers, with 18,068 employees in the sample for 2018, it lacks detail on each individual employee. Studies show that in many economies, employee characteristics such as education, parenthood, training, working hours etc, are essential to determine earnings (Bertrand, Goldin and Katz, 2010; Gallen et al, 2019), but these the latter are missing from the GOSI dataset. GOSI only collects data on *Age*, *Tenure (in month)*, *Occupation* and *Industry*. To emphasise the importance of such characteristics when modelling wage formation, another analysis is conducted, this time for the UK using the much richer LFS dataset; many employee characteristics are important in determining UK wages. This may be the case for SA too, however the GOSI data are insufficient to allow for such an investigation.

This highlights a need for the statistical association of SA to have greater scope of coverage, where it needs to reflect considerably more characteristics than those accessible from GOSI. This improvement is required as understanding the reasons that create pay differentials is crucial in any society. Also, GPG statistics that are based on a poorly specified regression will be biased, and therefore controlling for all important characteristics is necessary before drawing any conclusions about gender pay differences or the level of gender discrimination in society

We find that, for the UK, the unadjusted gender pay gap is 15% and the adjusted pay gap is 8%. This is considerably lower than the respective 51% and 14% that we report for SA. The adjusted GPG statistics are, however, not directly comparable due to differences in the coverage of the datasets. The GOSI dataset provides very little demographic information on respondents, i.e., it only contains *Age* and *Tenure (in month)*, also *Occupation* and *Industry*. Therefore, unlike with the LFS dataset, we cannot capture the

effects of certain important characteristics like *Number of dependent children*, *Education*, *Married*, etc. As such, we must bear in mind that the Saudi adjusted GPG of 14% calculated here may not be well measured. We also have to consider the low rate of female participation in the Saudi labour market, which is well below the participation rate in the UK. In this study, Saudi women employees only account for 15% of the total GOSI sample, compared to 53% in the LFS sample used in this study. The LFS findings indicate also that women in the UK face a "glass ceiling", implying that women in the UK working in the private and public sectors experience discrimination across pay distribution, especially at the top of the pay distribution, which is similar to that reported in GOSI data reference.

5.2 Gender pay differentials in Saudi Arabia using GOSI

The GOSI database is a sample is full-time employees employed in small, medium, and large firms in the private sector in SA for the year 2018. Although it does not include a significant number of factors (e.g., actual hours worked, education, marital status, etc.), it does provide information on age and tenure, as well as occupation and industry. Variable definitions are provided in Appendix IX.

5.2.1 Descriptive statistics

Table 5-1 presents the descriptive statistics for the sample of 18,068 full-time employees in the private sector in SA for 2018, composed of 15,311 men and 2,757 women.

Table 5-1 Summary statistics for Saudi full-time employees, by gender

Variable	Overall sample				Male sample				Female sample			
	Mean	Std. Dev.	Min	Max	Mean	Std. Dev.	Min	Max	Mean	Std. Dev.	Min	Max
Monthly pay (log)	8.89	0.83	7.31	11.48	9.01	0.82	7.31	11.48	8.28	0.54	7.31	10.98
Pay (in Saudi Riyal)	10,606	10552.30	1500.00	96406.25	11,640	10956.41	1,500	96,406.25	4,868	4923.16	1,500	58,647
Female	0.15	0.36	0.00	1.00								
Tenure (in month)	128.12	102.02	1.00	535.00	140.41	104.80	1.00	535.00	59.88	41.46	1.00	493.00
Age	35.24	9.58	18.00	60.00	35.26	10.12	18.00	60.00	35.15	9.40	18.00	60.00
Observations	**18,068**				**15,311**				**2,757**			

Source: Authors' calculation from the GOSI dataset for the year 2018.

As can be seen in the table above, 15% of the sample are women. The average monthly pay *(Monthly pay (log))* for the whole sample is 8.89. In Saudi Riyal, the average monthly pay is 10,606 with a minimum monthly pay of 1,500 Saudi Riyal and a maximum pay of 96,400 Saudi Riyal. Concerning the average Tenure in the current job *Tenure (in month),* is around 128 months (i.e., approximately 11 years) with a minimum of 1 month and a maximum of 535 months. The mean value of *Age* is about 34 years old, with a minimum age of 18 and a maximum age of 60 years old.

Table 5-1 shows the differences between mean values of *Monthly pay (log)*, *Age*, and *Tenure (in month)* across men and women. Men have an average monthly pay that is higher (μ=9.01, σ=0.82) than women's (μ=8.28, σ=0.54), and the difference is statistically significant at the 1% level. This finding provides preliminary support that Saudi women are paid less than men. Nonetheless, this does not mean that there is evidence of discrimination or a gender-based pay gap because the difference in the mean values of the *Monthly pay (log)* could simply be due to different economic attributes of men and women (e.g., education). According to Goldin and Polachek, (1987), 21.5% of the pays gap between men and women is explained by education (14.3%) and experience (9.5%). Kingdon and Unni, (2001) also find evidence suggesting that each extra year of schooling leads to 8% and 10% increase in pay for men and women, respectively. These studies highlight the importance of human capital variables, in particular education which explains a significant part of the gender pay gap.

The table shows that the average *Age* for Saudi male and female employees are similar but, women have much less work experience in their current job. This may be due to women's delay in entering the Saudi labour market and may also be to related changes

in the timing of marriage and childbearing. Consistent with this finding, Miyoshi, (2008) examines the influence of seniority in terms of work rank on women's pay in Japan, and find that women's labour-force involvement is shorter and less continuous due to family duties.

5.2.2 Correlation matrix

Table 5-2 presents the correlation coefficients among the independent variables.

Table 5-2 Correlation matrix

Panel A					Panel B	
Variable	Monthly pay (log)	Female	Tenure	Age	VIF	1/VIF
Monthly pay (log)	1					
Female	-0.2946*	1			1.22	0.82
Tenure (in month)	0.6710*	-0.2637*	1		2.63	0.38
Age	0.4245*	0.0568*	0.7001*	1	2.47	0.41
Mean VIF					2.11	

* Indicate statistical significance at p < 5% using two-sided t-statistics

Table 5-2 (Panel A) shows that none of the correlation coefficients among the independent variables is greater than the threshold value of 0.8, suggesting that multicollinearity is not a serious problem in this study (see, for example, Griffiths and Barker, 1993; Gujarati and Porter, 2009). It does, however, show that one of the correlations between *Age* and *Tenure (in month)* is rather high (r = 0.70), which underlines the fact that older employees tend to have more work experience; making them better endowed in terms of the overall human capital characteristics (i.e., the older the employee, the more work experience he or she is likely to have, and hence the higher the

correlation). This is, however, not a problem especially because the two variables are not included in the same regression.

Notwithstanding, Variation Inflation Factor (VIF) tests (see **Table 5-2**, Panel B) reveal that all VIF values are much lower than the cut-off threshold of 10, and hence there is no problem of multicollinearity among the variables. The mean of VIF value is 2.11, and the highest value is 2.63 and 2.47 for *Tenure (in month)* and *Age*, respectively.

5.2.3 Estimation results of Ordinary Least Squares

Table 5-3 shows the results of the OLS estimates of the pay functions that test the effects of gender, and job tenure as well as the squared term of tenure on the pays of Saudi employees in the private sector.

Table 5-3 Effect of gender, Tenure and Tenure² on pays across Male and Female groups

Variable	Overall sample	Male sample	Female sample
Raw (unadjusted) pay gap	*-0.728****		
	(-44.641)		
Female (adjusted) pay gap	-0.1531***		
	(-13.1653)		
Tenure (in month)	0.0064***	0.0066***	0.0028***
	(46.8947)	(45.8777)	(3.3328)
Tenure²	-0.0000***	-0.0000***	0.0000***
	(-8.6393)	(-9.8446)	(2.7967)
Constant	8.6863***	8.7416***	8.4139***
	(548.3083)	(486.4206)	(215.8720)
Observations	**18,068**	**15,311**	**2,720**
R-squared	0.5652	0.5384	0.3145
F-test	6016.90***	5554.52***	178.25***
Industry fe	YES	YES	YES
Occupation fe	YES	YES	YES

Source: Authors' calculation from the GOSI dataset for 2018. Heteroscedastic robust t statistics in parentheses.
* Significance at the 10% level.
** Significance at the 5% level.
*** Significance at the 1% level.

Table 5-3 demonstrates the difference in *Monthly pay (log)* between men and women; the first row reveals that the raw pay disparity between men and women was 0.728 log points. This figure reflects the 'unadjusted' differences in the log average monthly pay of men and women, which translates into a pay differential of 51% (calculated using (exp (-0.728) - 1) ×100 = 51%). This disparity in average salaries is not evidence of discrimination because it might simply be attributed to the differing economic characteristics of men and women. Male employees, for example, may have greater levels of experience, which impact the relative pay of men compared to women.

In order to obtain the conditional pay differential, this study pooled the data and ran an OLS regression, after controlling for *Tenure (in month)*, and *Tenure²*, as well as *occupation* and *industry* fixed effects. The conditional pay differentials are shown by the coefficient on the *Female* dummy variable [Column 1], demonstrating the 'explained'

component of the pay difference after controlling for *Tenure (in month)* and *Tenure²* variables. In particular, the computed coefficient on the *Female* dummy is negative and statistically significant, implying that Saudi women are paid less than men.

As can be seen from Table 5.3, the model also controls for *industry* and *occupations* effects, using the 2018 Standard Occupational Classification (SOC) system, which is used by federal statistical agencies to classify workers and jobs into occupational categories. SOC shows different levels of aggregation (major, intermediate, and high level). SOC identifies 23 categories at major level, 13 categories at intermediate level, and 6 categories at higher level of aggregation (see Appendix IX). Although controlling these variables has little impact on the other coefficients in the model, the magnitude of the pay difference is reduced, which is in line with the UK LFS analysis (see the next section) . As Schafgans and Stelcnery, (2006) suggest, adding additional controls, such as occupation and industry, can reduce the pay differentials attributed to discrimination.

The pooled results in **Table 5-3** indicated that tenure has the typical inverted U shape, so that work experience increases pay but by ever diminishing amounts. This fits well with the findings of previous research (see for example, Thrane, 2008; Biltagy, 2018; Jolliffe, 2002; Munasinghe, Reif and Henriques, 2008), demonstrating that salaries rise steeply during the younger years (in which the human capital investments are at their most intense), plateau out during midlife, and eventually deteriorate at high levels of work experience. However, there are gender differences, where an additional month of experience results in a pay rise of 0.66 log points for men but only 0.28 log points for women. Saudi women have less job experience with their current employers than men (60 months for women compared to 140 for men), which in turn reduce their pay. This

could be returned to a number of factors that have long limited Saudi women's participation in the labour force and thus delayed women's entry into the Saudi labour market. Key amongst these are the guardianship system, women's lack of independent mobility, and lack of childcare facilities. This is covered in greater detail in the Chapter 7. The lack of work experience affects women's investment in skills and occupational choice, making women accept low-pay occupations due to their lack of knowledge of the labour market (Polachek, 1981).

The table above also shows that the estimated coefficient on the squared term of job tenure $Tenure^2$ in the men sample [Column 2] is negative and statistically significant, highlighting an inverted U-shaped relationship between pays and job tenure. This means that pay levels of Saudi men workers tend to climb sharply during the younger years, where their human capital investments are in the best position, then plateau throughout midlife and subsequently decline at high levels of job experience. However, the coefficient on $Tenure^2$ for women group remain positive, and this is not surprising as women employees in our sample do not reach the point at which the number of months in their job tenure negatively affect pays. In particular, the longest tenure period for women was 60 months compared to 140 months for men; though more than half of men group.

It is postulated that age is a proxy for experience (see Jolliffe, 2002); this is true because age does not only capture 'job tenure' (i.e., current job seniority), but also captures 'total labour market experience.' As Sugihashi (2003) claim, "it is thus important to take age into account in examining the gender pay gap … although we expect the effect of age to be very different for men than for women…earnings rise with age, for men in particular. In fact, irrespective of the length of service with the same employer, men earn more than

women, especially when they are middle-aged" (p. 103). In further analysis, I therefore replaced experience *Tenure (in month)* with *Age* and the results (untabulated) show that the impact of *Age* on pay is not only positive but also larger in magnitude than the experience impact (β=0.0777, t-statistic =20.8523). The quadratic Age^2 also reveals a similar pattern of that of $Tenure^2$, i.e., pays rises with age and then declines at a certain age (which is 72), creating an inverted U-shaped relationship between pay and *Age*. This is consistent with prior research (e.g., Rahman, 2004) which suggest that the association between age and pay is positive, however this positive effect diminishes over time.

To examine the impact of *Age* in more depth, I run separate male/female regressions and find that the *Age* variable for both is positive and statistically significant at 1% (see Appendix II). Nonetheless, as men become older, their pay increases by 0.0824 log points, whereas women's pay only increases by 0.0575 log points. This is similar to Sugihashi's (2003) results who found that the impact of age is not the same for men as it is for women; income increases with age particularly for men. This might be due to the effect of having children on men's and women's job decisions, as well as the related 'motherhood penalty' or 'fatherhood premium.' As Teresa (2019) suggested, women tend to decrease the number of hours they work outside the home after they have children, whilst men, on the other hand, prefer to either maintain or increase the number of hours they work. the results also showed that Age^2 for both men and women suggests an inverted U-shaped relationship between pay and *Age*. The results, however, revealed that women peak age is 36 years old (compared to men's peak age of 77 years old); after this point women's pay declines. One of the potential explanations for this finding might be

that Saudi woman aged 36 years and above take a career break to raise their children, which limits the career paths of women employees and, hence their pay.

Overall, the results suggested that gender is the factor that explains a large proportion of the variability of pay. This result must, however, be interpreted with caution, because of possible confounding caused by other factors not being controlled or observed due to lack of data, but may still affect pay differentials between men and women employees (e.g., educational level, marital status, location and region of residence, and a number of children in the household). Therefore, this makes it difficult to conclude that the pay differential between men and women is simply due to discrimination.

In order to identify how *Tenure (in month)* and *Age* contribute to the gender gap, we consider Oaxaca Blinder decomposition, which divides the pay gap between men and women into explained and unexplained parts.

5.2.4 Estimation results of Oaxaca-Blinder decomposition

Table 5-4 provides the estimates of Oaxaca Blinder decomposition model, which offers deeper understanding of the factors that contribute to the gender pay gap.

Table 5-4 Oaxaca-Blinder decomposition[a]

VARIABLES	Tenure Model	
	Overall sample	Explained part[b]
Group 1: female = 0 (n= 15,311)	9.0061***	
	(1,356.7600)	
Group 2: female=1 (n= 2,720)	8.2772***	
	(808.7557)	
Difference in monthly pay	0.7289***	
	(59.7544)	
Total explained	0.5759***	
	(57.5553)	
Total unexplained	0.1531***	
	(13.0368)	
Endowment effects		
Tenure (in month)		0.5173***
		(38.8848)
Tenure²		-0.0687***
		(-8.5554)
Industry		0.1360***
		(24.1181)
Occupation		-0.0087**
		(-2.4862)
Total endowment effects	0.5759***	
	(57.5553)	
Discrimination effects	0.1531***	
	(13.0368)	

Source: Authors' calculation from the GOSI dataset for 2018. Coefficients are unbracketed, with heteroscedastic robust t statistics in parentheses. All estimates are statistically significant due to small standard errors. [a] Decomposition at the mean. Male pay is the reference category. A positive entry indicates an advantage in favour of males. [b] Explained part or differences in endowment. The following explanatory variables are included in each group: *Tenure (in month)* and *Tenure²*. *Age* and *Age²*. *Industry* (15 categories). *Occupation* (12 categories). Unexplained part or discrimination effects.
* Significance at the 10% level.
** Significance at the 5% level.
*** Significance at the 1% level.

Despite the fact that the OLS regression identifies the characteristics that have a significant impact on pay determination, it does not demonstrate how these factors contribute to the gender pay disparity. The Oaxaca-Blinder decomposition has the benefit of quantifying the relative impact of each variable on pay differentials. It also divides the pay disparity between men and women into two parts: *the explained part* (or the endowment effect), which refers to the pay gap that is attributable to the differences in

observed characteristics (e.g., experience); and the *unexplained part* (or the discrimination effect), which includes the pay differentials between men and women relating the labour market discrimination as well as the unobserved characteristics between men and women (e.g., motivation). Therefore, particular care should be taken when interpreting the model residuals as discrimination (see Ahmed and McGillivray, 2015).

The results of the decomposition for Tenure Model are shown in **Table 5-4**. The gender pay differentials reflect the log 'raw' pay differentials and confirm a pay difference of 0.7289 log points between men and women (or 51%), which could be attributable to discrimination in the Saudi labour market. The results also demonstrate that the value of the *explained part* (or endowment effect) is 0.5759, suggesting that disparities in observable attributes account for 79% (=0.5759/0.7289) of pay differentials, which might be minimised if women had the same productive characteristics as men. However, after accounting for variations in labour market endowments, the *unexplained part* (or discrimination effect) is reduced to 21% (0.1531/0.7289). This indicates that if men and women obtained similar price for their productive characteristics, men on average would have obtained 21% higher pay than women.

In addition, the results of **Table 5-4** make clear that *Tenure (in month)* is the observable variable that contributed most to the *explained part* (or endowment effect). Precisely, this variable explains (0.5173/0.5759) 71% of the variance, suggesting that *Tenure (in month)* is playing a key role in narrowing the pay gap between women and men in the Saudi private sector.

I further re-estimated the Oaxaca-Blinder decomposition model with *Age* and the results (untabulated) unveil that the endowment effect is smaller than that in the *Tenure (in month)* model, accounting for 25% (=0.1834/0.7280) of pay disparity. The *unexplained part* (or discrimination effect) is significantly higher than that in *Tenure (in month)* model, which accounted for 74% of the pay disparity (=0.5446/0.7280). This proves that *Age* is not as important as *Tenure (in month)* in narrowing the pay gap between Saudi men and women employees.

Overall, the results revealed that women are paid less than men. However, it is necessary to exercise caution when interpreting the *unexplained part* (or discrimination effect). This is because the unexplained pay disparity (i.e., pay discrimination) does not consider the impact of omitted factors or measurement issues (e.g., self-reporting pay). Specifically, the decomposition findings would overestimate discrimination when there is an omitted variable, which has a positive influence on pay, and men are more endowed with this variable (Ahmed and Maitra, 2010). Alternatively, if some of the factors in the model are themselves affected by discrimination, the analysis could underestimate discrimination. For example, if women are more likely to be fired in economic downturns, or if they have less access to the types of schooling deemed more valuable by the market, the decomposition may underestimate discrimination, because it only captures discrimination in pays.

The next section discusses the distribution decomposition at specified quantiles to estimate whether the pay gap is higher (or lower) at the top (bottom) of the pay distribution in Saudi private sector.

5.2.5 Estimation results of distributional decomposition at selected quantiles

Several studies have investigated whether the gender pay gap is higher at the higher quantiles (i.e., women face a glass ceiling), or whether it is higher at the lower quantiles (i.e., women face a sticky floor) especially for developing countries (e.g., Albrecht, Björklund and Vroman, 2003; Arulampalam, Booth and Bryan, 2007; de la Rica, Dolado and Llorens, 2008; Kee, 2006; Deshpande, Goel and Khanna, 2018; and Agrwal,2014). According to Koenker and Bassett (1978), the quantile regression approach permits individual traits to have different effects at various points of the pay distribution. Hence, this section extends the analysis by re-estimating the Oaxaca–Blinder decomposition model at various quantiles of the pay distribution (q = 0.10, 0.25, 0.50, 0.75, and 0.90). It uses Recentered Influence Function (RIF) regression estimations to identify if the gender pay gap in Saudi private sector is higher (lower) at the top (bottom) of pay distribution.

Table 5-5 presents distributional decomposition of pay gap for applying the unconditional quantile regressions for selected quantiles (q = 0.10, 0.25, 0.50, 0.75, 0.90).

Table 5-5 Distribution[a] at selected quantiles for Saudi employees (Tenure &Tenure²)

Variable	q=0.10	q=0.25	q=0.50	q=0.75	q=0.90
Difference in monthly pay	0.1157***	0.1536***	0.6559***	1.3822***	1.0206***
	(56.9172)	(22.6119)	(54.6907)	(83.2937)	(15.0975)
Endowment effects[b]					
Tenure (in month)	0.0422***	0.7272***	0.8808***	0.4410***	0.0681**
	9.8720)	(41.5299)	(34.1202)	(18.3748)	(2.2031)
Tenure²	-0.0232***	-0.3793***	-0.2627***	0.2185***	0.3981***
	(-8.8188)	(-34.1553)	(-16.8206)	(12.8910)	(14.2125)
Industry	0.0014	0.1788***	0.3168***	0.1646***	0.0456***
	(0.9192)	(18.5531)	(20.9203)	(17.4869)	(6.4933)
Occupation	-0.0003**	-0.0048**	-0.0163**	-0.0149**	-0.0084**
	(-2.0348)	(-2.4600)	(-2.4835)	(-2.4828)	(-2.4630)
Total endowment effects	0.0201***	0.5218***	0.9187***	0.8092***	0.5033***
	(8.6446)	(44.3127)	(47.5440)	(48.9098)	(33.7903)
Discrimination effects	0.0955***	-0.3682***	-0.2627***	0.5730***	0.5172***
	(25.6261)	(-25.9861)	(-12.8148)	(37.6421)	(7.9964)

Source: Authors' calculation from the GOSI dataset for the 2018. Coefficients are unbracketed, with heteroscedastic robust t statistics in parentheses. [a] Male pays is the reference category in the decomposition. A positive entry indicates an advantage in favour of males. [b] Differences in endowment or observed characteristics. The following explanatory variables are included in each group: The following explanatory variables are included in each group: *Tenure (in month)* and *Tenure²*. *Industry* (15 categories). *Occupation* (12 categories).
* Significance at the 10% level.
** Significance at the 5% level.
*** Significance at the 1% level.

From the table above, the results underline that the estimated total gender pay gap is higher at the upper end of the distribution, compared to the lower end of the distribution. This result accords with Albrecht, Björklund and Vroman, (2003), who reported a similar pattern of results for Swedish employees.

As shown in **Table 5-5**, the results indicate that the greatest inequality is at the top of the pay distribution, where Saudi women who break the glass ceiling pay a substantial pay penalty in the private sector. This study differs in the findings of exploring the glass ceiling, as most developing countries (e.g., Chi and Li, 2008; Ahmed and McGillivray, 2015;

Deshpande, A., Goel, D. and Khanna, S., 2018) face a wider pay gap at the lower quantiles.The possible causes for this are gender differences in rewards distributions (i.e., discrimination effect); or gender differences in labour–market characteristics (i.e., endowments effect). Any of these cases implies a pre-existing discriminatory environment for Saudi women in the private sector. This is consistent with Agrwal's (2014) finding which suggested that the biggest disparity is at the higher quantiles (i.e., a glass ceiling) in the rural sector in India.

Turning to the impact of different characteristics; the endowment effect of men and women as a proportion of the pay gap demonstrates that the differences in characteristics are in favour of men. **Table 5-5** shows that the endowment effect is positive for all quantiles and statistically significant at 1%. Specifically, men have a greater relative endowment advantage at the top of the pay distribution than at the bottom. **Table 5-5** shows that the endowment effect associated with *Tenure (in month)* explained a great deal of the observed pay difference especially at the bottom of the pay distribution. In terms of the discrimination effect, **Table 5-5** demonstrates negative coefficient up to the 25th and 50th quantiles. It indicates that Saudi women do not face any sort of discrimination at the bottom of pay distribution. However, the coefficient becomes positive and increases along the pay distribution from the 75th quantile, suggesting that women at the top of the pay distribution encounter more discrimination.

Overall, the results indicate that women at the upper end of the pay distribution face significant discrimination. In particular, the shorter a woman's job experience with her current employer is (i.e., 59 months versus 140 months for men), the more likely she

encounters discrimination in high-level positions, which needs a high degree of skill and expertise. Thus, policy makers in the Saudi private sector need to target upper segments of the pay distribution to reduce the pay gap in SA.

5.3 Gender pay differentials in UK using LFS

The data in this section are obtained from the LFS (for more details, see Chapter 4). LFS data are drawn from the Office for National Statistics Quarterly Labour Force Survey (QLFS) for the period (October – December) in 2018 for full-time employees in the private and public sectors across different firm sizes (small, medium, and large). The LFS dataset used in this study provides information on variables such as actual hours worked, education, marital status, number of children, training, region of living. Appendix III provides definitions of the variables used in the section.

5.3.1 Descriptive statistics

Table 5-6 reports the descriptive statistics of selected variables for the pooled sample and for men and women separately, for full-time and part time employees in private and public sectors in the UK using the (LFS) dataset for the period (October – December) 2018. The number of observations is 9,681, of whom 4,577 are men and 5,104 are women.

Table 5-6 Summary statistics for UK full-time employees, by gender

Variable	Overall sample				Male sample				Female sample			
	Mean	Std. Dev.	Min	Max	Mean	Std. Dev.	Min	Max	Mean	Std. Dev.	Min	Max
Hourly pay (log)	2.57	0.57	-1.11	6.35	2.67	0.59	-0.94	6.35	2.49	0.53	-1.11	4.97
Real hourly pay (£)	15.48	11.72	0.33	574.63	17.18	13.86	0.39	574.63	13.95	9.13	0.33	144.68
Female	0.53	0.50	0.00	1.00								
Tenure												
Less than 3 months	0.05	0.21	0.00	1.00	0.05	0.21	0.00	1.00	0.05	0.22	0.00	1.00
3 months, less than 6	0.04	0.20	0.00	1.00	0.04	0.20	0.00	1.00	0.04	0.21	0.00	1.00
6 months, less than 12	0.06	0.24	0.00	1.00	0.06	0.23	0.00	1.00	0.07	0.25	0.00	1.00
1 year, less than 2	0.10	0.30	0.00	1.00	0.10	0.29	0.00	1.00	0.11	0.31	0.00	1.00
2 years, less than 5	0.22	0.41	0.00	1.00	0.23	0.42	0.00	1.00	0.21	0.41	0.00	1.00
5 years, less than 10	0.18	0.38	0.00	1.00	0.18	0.39	0.00	1.00	0.17	0.38	0.00	1.00
10 years, less than 20	0.22	0.42	0.00	1.00	0.21	0.41	0.00	1.00	0.23	0.42	0.00	1.00
20 years or more	0.12	0.33	0.00	1.00	0.13	0.34	0.00	1.00	0.11	0.32	0.00	1.00
Age	42.35	12.26	18.00	67.00	42.21	12.36	18.00	67.00	42.47	12.17	18.00	67.00
Age²	1943.52	1044.74	324.00	4489.00	1934.33	1053.58	324.00	4489.00	1951.77	1036.78	324.00	4489.00
Hours	35.57	11.84	10.00	58.00	39.51	10.51	10.00	58.00	31.83	11.81	10.00	58.00
Training	0.16	0.36	0.00	1.00	0.14	0.35	0.00	1.00	0.17	0.38	0.00	1.00
Education												
No qualification	0.05	0.22	0.00	1.00	0.06	0.23	0.00	1.00	0.05	0.22	0.00	1.00
Other qualification	0.07	0.25	0.00	1.00	0.07	0.26	0.00	1.00	0.06	0.23	0.00	1.00
GCSE grades A*-C or equivalent	0.19	0.39	0.00	1.00	0.18	0.38	0.00	1.00	0.19	0.39	0.00	1.00
GCE A level or equivalent	0.22	0.42	0.00	1.00	0.25	0.43	0.00	1.00	0.20	0.40	0.00	1.00
Higher education	0.10	0.30	0.00	1.00	0.09	0.29	0.00	1.00	0.11	0.31	0.00	1.00
Degree or equivalent	0.37	0.48	0.00	1.00	0.34	0.48	0.00	1.00	0.39	0.49	0.00	1.00
Number of dependent children												
No. of children under 2	0.08	0.28	0.00	2.00	0.09	0.29	0.00	2.00	0.08	0.27	0.00	2.00
No. of children 2-4	0.12	0.36	0.00	2.00	0.13	0.37	0.00	2.00	0.12	0.36	0.00	2.00
No. of children 5-9	0.22	0.51	0.00	3.00	0.22	0.51	0.00	3.00	0.22	0.51	0.00	3.00
No. of children 10-15	0.24	0.55	0.00	5.00	0.22	0.53	0.00	4.00	0.25	0.57	0.00	5.00
Other variables												
Trade union	0.26	0.44	0.00	1.00	0.23	0.42	0.00	1.00	0.29	0.45	0.00	1.00
Public sector	0.28	0.45	0.00	1.00	0.19	0.39	0.00	1.00	0.37	0.48	0.00	1.00
Married	0.53	0.50	0.00	1.00	0.55	0.50	0.00	1.00	0.52	0.50	0.00	1.00
Ethnicity	0.91	0.29	0.00	1.00	0.90	0.30	0.00	1.00	0.91	0.28	0.00	1.00
observations	**9,681**				**4,577**				**5,104**			

Source: Authors' calculation from the LFS dataset for the period (October – December) 2018

For the pooled sample, the average *Hourly pay (log)* for both men and women was 2.57 log points, and the real hourly pay was £15 with a minimum £6 and a maximum of £35. About 53% of the sample are women compared to 47% of men. The table shows that 25% of employees in the sample reported *Tenure* of less than 2 years; 63% had more than 2 years but less than 20 years of tenure, while only 12% of employees reported 20 years or more of their tenures.

Taking *Age* into account, the average age for employees is 42 years old, with the youngest 18 years old and oldest 67 years old. The mean working hours for employees is 35 hours per week with a minimum of 10 hours and maximum of 58 hours. Only 16% of the sample period received job-related training. Yet, 95% of the sample have qualifications (e.g., *GCSE* 19%; *GCE A-level* 22%); in particular, employees with university degree or above *(Master and/or Doctorate)* account for around 37% of the sample. This is not surprising given the significantly higher employment rate among graduates/postgraduates in 2018 compared to the employment rate of non-graduates (Department for International Trade, 2018).

Regarding *the number of dependent children* in families, 24% of employees had children aged between 10 and 15, compared to only 8% of employees had children aged under 2 years old. The table also reveals that approximately 26% of the UK employees were *Trade union* members, 28% of the sample employees work in the *Public sector*, 53% of the sample employees are *Married* (or living with their spouse), and majority of the pooled sample, around 91%, are white.

When analysing the different genders, we can see that men have an average hourly rate of 2.67 log unit, which is higher than women at 2.49. For the real hourly pay, the mean hourly pay of men is also greater (£16) compared to women (£14). The table also shows that the pattern of *Tenure* is similar for men and women, with women having slighter more work experience than men. Specifically, the table indicates that 23% of women have work experience with their current employer between 10 and 20 years, compared to 21% of men.

The average *Age* of men and women is 42 years. Men have an average of 40 working *Hours* per week, which is notably higher than the average working hours per week for women at 32 hours. This is not surprising given that approximately 41% (or 2,127) of the women in this study work on a part-time basis, compared to only 10% (or 496) for men. Interestingly, 17% of women take more *Training* than men at 14%.

Table 5-6 presents similar patterns for *Education* for men and women; almost 39% of the women had *university degree or equivalent*, compared to 34% for men. This suggests the gender-based gap in education is declining (though not vanished) as more educated women are participating in the UK labour force (Healy and Ahamed, 2019). The table shows a similar pattern for men and women for *the number of dependent children*. Moreover, it can be noticed from **Table 5-6** that 29 % of women in the sample were *Trade-union* member compared to only 23% of men.

Regarding the *Public sector*, 37% of women work in the public sector compared to 19% for men. An increasing number of women in the public sector in comparison to men is consistent with previous studies in the UK (see Jones, Makepeace and Wass, 2018). There are a number of reasons that women in the public sector are more than men.

Women regard the public sector as a more favourable working environment, in part because it has a reputation for being a 'good' and 'fair' employer for women as compared to the private sector (see Beaumont 1981; Blanchflower and Bryson, 2010). The public sector works to improve gender pay disparities through monitoring equality outcomes, allowing for flexible working hours and promoting family-friendly policies (see Chatterji, Mumford and Smith, 2011). Equality policies are also more visible in the public sector, where they are more likely to be backed by real supporting practices (Hoque and Noon, 2004). In this regard, these reasons would seem to provide women more reassurance to work in the public sector.

5.3.2 Correlation matrix

Table 5-7 reports the correlation coefficients and their statistical significance for the variables included in the regression analysis. As it can be seen, none of the correlation coefficients among the independent variables is greater than the threshold value of 0.8, indicating that multicollinearity is not a serious problem in this study (see Gujarati and Porter, 2009). Nevertheless, Variation Inflation Factor (VIF) test indicates that all VIF values are far below the cut-off threshold of 10, implying that multicollinearity among the variables is not an issue. The mean of VIF value is 1.18, and the highest positive correlation is 0.40 between *Tenure* and *Age*. This underlines the fact that older employees tend to have more work experience; making them better endowed in terms of overall human capital characteristics (i.e., the older the employee, the more work experience he or she is likely to have, and hence the higher the correlation). Interestingly, there is also a positive correlation (r = 0.40) between *Public sector* and *Trade union*, implying that employees with trade union membership tend to work in the public sector.

Table 5-7 Correlation matrix

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. Log (hourly pay)	1															
2. Female	-0.1579*	1														
3.Tenure	0.2165*	-0.0198	1													
4. Age	0.1460*	0.0106	0.4037*	1												
5. Age ^{2}	0.1109*	0.0083	0.3810*	0.9897*	1											
6. Hours	0.2396*	-0.3244*	0.0812*	-0.0448*	-0.0622*	1										
7. Training	0.0355*	0.0365*	-0.0673*	-0.0681*	-0.0654*	0.0337*	1									
8. Education	0.3851*	0.0502*	-0.0480*	-0.1519*	-0.1682*	0.1051*	0.1094*	1								
9. No. of children under 2	0.0298*	-0.0191	-0.0350*	-0.2082*	-0.2194*	-0.0113	-0.0262*	0.0630*	1							
10.No. of children 2-4	0.0485*	-0.0129	-0.0372*	-0.1874*	-0.2089*	-0.0370*	-0.0026	0.0379*	0.1862*	1						
11.No. of children 5-9	0.0318*	0.0047	-0.0096	-0.1322*	-0.1694*	-0.0455*	-0.0008	0.0245*	0.0389*	0.1567*	1					
12. No. of children 10-15	-0.0032	0.0316*	0.0191	0.0007	-0.0330*	-0.0463*	0.0054	-0.0106	-0.0747*	-0.0410*	0.1376*	1				
13. Public sector	0.0737*	0.1966*	0.1505*	0.0889*	0.0753*	-0.0668*	0.1225*	0.2144*	0.0036	-0.019	0.0229*	0.0327*	1			
14. Married	0.2004*	-0.0320*	0.1932*	0.3082*	0.2756*	-0.0109	-0.0323*	0.0434*	0.1006*	0.1403*	0.1591*	0.1258*	0.0875*	1		
15. Ethnicity	0.0001	0.0179	0.0751*	0.0632*	0.0720*	0.0374*	0.0004	-0.0505*	-0.0448*	-0.0752*	-0.0379*	-0.0542*	-0.005	-0.0617*	1	
16.Trade union	0.0967*	0.0648*	0.2301*	0.1169*	0.1051*	0.0545*	0.0987*	0.1109*	0.0147	-0.0182	-0.0061	0.0243*	0.4059*	0.0769*	0.0118	1

* Indicate statistical significance at p<5% using two-sided t-statistics

5.3.3 Estimation results of Ordinary Least Squares

The OLS regression estimates for full and part time men and women in private and public sectors for 2018 in the UK using the (LFS) dataset are presented in the **Table 5-8**. The F-tests across all model specifications are statistically significant at the 1% level, indicating that all model coefficients are equally significant and provide a good overall fit for the data. The reported R-squared values suggest that explanatory variables (i.e., *Tenure*, *Age*, *Education* etc) explain about 42.8% of variance for men and 48.5% of variance for women. Thus, the model of women sample has incremental explanatory power.

The total raw pay gap of the sample is provided in the first row of **Table 5-8**. The 'unadjusted' differences in the log average hourly pay of men and women observed in the data that was 16.6 log points. This figure corresponds to a pay differential of 15% (calculated using (exp (- 0.166) - 1) ×100 = 15%. This variation in average pay is surely not an indication of discrimination since it might possibly be related to the various economic characteristics of men and women paid employees.

Table 5-8 Effect of gender on pays across Male and Female groups

Variable	Overall sample	Male sample	Female sample
Raw (unadjusted) pay gap	*-0.166****		
	(-13.833)		
Female (adjusted) pay gap	-0.086***		
	(-7.880)		
Tenure [a]			
3 months, less than 6	-0.007	-0.005	-0.011
	(-0.216)	(-0.097)	(-0.263)
6 months, less than 12	0.015	0.048	-0.014
	(0.554)	(1.301)	(-0.352)
1 year, less than 2	0.036	0.052	0.023
	(1.425)	(1.484)	(0.627)
2 years, less than 5	0.047**	0.061**	0.034
	(2.022)	(1.964)	(0.961)
5 years, less than 10	0.113***	0.125***	0.100***
	(4.667)	(3.788)	(2.830)
10 years, less than 20	0.134***	0.141***	0.126***
	(5.501)	(4.281)	(3.499)
20 years or more	0.192***	0.168***	0.212***
	(7.104)	(4.520)	(5.446)
Age	0.038***	0.044***	0.032***
	(12.796)	(9.921)	(8.335)
Age^2	-0.000***	-0.000***	-0.000***
	(-11.102)	(-8.698)	(-7.230)
Hours	0.002***	0.001	0.004***
	(5.109)	(0.905)	(6.241)
Training	0.004	0.023	-0.008
	(0.362)	(1.087)	(-0.585)
Education[b]			
Other qualification	0.004	0.003	0.004
	(0.179)	(0.092)	(0.141)
GCSE grades A*-C or equivalent	0.063***	0.076***	0.050*
	(3.247)	(2.725)	(1.829)
GCE A level or equivalent	0.131***	0.145***	0.112***
	(6.711)	(5.292)	(3.984)
Higher education	0.170***	0.184***	0.155***
	(7.328)	(5.229)	(5.109)
Degree or equivalent	0.312***	0.319***	0.295***
	(14.628)	(10.300)	(9.990)
Number of dependent children			
No. of children under 2	0.034**	0.017	0.062***
	(1.965)	(0.726)	(2.598)
No. of children under 2-4	0.023*	-0.007	0.049***
	(1.847)	(-0.367)	(2.759)
No. of children under 5-9	-0.001	-0.005	0.000
	(-0.139)	(-0.312)	(0.005)
No. of children under 10-15	-0.022**	-0.002	-0.039***
	(-2.392)	(-0.104)	(-3.687)

Table 5-8 Effect of gender on pays across Male and Female groups

Variable	Overall sample	Male sample	Female sample
Trade union	0.030***	0.039**	0.025*
	(2.676)	(2.165)	(1.769)
Public sector	-0.012	-0.052*	0.012
	(-0.822)	(-1.874)	(0.679)
Married	0.078***	0.114***	0.048***
	(7.652)	(6.600)	(3.897)
Ethnicity	0.092***	0.127***	0.057***
	(5.295)	(4.627)	(2.655)
Constant	1.324***	1.134***	1.499***
	(13.368)	(8.324)	(10.907)
Observations	**9,681**	**4,577**	**5,104**
R-squared	0.459	0.428	0.485
F-test	150.35***	69.24***	87.18***
Occupation fe	YES	YES	YES
Industry fe	YES	YES	YES
Region fe	YES	YES	YES

Source: Authors' calculation from the LFS dataset for the period (October – December) 2018
Heteroscedastic robust t statistics in parentheses. Note: [a] indicates to Less than 3 months as reference group for Tenure, [b] means no qualification as a reference for Education.
* Significance at the 10% level.
** Significance at the 5% level.
*** Significance at the 1% level.

To get the conditional pay disparity (or adjusted pay gap) presented in [Column 1], a wide variety of explanatory factors (e.g., *Tenure*, *Education*, *Children*, etc.) was included in the pay function. Particularly, in **Table 5-8**, it can be seen that the coefficient of *Female* is negative and statistically significant 08.6 log points, meaning that women are paid less than men.

5.3.4 Estimation results of Oaxaca-Blinder decomposition

To provide a clearer apportionment of the gender pay gap to various factors, **Table 5-9** reports the results of the decomposition of OLS estimates at the means by conducting an Oaxaca Blinder decomposition. Although the regression reveals the factors that play a significant role in pay determination, it does not show how these factors contribute to the gender gap. The advantage of the Oaxaca-Blinder

decomposition lies in quantifying both the relative contribution of each factor, as well as the role of both *explained* and *unexplained* factors. Moreover, Blinder–Oaxaca model has been applied to separate the pay gap between men and women into two parts: (i) the first part is *explained* by differences in causes of pay (e.g., *Tenure*, *Age*, *Age²*, *Hours*, *Number of dependent children*, *Training*, *Education*, *Trade union*, *Public sector*, *Married*, *Ethnicity*, *Occupation*, *Industry*, and *Region*); and the second part which cannot be justified or explained by such group differences, and this parts refers to as 'discrimination'.

Table 5-9 Oaxaca-Blinder decomposition[a]

Variables	Overall sample	Explained part[b]
Differences in hourly pay	0.166***	
	(13.790)	
Group 1: female = 0 (n= 4,577)	2.661***	
	(292.785)	
Group 2: female=1 (n=5,104)	2.494***	
	(315.673)	
Total explained	0.036***	
	(4.026)	
Total unexplained	0.130***	
	(12.097)	
Endowment effects		
Tenure		0.003**
		(2.180)
Age		-0.021*
		(-1.893)
Age²		0.016
		(1.638)
Hours		0.026***
		(6.827)
Training		-0.000
		(-0.162)
No qualification		0.000
		(0.361)
Other qualification		0.001
		(0.740)
GCSE grades A*-C or equivalent		-0.001
		(-1.349)
GCE A level or equivalent		0.008***
		(3.187)
Higher education		-0.003**
		(-2.349)
Degree or equivalent		-0.018***
		(-4.206)
No. of children under 2		0.001*

Table 5-9 Oaxaca-Blinder decomposition[a]

Variables	Overall sample	Explained part[b]
		(1.675)
No. of children 2-4		0.000
		(1.436)
No. of children 5-9		0.000
		(0.242)
No. of children 10-15		0.001**
		(2.057)
Trade_union		-0.002***
		(-3.000)
Public sector		0.011***
		(4.788)
Married		0.003***
		(3.213)
Ethnicity		-0.000
		(-0.943)
Occupation		-0.002
		(-0.515)
Industry		0.014***
		(4.334)
Region		-0.000
		(-0.779)
Total endowment effects		0.036***
		(4.026)
Discrimination effects	0.130***	
	(12.097)	

Source: Authors' calculation from the LFS dataset for the period (October – December) 2018. Heteroscedastic robust t statistics in parentheses. [a] Decomposition at the mean. Male pays are the reference category. A positive entry indicates an advantage in favour of males. [b] Explained part or differences in endowment. The following explanatory variables are included in each group: *Tenure* (8 categories). *Age*. *Age²*. *Hours*. *Training*. *Education* (6 categories). *No. of children 0-2. No. of children 2-4. No. of children 5-9. No. of children 10-15*. *Trade union*. *Public*. *Married*. *Ethnicity*. *Occupation* (9 categories). *Industry* (9 categories). *Region* (12 categories). [c]Unexplained part or discrimination effects.
* Significance at the 10% level.
** Significance at the 5% level.
*** Significance at the 1% level.

First of all, the decomposition output of **Table 5-9** reports the mean predictions by groups and their difference in the first panel. As expected, the mean of *Hourly pay (log)* is higher for men than women, where 2.661 for men and 2.494 for women, yielding a pay gap of 0.166 unit of log (or 15 %). This result is somehow similar with the findings of ONS (2019). This pay gap is divided into two parts. *The explained part* (or the endowment effect) is 0.036 unit of log, suggesting that the differences in the observed characteristics account for 21% (=0.036 /0.166) of pay differentials, and this could be reduced if women had the same characteristics as men (see Nam, 1996).

The *unexplained part* (or the discrimination effect) that resulted from the differences in the unobserved parts between genders accounted for 78% (=0.130/0.166) of the pay gap, which is notably higher than the *explained part* (i.e., endowments). This means that men and women are rewarded differently for their equal characteristics in the UK using the (LFS) dataset, where men would have a higher mean pay than women for their same productive attributes. This finding is comparable to prior research (see for example, Ahmed and McGillivray, 2015). **Table 5-9** shows that the observed factor that contributed most to the explained part (or the endowment effect) is the number of hours worked (*Hours*). In particular, this variable explains 72% (0.026/0.036), suggesting that the number of working hours plays an important and a large role in reducing gender pay gap in the UK private and public sector using the (LFS) dataset. To sum up, the results show that women are paid less than men; and this could be (partially) due to discrimination in the labour market.

5.3.5 Estimation results of distributional decomposition at selected quantiles

Earlier studies (e.g., Deshpande, Goel and Khanna, 2018; Brown and Troutt, 2020) indicate that the gender pay gap varies across pay distribution, particularly at the top and bottom of pay distribution. This part, further, extends the earlier findings by investigating the gender pay difference at certain quantiles of the pay distribution (q= 0.10, 0.25, 0.50, 0.75, and 0.90) using Recentered Influence Function (RIF) regression estimations. This helps identify whether the level of labour market discrimination is more prevalent at the bottom or top of the distribution, which has various policy implications.

Table 5-10 Distribution decomposition[a] at selected quantiles for UK full times employees

Variable	q=0.10	q=0.25	q=0.50	q=0.75	q=0.90
Difference in hourly pay	0.092***	0.136***	0.178***	0.200***	0.268***
	(7.481)	(11.201)	(11.089)	(11.375)	(11.984)
Endowment effects[b]					
Tenure	0.001	0.003**	0.003**	0.002*	0.001
	(1.060)	(2.094)	(2.103)	(1.841)	(1.247)
Age	-0.031*	-0.034*	-0.029*	-0.022*	-0.013
	(-1.863)	(-1.887)	(-1.877)	(-1.847)	(-1.596)
Age^2	0.025	0.028	0.023	0.015	0.006
	(1.621)	(1.637)	(1.627)	(1.583)	(1.146)
Hours	0.013	0.013*	0.002	0.008	0.036***
	(1.498)	(1.912)	(0.289)	(0.991)	(2.798)
Training	0.000	0.000	0.000	-0.002	-0.001
	(0.363)	(0.461)	(0.152)	(-1.446)	(-0.698)
Education	-0.005***	-0.009***	-0.016***	-0.019***	-0.021***
	(-3.239)	(-3.964)	(-4.300)	(-4.327)	(-4.209)
No. of children under 2	-0.001	0.001	0.001	0.000	0.000
	(-0.526)	(1.083)	(0.841)	(0.002)	(0.211)
No. of children 2-4	-0.000	0.000	-0.000	0.000	-0.001
	(-0.168)	(0.012)	(-0.058)	(0.725)	(-1.064)
No. of children 5-9	0.000	0.000	0.000	-0.000	-0.000
	(0.564)	(0.564)	(0.362)	(-0.335)	(-0.556)
No. of children 10-15	0.002**	0.002**	0.000	-0.002**	-0.002
	(2.215)	(2.060)	(0.401)	(-1.985)	(-1.509)
Trade union	-0.007***	-0.007***	-0.007***	0.002	0.006***
	(-4.300)	(-4.227)	(-3.625)	(1.309)	(2.645)
Public sector	0.002	0.005	0.011**	0.026***	0.050***
	(0.541)	(1.074)	(2.037)	(4.041)	(5.538)
Married	0.003**	0.003***	0.006***	0.004***	0.005***
	(2.341)	(2.746)	(3.110)	(2.651)	(2.614)
Ethnicity	-0.001	-0.001	-0.001	0.000	0.000
	(-1.237)	(-1.445)	(-1.243)	(0.444)	(0.309)
Occupation	-0.001	-0.002	-0.003	-0.003	-0.002
	(-0.514)	(-0.515)	(-0.515)	(-0.515)	(-0.515)
Industry	0.008	0.020***	0.019***	-0.002	-0.015
	(1.392)	(3.600)	(3.056)	(-0.302)	(-1.524)
Region	-0.000	-0.000	-0.000	-0.000	-0.001
	(-0.275)	(-0.304)	(-0.768)	(-0.732)	(-0.766)
Total endowment effects	0.008	0.022**	0.010	0.008	0.050***
	(0.783)	(2.036)	(0.753)	(0.564)	(2.860)
Discrimination effects	0.084***	0.114***	0.168***	0.192***	0.217***
	(5.507)	(8.554)	(10.810)	(10.179)	(8.614)

Source: Authors' calculation from the LFS dataset for the period (October – December) 2018. Heteroscedastic robust statistics in parentheses. [a] Male pays is the reference category in the decomposition. A positive entry indicates an advantage in favour of males. [b] Differences in endowment or observed characteristics. The following explanatory variables are included in each group: *Tenure* (8 categories). *Age*. *Age²*. *Hours*. *Training*. *Education* (6 categories). *No. of children 0-2. No. of children 2-4. No. of children 5-9. No. of children 10-15*. *Trade union*. *Public*. *Married*. *Ethnicity*. *Occupation* (9 categories). *Industry* (9 categories). *Region* (12 categories).

* Significance at the 10% level.

** Significance at the 5% level.

*** Significance at the 1% level.

Table 5-10 displays the results of distributional decomposition of pay gap using the unconditional quantile regressions for selected quantiles (q = 0.10, 0.25, 0.50, 0.75, 0.90). Unsurprisingly, the estimated pay gap is higher at the upper tail of the distribution. Though the pay gap at the 10th quantile is 09.2 log points, it reaches 26.8 at the 90th quantile. This finding is consistent with Chzhen and Mumford, (2011), who find a similar pattern for the British employees working full time. In line with Bell and van Reenen, (2014), the finding suggest that the greatest inequality is at the top of the pay distribution so that women who break the glass ceiling pay a substantial pay penalty in the UK public and private sectors. The reasons that might widen the pay gap at the top pay distribution may include firstly, the unconscious bias favouring promoting men colleagues to the top; and secondly, that women might be more reluctant to take up top executive positions. Either of these possibilities suggests an inherent discriminatory environment for women in the UK public and private sectors.

The endowment effect of men and women as a proportion of the pay gap reveals that the differences in characteristics are in favour of men. The relative endowment advantage for men is higher at the upper end of the pay distribution (i.e., q= 0.90) compared to the bottom end (i.e., q= 0.25). In particular, a large part of the contribution to endowment effect at the 90th quantile is by *Hours*. In relation to discrimination effect, the table shows that women on bottom and top of the pay distribution are subject to discrimination. For instance, the effect of discrimination increases from 08.4 log points at the 10th quantile to 21.7 log points at the 90th quantile. It implies that the differences in unobservable characteristics are the main drivers in pay gap across pay distribution, especially at the top of the pay distribution. This finding reveals that policy makers need to target different segments of the pay distribution to reduce the pay gap in the UK.

This section offered an analysis of the pay gap between men and women, using the LFS dataset, for the full-time and part-time employees in private and public sectors (October – December) 2018. The study finds that *Tenure* (i.e., length of service with current employer 5 years, less than 10, 10 years less than 20, and 20 years or more), *Age*, *Hours*, *Education*, *Trade union*, being *Married*/living with spouse, and *Ethnicity* play a particularly important role in determining employees' pays. The most striking result is that *Number of dependent children* under 2 or between 2 and 4 in the household have a positive impact on pays for women employees, yet a negative if children aged between *10 and 15*. This result clearly indicates that the timing of children arrival has an impact on women's pays rather than the age of the children. In addition, Blinder–Oaxaca decomposition analysis implies that there is a gap in pay between full-time working men and women in the UK using the (LFS) dataset, and this may in part be attributed to the discrimination in the labour markets.

Finally, this study applies distributional decomposition of pay gap using the unconditional quantile regressions for selected quantiles (q = 0.10, 0.25, 0.50, 0.75, 0.90). The findings show that the estimated total pay gap is bigger at the upper tail of the distribution, indicating that the largest disparity exists at the top of the pay. This finding suggests that women in the UK using the (LFS) dataset, who shatter the glass ceiling face a significant pay penalty in the private and public sectors. Furthermore, the study found that the difference in productive characteristics (i.e., endowment effects) is greater for men, especially at the top of the pay distribution than at the bottom, where the large part of the contribution to endowment effect at the 90th quantile is by *Hours*. Finally, the most remarkable finding is that women employees across private and public sectors face discrimination across pay distribution, especially at the top of the pay distribution.

5.4 Conclusion

This Chapter aims to investigate the causes of the gender pay gap in the Saudi private sector using GOSI database. Multiple regression analysis revealed that the Saudi women are paid less than men. Where the 'unadjusted' differences in the log average monthly pay of men and women are 51%, but after controlling the work experience differences, Saudi women in the private sector are paid less than men. This study has shown that gender is an important factor explaining a considerable amount of pay difference. In addition, the finding of this study has also clarified that pay increases with work experience, specifically for men. Interestingly, women face a "glass ceiling", where the greatest inequality is at the top of the pay, indicating that Saudi women, who break the glass ceiling pay a substantial pay penalty in the private sector.

Using LFS, the findings of this study revealed that the 'unadjusted' gender pay gap in the UK is 15%. This is significantly lower than that of GOSI. The reason behind the low 'unadjusted' disparity in the UK less than SA, may be referred to the fact that woman status in the UK is better than that in SA. This evidence indicates that women's involvement in the UK is somehow greater (5,104) than men's (4,577), while women's participation in SA is significantly lower (2,757) than men (15,311). Additionally, this study has found that both women in the UK and in SA face a "glass ceiling", stating that women in both countries encounter discrimination across the pay distribution, particularly at the top of the pay distribution.

Furthermore, the comparison results of this study highlighted that by including a wide range of explanatory variables (e.g., Hours, Education, Number of dependent children, etc.), the "adjusted" gap in the UK using the (LFS) dataset is considerably lower than

that in SA. This emphasises the need for incorporating a broad range of socio-economic factors in Saudi data, which requires a more accurate and comprehensive analysis to measure the gap and identify the causes behind the existing gender pay gap in SA, and this has been discussed in the next chapter (Chapter 6).

6 Chapter 6: Saudi Survey Analysis

6.1 Introduction

This Chapter discusses the relative importance of a wide variety of socio-economic factors that can affect the gender pay gap in the Saudi private and public sectors, using self-report questionnaires distributed across Saudi private and public companies (large-medium and small), for the period (July 2020 – April 2021). The Saudi survey analysis is important as it allows the researcher to control for a range of controls (*Education*, *Tenure*, *Number of children*, *Training*, *Married*, etc.) that are not available in the GOSI secondary data. The data provided in this chapter is more representative than the GOSI dataset, as the data from the questionnaire include comprehensive socio-economic factors, such as education, training, children etc., where GOSI data contains only limited variables (e.g., age, tenure), and it is more recent the GOSI dataset. Also, the female sample represents 36% in the Saudi survey sample statistic, compared to only 15% in the GOSI. Furthermore, the Saudi survey includes Saudis and non-Saudis employees, as well as private and public sectors, while the data in GOSI includes only Saudis nationality that are only working the private sector. The importance of the representative sample is that the sample yield insights and observations that closely align with the entire population group. Section 6.2 discusses various factors that may influence the level of earnings for Saudi employees in SA. It includes first the descriptive statistics and pairwise correlations between the model's independent variables; then it presents the empirical results of OLS regression regarding the effect of gender, and other socio-economic factors (e.g., *Education*, *Tenure*, *Number of children*, *Training*, *Married*, etc.) on pay for the whole sample and across men and women in the private and public sectors. This section also reports the

results of the Oaxaca-Blinder decomposition model estimates. Additionally, section 6.2 shows the pay distribution at several quantiles (q = 0.10, 0.25, 0.50, 0.75, and 0.90) and assesses if the pay gap is higher or lower at top or bottom of the earnings distribution.

The results reveal that the 'unadjusted' differences in the average monthly earnings of men and women are 45%; and after controlling for the usual socio-economic characteristics, women in both sectors receive salaries that are 23% lower than men. The analysis also shows that gender, age, length of service with current employer for 1 year and over, working in public sector, working long hours per day, educational achievements, full-time employment, professional qualifications, nationality, and working in managerial positions play important roles in determining employees' pay. Interestingly, the analysis shows that having one or more children has no significant impact on women and men's pay, while career breaks have a strong negative impact on the pay of men (but not women). Additionally, the results show that women face a "glass ceiling", where the highest inequality is at the top of the pay distribution, suggesting that female employees who break the glass ceiling pay a substantial pay penalty in the Saudi private and public sectors. This finding is in line with the results obtained from using the GOSI data and is also found in the UK labour market, as suggested by the previous LFS results.

6.2 Estimation of the factors influencing the earnings for women and men employees

Using self-reporting questionnaires distributed across Saudi private and public companies (large-medium and small), for the period (July 2020 – April 2021), this study seeks to estimate the relative importance of factors that may impact the level of

earnings for women and men in SA. Appendix V provides the definition of these variables used in the analysis.

6.2.1 Descriptive statistics

Table 6-1 reports the descriptive statistics of selected variables for the pooled sample and for men and women, for full- and part-time employees in both private and public sectors in SA for the period July 2020 and April 2021. There are 2,049 individuals in the sample, of whom 1,295 are men and 754 are women.

Table 6-1 Summary statistics for a sample of employees in Saudi Arabia by their gender

Variable	Overall sample				Male sample				Female sample			
	Mean	Std. dev.	Min	Max	Mean	Std. dev.	Min	Max	Mean	Std. dev.	Min	Max
Monthly pay (log)	9.4504	0.7829	6.8977	11.2898	9.6719	0.7342	6.8977	11.2898	9.0700	0.7151	6.8977	11.2898
Pays in Saudi Riyal[7]	17,043	14382	990	80,000	20,402	15316	990	80,000	11,275	10333	990	80,000
Female	0.3680	0.4824	0	1								
Saudi	0.9600	0.1961	0	1	0.9490	0.2200	0	1	0.9788	0.1442	0	1
Public sector	0.4446	0.4970	0	1	0.4440	0.4970	0	1	0.4456	0.4974	0	1
Age												
18-29 years old	0.3568	0.4792	0	1	0.2378	0.4259	0	1	0.5610	0.4966	0	1
30-39 years old	0.4012	0.4903	0	1	0.4486	0.4975	0	1	0.3196	0.4666	0	1
40-49 years old	0.1806	0.3848	0	1	0.2355	0.4245	0	1	0.0862	0.2809	0	1
50 and over	0.0615	0.2403	0	1	0.0780	0.2683	0	1	0.0332	0.1792	0	1
Tenure												
Less than 1 year	0.1679	0.3739	0	1	0.1089	0.3116	0	1	0.2692	0.4439	0	1
1-2 years	0.2235	0.4167	0	1	0.1753	0.3804	0	1	0.3064	0.4613	0	1
3-5 years	0.1913	0.3934	0	1	0.1961	0.3972	0	1	0.1830	0.3869	0	1
6-10 years	0.1733	0.3786	0	1	0.1938	0.3954	0	1	0.1379	0.3451	0	1
Over 10 years	0.2440	0.4296	0	1	0.3259	0.4689	0	1	0.1034	0.3047	0	1
Education												
No qualification[8]	0.0005	0.0221	0	1	0.0008	0.0278	0	1				
High School	0.0664	0.2490	0	1	0.0656	0.2477	0	1	0.0676	0.2513	0	1
Diploma	0.0815	0.2737	0	1	0.0950	0.2933	0	1	0.0584	0.2346	0	1
Bachelor's degree	0.6003	0.4900	0	1	0.5614	0.4964	0	1	0.6671	0.4716	0	1
Postgraduate (Master's/Doctoral Degree)	0.2513	0.4339	0	1	0.2772	0.4478	0	1	0.2069	0.4053	0	1
Training	0.8629	0.3441	0	1	0.9027	0.2965	0	1	0.7944	0.4044	0	1
Professional qualification	0.5969	0.4906	0	1	0.6355	0.4815	0	1	0.5305	0.4994	0	1
Hours	8.1371	1.2315	4	12	8.2734	1.2123	4	12	7.9032	1.2299	4	12
Full time	0.9283	0.2581	0	1	0.9653	0.1832	0	1	0.8647	0.3422	0	1
Managerial	0.4500	0.4976	0	1	0.5483	0.4979	0	1	0.2812	0.4499	0	1
Career break	0.1269	0.3329	0	1	0.1019	0.3027	0	1	0.1698	0.3757	0	1
Married	0.5159	0.4999	0	1	0.6386	0.4806	0	1	0.3050	0.4607	0	1
Children under 16 years old												
No children	0.5652	0.4959	0	1	0.4703	0.4993	0	1	0.7281	0.4452	0	1
1 child	0.1108	0.3139	0	1	0.1104	0.3135	0	1	0.1114	0.3148	0	1
2 children	0.1367	0.3436	0	1	0.1637	0.3702	0	1	0.0902	0.2866	0	1
3 children and above	0.1874	0.3903	0	1	0.2556	0.4364	0	1	0.0703	0.2558	0	1
Observations	**2,049**				**1,295**				**754**			

Source: Authors' calculation from the primary dataset for the period July 2020 – April 2021.

[7] The median pay salary for men 16,000 SR, and the median pay salary for women 9,700 SR.

[8] Unlike male employees all the female employees in the sample have a qualification.

In the sample observations, women account for around 36% of the observations, which is much higher than the 15% in GOSI sample in 2018. However, it is far lower than the LFS data's 53%. 96% of the sample are Saudis and 44% of the employees in the sample work in the public sector.

The length of services with the current employer for *Over 10 years* and *1-2 years* categories had both a higher representation (24% and 22% respectively), while the category of *Less than 1 year* had the lowest percentage (16 %) throughout the study period. With regard to *Education* qualification, **Table 6-1** shows that around 99% of the sample employee have qualifications (e.g., High School 6%; Diploma 8%; Postgraduate (Master's/Doctoral Degree) 25%; particularly, employees with bachelor's degree account for around 60% of the sample. 86% of the sample employees received job-related *Training*, and 59% of the employees have a *Professional qualification*. The mean working *Hours* for employees is 8 hours per day, with a minimum of 4 hours and maximum of 12 hours. **Table 6-1** also shows that approximately 92% of employees work in *Full time* jobs, 45% of the pooled sample held a *Managerial* position, 12% the sample employees had *Career breaks*, and 51% of the sample employees are *Married*. In relation to *number of children under 16* in families, 56% of employees had no children, compared to only 11% of employees had one child.

Moving into [column 2] and [column 3], **Table 6-1** displays the differences in the mean selected variables for the men and women samples. It is clear that the men group had a higher average monthly rate of 9.67 log unit (μ= 9.67, σ= 0.73) than the women group (μ= 9.07, σ= 0.71). The table above also shows that the average (median) pay salary is 20,402 SR (16,000 SR) and 11,275 SR (9,700 SR) for men and women,

respectively. This suggests an 'unadjusted' average (median) pay gap of 45%[9] (39%)[10], meaning that Saudi women earn almost 45 (39) pence (i.e., Halala[11]) less than every 1 Saudi Riyal earned by Saudi men.

Table 6-1 also shows that 94% of men in the sample were *Saudis*, while Saudi women represent 97% of the sample. In relation to the *Public sector*, approximately 44% of both samples work in the public sector. Regrading *Age* group, **Table 6-1** demonstrates that 56% of working women are between the ages of *18-29 years old*, while 44% of men employees are between the ages of *30-39 years old*. Moreover, this table illustrates that the pattern of tenure is similar for men and women, with men having more work experience than women. Particularly, the table shows that 32% of men have worked for their current employer for more than 10 years, compared to 10% of the women sample for the same category. This might be attributable to women's delayed entry into the labour market in the SA, as the Saudi government started to open more work opportunities for women in 2012. However, prior 2012 Saudi women were limited to working in fields deemed "suitable" for their "nature" such as medicine, charity work, and education (Alomar, 2014)

Table 6-1 also presents similar patterns for *Education* for men and women groups; almost 66% of the women employees had bachelor's degree, compared to 56% of the men employees. This reveals that the gender gap for bachelor's degree holders in SA is decreasing, as more women with bachelor's degrees are entering the Saudi labour force (General Authority for Statistics, 2022). As expected, 90% of men employees

[9] Average pay gap= {(average male salary-average female salary)/average male salary} x 100. {(20,402-11,275)/20,402} ×100= 45%.

[10] Median pay gap = {(Median salary of man – Median salary of woman) / median salary of man} x 100. {(16,000-9,700)/16,000} ×100= 39%.

[11] Saudi's national currency is the Saudi riyal (SAR), which is subdivided into 100 halala.

attend more *Training* than 79% of women employees. This finding could be due to the lack of awareness of women workers' optimal choices or increased discriminatory training and promotion practices within firms in SA. This result is consistent with prior research (see Evertsson, 2004), which suggests that women are less likely than men to take part in job training.

Similarly, 63% of men employees had *Professional qualification*, compared to 53% of women employees. In terms of working *Hours*, men and women groups work around 8 hours per day. It can also be seen that 96% of men in the sample work in *Full time* jobs, compared to 86% of women. For *Managerial* positions, 54% of men employees work in managerial position, while only 28% of women employees hold managerial position in the Saudi labour market. This result can be explained by the fact that men, in Saudi society, are perceived to be better for leadership positions than women due to their personal characteristics; men are seen to be leading, and dominant, while women are generally viewed as dependent, and gentle (Baron, 1994; Mensch et al., 2003). This is further examined in detail in the next Chapter.

Unsurprisingly, 16% of the women sample had *Career breaks*, compared to solely 10% of the men sample. This is because Saudi women may have taken their maternity leave for 10 weeks (only 3 days for men—as a paternity leave for male parent); or 4-month leave after the death of their husband (only 5 days for men after the death of their spouse) (Bureau of Experts at the Council of Ministers, 2021). It is also worth noting that 63% of the men in the sample are married, compared to only 30% for women. This is because some employers avoid hiring married women, as they have marriage/family commitment (e.g., childrearing, and pregnancy etc.), and this may have greater adverse effects on their work performance (Al-Fawzan, 2012). Or maybe because of the effect of the distribution of gender roles in Saudi society on women's

job; married women supposed to stay at home to take care of their children and families.

The above table also shows a similar pattern for men and women in terms of the *Number of children under the age of 16* in families; however, the majority of women employees (72%) have no children compared to (47%) of men employees. This finding confirms the idea stated earlier regarding Saudi employers' recruitment and hiring strategies, which seem to favour the employment of non-married women as they do not have any family responsibilities toward their children.

Overall, after presenting the descriptive statistics of selected variables for the pooled sample and for men and women, for full- and part-time employees in both private and public sectors in SA for the period July 2020 and April 2021,the next table discusses the correlation among the independent variables, as presented in **Table 6.2** to check for multicollinearity.

6.2.2 Correlation matrix

Table 6-2 shows the correlation coefficients and statistical significance for the variables in the regression analysis. As can be seen, none of the correlation coefficients between the independent variables are greater than 0.8, indicating that multicollinearity is not a significant issue in this study (see (Shrestha, 2020). The highest positive correlation is 0.71 between *Married* and *Number of children under the age of 16*, indicating that married employees are more likely to have children under the age of 16 in families.

Table 6-2 Correlation matrix

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1.Log (monthly pay)	1														
2.Female	-0.3708*	1													
3.Saudi	0.0232	0.0732*	1												
4.Public sector	0.0985*	0.0016	0.0524*	1											
5.Age	0.4388*	-0.3069*	-0.0912*	0.1906*	1										
6.Tenure	0.3597*	-0.3221*	-0.0151	0.2466*	0.6090*	1									
7.Education	0.3769*	-0.022	-0.0837*	0.1172*	0.1167*	0.0832*	1								
8.Training	0.1723*	-0.1518*	0.0272	0.0740*	0.1398*	0.3449*	0.0787*	1							
9.Professional qualification	0.1667*	-0.1032*	-0.0561*	-0.0376	0.1116*	0.1034*	0.0852*	0.1843*	1						
10.Hours	0.1613*	-0.1450*	-0.0865*	-0.1791*	-0.0455*	-0.0452*	0.0176	-0.013	0.1016*	1					
11.Full time	0.2794*	-0.1879*	0.0108	0.0432	0.1631*	0.1525*	0.1737*	0.0761*	0.0645*	0.2002*	1				
12.Managerial	0.2808*	-0.2589*	-0.0055	-0.0492*	0.2721*	0.1974*	0.1305*	0.0840*	0.0994*	0.0327	0.0728*	1			
13.Career break	-0.0994*	0.0983*	0.0105	0.0012	0.023	0.0036	0.0052	-0.0143	-0.0006	-0.0225	-0.0588*	0.0236	1		
14.Married	0.3562*	-0.3219*	-0.0633*	0.1160*	0.5165*	0.4548*	0.1591*	0.1447*	0.1077*	-0.026	0.1507*	0.3129*	-0.015	1	
15.Children under 16 years old	0.3310*	-0.2813*	-0.0567*	0.0913*	0.5174*	0.4615*	0.1322*	0.1119*	0.0708*	-0.022	0.1306*	0.2800*	-0.0305	0.7179*	1

* Indicate statistical significance at p<5% using two-sided t-statistics.

6.2.3 OLS Estimation results

The findings from the OLS estimation of the earnings functions are presented in **Table 6-3.** The raw pay differential between men and women is 60.18 percentage points. This is simply the "unadjusted" differences in the log average monthly pay of men and women observed in the data, which corresponds to a pay differential of (exp (- 0.6018) - 1) ×100 = 45%. This difference in average pays is certainly no indication of discrimination; this could simply be due to gaps in men's and women's unobserved attributes (see Ahmed and McGillivray 2015). In contrast to the GOSI analysis, the gender pay gap in this survey-based analysis is lower. This may be attributable to the change in the Saudi government policies from 2018 onwards (e.g., lifting the restriction on women driving, allowing women to work without the approval of their male guardians, and increasing women's labour force participation etc), which help improve women's working conditions in the Saudi workplace, and hence positively influence women's employment and salary.[12]

To get the conditional pay differential, this study pooled the sample and run an OLS regression while controlling for various socio-economic factors that are found to influence the employees pay. The coefficient on the 'Female' dummy variable is negative and statistically significant, suggesting that women on average earn 24% less than men. This is much higher than the 8% gap in the earnings of men and women in the UK for 2018,

[12] One may argue that this survey yield less precise an accurate estimation of the GPG as the survey respondents are recognised as essentially self-selecting, deciding whether or not a survey questioner, and, as such, they may not form are representative sample of the population at-large like GOSI, which has large numbers of responses. However, this survey provides is more comprehensive than GOSI in terms of coverage of sectors (private and public sectors) and the socio-economic characteristics of employees. These characteristics have proved to play an important role in determinate the magnitude of GPG, and the inclusion of such factors in model specification helps provide an accurate estimation of GPG.

as the LFS analysis shows in Chapter 5 using the same control variables. In contrast to the GOSI dataset, women on average earn 15% less than men in 2018. This comparison between the adjusted gender pay gap in the Saudi survey with GOSI is very difficult to make, as the female sample in GOSI is only 15% compared to 36% in the Saudi survey. Also, GOSI contains Saudis nationality only, while the Saudi survey includes Saudis and non-Saudis. This emphasises the importance of considering the contextual factors (such as society, culture, gender stereotypes, and religion) and their influence on women's working life in SA. This is examined in more depth in the next Chapter.

Table 6-3 Effect of gender on pays across Male and Female groups

Variable	Overall sample	Male sample	Female sample
Raw (unadjusted) pay gap	*-0.6018****		
	(-18.0653)		
Female (adjusted) pay gap	-0.2661***		
	(-8.7127)		
Saudi	0.3526***	0.3952***	0.3291**
	(5.2811)	(5.3698)	(2.1681)
Public	0.2235***	0.1639***	0.2609***
	(4.6187)	(2.6061)	(3.4520)
Age [a]			
30-39 years old	0.2707***	0.4171***	0.0666
	(7.0806)	(8.1591)	(1.1370)
40-49 years old	0.5125***	0.6398***	0.2686***
	(9.9263)	(10.1216)	(2.6933)
50 and over	0.5649***	0.7487***	0.1179
	(8.3215)	(9.3973)	(0.8093)
Tenure [b]			
1-2 years	0.1732***	0.1822***	0.2119***
	(4.1052)	(2.9705)	(3.6297)
3-5 years	0.2110***	0.1109*	0.3348***
	(4.6118)	(1.7922)	(4.7860)
6-10 years	0.1566***	0.0273	0.3978***
	(3.0120)	(0.4056)	(4.5972)
Over 10 years	0.2262***	0.0992	0.6153***
	(4.1726)	(1.4764)	(5.7293)
Education [c]			
High School	-0.2351	-0.1132	-
	(-0.4088)	(-0.2002)	
Diploma	-0.0626	0.0513	0.1657
	(-0.1089)	(0.0907)	(1.3801)
Bachelor's degree	0.2419	0.3848	0.3857***
	(0.4218)	(0.6825)	(4.3286)
Postgraduate (Master's/Doctoral Degree)	0.5548	0.6592	0.7646***
	(0.9667)	(1.1687)	(7.5440)
Training	0.0418	0.0930	-0.0489
	(1.0293)	(1.6406)	(-0.8284)
Professional qualification	0.0801***	0.0689**	0.1098**
	(3.0092)	(2.0711)	(2.4907)
Hours	0.0720***	0.0750***	0.0505***
	(6.4670)	(5.4743)	(2.6484)
Full time	0.2635***	0.2329***	0.3103***
	(4.9965)	(2.6380)	(4.5227)
Managerial	0.1406***	0.1547***	0.0639
	(5.0428)	(4.5118)	(1.3103)
Career break	-0.1732***	-0.2735***	-0.0721
	(-4.5042)	(-5.2224)	(-1.2673)
Married	0.0703	0.0834	0.0027
	(1.6196)	(1.5407)	(0.0367)

Table 6-4 Effect of gender on pay across Male and Female groups

Variable	Overall sample	Male sample	Female sample
Children under 16 years old [d]			
1 child	0.0685	0.1046	0.0372
	(1.3023)	(1.6025)	(0.4272)
2 children	-0.0244	-0.0381	0.0161
	(-0.4711)	(-0.6251)	(0.1641)
3 children and above	0.0343	0.0560	0.0027
	(0.6778)	(0.9547)	(0.0246)
Constant	7.3089***	7.1176***	7.0405***
	(12.3955)	(12.0302)	(29.8563)
Observations	**2,049**	**1,295**	**754**
R-squared	0.4878	0.4499	0.4028
F-test	49.06***	27.03***	13.05***
Region fe	YES	YES	YES
Industry fe	YES	YES	YES

Source: Authors' calculation from the primary dataset for the period July 2020 – April 2021. Coefficients are unbracketed, with heteroscedastic robust t statistics in parentheses. Note: [a] indicates to 18-29 years old as reference group for *Age*, [b] means less than 1 year as a reference for *Tenure*, [c] refers to no qualification as a reference group for *Education* particularly for male sample, and High School as a reference for female sample, [d] indicates no children as a reference group for *Children under 16 years old.*

* Significance at the 10% level.
** Significance at the 5% level.
*** Significance at the 1% level.

The results show that Saudi employees earn more than their non-Saudi counterparts, implying possible discrimination against non-Saudi employees.

Table 6-3 also reveals that working in the *Public sector* had a positive effect on pay. Employees who are *30 years old and above* were paid more than employees between the ages of 18 and 29 (i.e., reference category), suggesting that pay increases as an employee gets older. This finding is consistent with Miller and Vagins, (2018). In relation to *Tenure*, (i.e., length of service), the results reveal that employees who have worked with their current employers for 1 year and more received higher pays compared to employees with less than 1 year of work experience (i.e., reference category). This suggest that longer work experience leads to a significant increase in employees'

salaries. This dovetails well with the findings of Costa et al. (2020), suggesting that long work experience is an important determinant of employees' pays.

The results in **Table 6-3** also demonstrate that *Professional qualification*, *Hours* worked, *Full time* employee and working in *Managerial* position, have positive impacts on pay. Employees with *Career breaks* receive lower pay than employees who did not. This is true since career interruption can reduce the number of hours worked in full-time jobs, with gaps in income and number of promotions widening over time (see Goldin, 2014).

Table 6-3 also reports the estimated coefficients after dividing the entire sample into two subsamples: men and women [Columns 2 and 3]. In terms of employees' nationality, the coefficients on *Saudi* for men and women groups are significant and positively associated with income, suggesting that Saudi employees earn more than non-Saudi employees. In regard to the impact of working in the *Public sector*, the result shows that being an employee in the public sector is beneficial for both women and men, but its impact on pay is more pronounced for women than for men. This result may be explained by the fact that public sector is favourably perceived by women as a more suitable working environment, where employees in the Saudi public sector have more weekly and annual breaks than private sector employees; let alone the number of working hours. Unlike private sector, the number of working hours in the public sector is approximately 35 hours per week (i.e., an average of 7 hours per day for 5 days per week). Additionally, the Saudi public sector is financially supported by the government, and this is a very important advantage. To explain further, in the public sector, there is a consistent pay increase over years for all employees; and there are estimated bonuses based on the number of years of service, in addition to the retirement law in government departments that allow

employee to receive full pension after 30 years of service (Sayidaty, 2019). Therefore, this suitable working environment motivates women to perform and achieve their work efficiently, which positively affected their salary.

In relation to the influence of *Age* on pay, the notable finding is that the age effect is more pronounced for men aged 30 years old and above than women in the same age group. Men aged between 40-49 years old received higher salaries than women employees in the same age group. Age can be an indicator for lifetime work experience (see Sugihashi,2003); Saudi women have less lifetime work experience than men, as a result of their delayed entry to the Saudi labour market, and therefore they have lower returns to age. This finding is further discussed in the next Chapter.

[Columns 2 and 3] of **Table 6-3** also reports the influence of the length of services (i.e., *Tenure*) on pay, the notable finding is that women who have been with their current employer for *1 year and above* (in particular, between *1-2 years*) received higher salaries than men in the same tenure group. This finding is contrary to the findings based on the analysis of GOSI dataset (see Chapter 5), which shows that men (across all *Tenure* groups) have higher returns to their experience with their current employers than women. This might be attributed to the Saudi government initiatives taken in 2018, which aim to improve women's economic involvement, such as increasing women's workforce participation rate from 22% to 30%. These initiatives are further discussed in the next Chapter. Furthermore, this result is likely related to the fact that women are more attached to their employers than men, as employers may provide a flexible working environment for women to manage their family responsibilities.

It is suggested that increases in women's awareness and their *Educational* attainment in male-dominated fields (such as computer and information sciences, accounting, econometrics, and law) are associated with high status careers (Cromwell, 2022); which in turn increases their pay. As the table above shows, women with a bachelor's degree or a Postgraduate (Master's/Doctoral) degree, on average earned more than women who have only completed high school (i.e., reference group). This is because the Kingdom of Saudi Arabia made way for many women to pursue highly educated degrees (e.g., master's degree or higher) by the introduction of government scholarships and Ministry of Education programs to encourage female students to study a range of in-demand and specialized subjects, such as science, technology, engineering, and mathematics, breaking barriers and facing challenges head-on (Hameed et al,2022). This finding does concur with the results reported by Blau and Kahn (2017), which indicates that the level of education plays a large and important role in closing the gender pay gap due to higher educational attainment among women.

In terms of *Professional qualification*, the coefficients in both groups are positive and statistically significant; however, women seem to benefit more from professional attainment than men. In the same vein, the results demonstrate that the coefficient on the number of hours worked per day (*Hours*) is positive and statistically significant for both women and for men, implying that when women and men work more hours per day, they earn significantly more pay. This result is consistent with Mandel and Semyonov, (2014), who found that the decline over time in earnings disparities between men and women was partially attributed to the number of working hours (including the premium pay for working overtime or on weekends). However, it can be seen from the results that women

have a lower return to hours of work compared to men even though their number of hours worked per day (*Hours*) is similar to men. This could be attributed to women being overrepresented in positions with low pay. Furthermore, both women and men benefit from working *Full-time* jobs compared to part-time. This finding in line with the theory of Dual Labour Markets (Doeringer and Piore, 1971), which proposes that pay of full-time workers are higher than part-time ones due to lower qualifications or the reduced bargaining power of part-time employees.

Regarding being in *Managerial* positions, the coefficients on *Managerial* are positive and significant, only for men, suggesting that *Managerial* position only matters for men but not for women. Specifically, while male managers earn significantly higher pay than non-managerial male employees, female managers earn statistically the same as female non-managers. This is because employers perceive women to have characteristics (such as being submissive, sensitive, and less trustworthy) that are unsuitable for leadership positions. Furthermore, as previously discussed (see Section 6.2), the lack of experience that women have compared to men with their current employer makes it difficult for women to advance to senior management positions. These subjects are covered in greater detail in Chapter 7.

This result is broadly consistent with an earlier study by Watson, (2010), who finds that women managers earn less than male ones, suggesting that “this pay gap cannot be explained by the characteristics of managers and is possible due to discrimination…One is left with the stark conclusion that a major part of the gap is simply due to women managers being female” (p.69)

Interestingly, having children has no impact on women's and men's pay. This is not surprising for women sample in particular given that most women in this study are under 30 (or 56%), where they might have not get married yet or they might have no children. A possible explanation for this might be that women with children are unable to find jobs in the first place because of childcare responsibilities and the ones that do find jobs are the ones with good childcare support that allows them the opportunity to go to work. Married women are entitled to 10-weeks maternity leave and an hour each day to breastfeed her infant. There is a bias among Saudi employers in relation to their 'singlehood' recruitment strategy (Al-Zahrani, 2017). According to Rashad (2023), married Saudi women looking for work claim that they face hidden barriers in the private and public sectors, as hiring managers exclude or reject married women looking for work, particularly those with children, and prefer to hire single women, claiming that married female employees' family lives have a direct impact on performance. In this study, the distribution of survey respondents shows that Saudi employers tend to avoid hiring married women with children; the proportion of women in the sample who have children is 27%, compared to 53% for men. This suggests that having children has an adverse impact on women's participation in the labour market. Another possible explanation is related to a patriarchal society (which is prevalent in Muslim societies, particularly in SA), in which married women with children face pressure from their husbands to abandons their work to care for their children.

Career breaks have a strong negative impact on men but not women. This finding is contrary to previous studies (Harkness, 2016; Drolet and Mumford, 2012) suggesting strong negative effects of career interruption on women's pays. It appears from this result

that men take more ‘unpaid leave’ than women; the paid leave for men in SA is less than the paid leave for women. According to Saudi labour law, paid maternity leave is 10 weeks compared to 3 days paid parental leave. Also, in the case of death leave, men have 5 days leave upon the death of wife, while Muslim women whose husbands have passed away have a total leave of 4 months and 10 days with full pay, regardless of their length of service or when they were appointed (Bureau of Experts at the Council of Ministers, 2021). Therefore, in SA, men are less paid leaves, causing them to use their unpaid leave, which in turn reduces their earnings.

6.2.4 Estimation results of Oaxaca-Blinder decomposition

The regression analysis identifies the factors that have a significant impact on salary determination, but it does not show their relative contribution to the gender pay gap.

Table 6-4 reports the results of the decomposition of OLS estimates. The first results column reveals the mean predictions by men and women groups and their difference.

Table 6-5 Oaxaca-Blinder decomposition[a]

Variables	Overall sample	Explained part
Differences in monthly pay	0.6018***	
	(18.1957)	
Group 1: female = 0 (n= 1295)	9.6719***	
	(474.0729)	
Group 1: female = 1 (n= 754)	9.0700***	
	(348.3970)	
Total explained	0.3156***	
	(12.6160)	
Total unexplained	0.2862***	
	(9.4942)	
Endowment effects		
Age		0.1176***
		(7.7294)
Tenure		0.0384***
		(2.8967)
Education		0.0106
		(1.0176)
Training		0.0076
		(1.4994)
Hours		0.0285***
		(4.5336)
Professional qualification		0.0095***
		(2.7080)
Full-time		0.0268***
		(3.4419)
Public sector		-0.0001
		(-0.0705)
Married		0.0247*
		(1.9317)
Children under 16 years old		0.0130
		(1.1622)
Saudi		-0.0112***
		(-2.9672)
Career break		0.0132***
		(3.1266)
Managerial position		0.0355***
		(4.3829)
Region		0.0005
		(0.1045)
Industry		0.0009
		(0.5566)
Total endowment effects		0.3156***
		(12.6160)
Discrimination effects	0.2862***	
	(9.4942)	

Source: Authors' calculation from the primary dataset for the period (July 2020 – April 2021). Coefficients are unbracketed, with heteroscedastic robust t statistics in parentheses. [a] Decomposition at the mean. Male pay is the reference category. A positive entry indicates an advantage in favour of males. The following explanatory variables are included in each group: *Age*. *Tenure* (5 categories). *Education* (6 categories). *Training*. *Hours*. *Professional qualification*. *Full time*. *Public sector*. *Married*. *Children under 16 years old* (4 categories). *Saudi*. *Career break*. *Managerial* position. *Industry* (11 categories). *Region* (6 categories).
* Significance at the 10% level.
** Significance at the 5% level.
*** Significance at the 1% level.

Men have a higher mean of log monthly pay than women yielding a pay gap of 0.6018 units of log monthly pay (or 45%). The decomposition of this gender pay gap shows that it is partially due to labour market discrimination. Specifically, the value 31.5 log points of the *explained part* (or endowment effect) suggests that the differences in the observed characteristics account for 52% (=0.3156/0.6018) of pay differentials, which could be reduced if women had the same characteristics as men. However, after accounting for differences in labour market endowments, the *unexplained part* (or the discrimination effect) accounts for 48% (=0.2862/0.6018) of the pay gap and is lower than the endowment effect. This is consistent with earlier findings (see Chapter 5) and the finding of previous studies (see for example, Healy and Ahmed, 2019). This indicates that if men and women obtained a similar price for their productive characteristics such as returns to education and tenure ,etc , men would have obtained a higher mean wage than women.. The *unexplained part* (or the discrimination effect) may be caused by structural issues in SA, such as social norms, gender stereotyping, and potential discrimination, which are difficult to measure and can influence the pay gap. These issues are thoroughly discussed in the next Chapter.

The last column refers to the variables that are distributed to the endowment effect. The component that contributed the most to the *explained part* (the endowment effect) is *Age*. In more detail, this variable explains (0.1176/0.3156) 37%, indicating that *Age*, which can serve as an indicator of economically relevant human capital trait (i.e., total work experience), is playing a large an important role in determining the gender pay gap in the Saudi private and public sector. In general, the findings show that women are paid less than men employees, and 52% of this gap is explained by differences in socio-economic

characteristics, and 48% is due to discrimination (but in addition, due to omitted variables); in this sense it is often said that the discrimination part serves as the 'unjustified' or 'unexplained' wage differentials.

The final section of this chapter uses distribution decomposition at selected quantiles to estimate whether the pay gap is higher (or lower) at the top (or bottom) of pay distribution.

6.2.5 Estimation results of distributional decomposition at selected quantiles

Prior research (e.g., Healy and Ahamed, 2019) suggests that the gender pay gap differs across pay distribution in financial services in the UK, in particular at upper and bottom. This section therefore expands the Oaxaca-Blinder decomposition analysis by examining the gender pay gap at certain quantiles (q= 0.10, 0.25,0.50, 0.75, and 0.90) of the pay distribution. Looking across the distribution helps to determine whether the extent of labour market discrimination differs at the bottom or the top of the distribution, which has different policy implications.

Table 6-6 Distribution decomposition at selected quantiles for employees in Saudi Arabia

Variable	q=0.10	q=0.25	q=0.50	q=0.75	q=0.90
Difference in monthly pay	0.5589***	0.6291***	0.4948***	0.6164***	0.7866***
	(10.4433)	(13.6252)	(13.1630)	(14.5221)	(15.0011)
Endowment effects					
Saudi	-0.0155**	-0.0120***	-0.0101**	-0.0093**	-0.0103*
	(-2.0779)	(-2.6568)	(-2.5212)	(-2.1280)	(-1.7999)
Public sector	-0.0004	-0.0001	0.0002	0.0001	0.0001
	(-0.0706)	(-0.0704)	(0.0706)	(0.0705)	(0.0704)
Age	0.0756***	0.0893***	0.1687***	0.2360***	0.2125***
	(2.6958)	(4.8500)	(8.3944)	(8.4307)	(5.9919)
Tenure	0.1210***	0.0962***	-0.0111	-0.1031***	-0.1225***
	(3.5899)	(4.9414)	(-0.6238)	(-4.2199)	(-3.6358)
Education	0.0136	0.0124	0.0097	0.0108	0.0113
	(1.0078)	(1.0157)	(1.0151)	(1.0145)	(1.0112)
Training	0.0637***	0.0235**	0.0036	-0.0030	-0.0049
	(2.9319)	(2.4651)	(0.5098)	(-0.3480)	(-0.3773)
Professional qualification	0.0060	0.0110**	0.0059	0.0048	0.0088
	(0.7158)	(2.0455)	(1.2523)	(0.8563)	(1.2212)
Hours	0.0303**	0.0170**	0.0273***	0.0436***	0.0357***
	(2.3920)	(2.3468)	(3.7520)	(4.2682)	(2.8574)
Full time	0.0787**	0.0282**	0.0206**	-0.0152	-0.0516***
	(2.4178)	(2.0148)	(2.2469)	(-1.3548)	(-2.6351)
Managerial	-0.0267	0.0042	0.0558***	0.0847***	0.0804***
	(-1.1783)	(0.3264)	(4.2896)	(5.4118)	(4.6608)
Career break	0.0385***	0.0175***	0.0154***	0.0228***	0.0248***
	(2.7667)	(2.7633)	(2.6243)	(3.0737)	(2.9888)
Married	0.1524***	0.0696***	0.0331	-0.0025	-0.0038
	(4.1165)	(3.0470)	(1.5039)	(-0.0940)	(-0.1194)
Children under 16 years old	-0.0323	-0.0120	-0.0120	0.0571**	0.0869***
	(-1.3580)	(-0.7613)	(-0.7429)	(2.5611)	(2.8816)
Region	0.0004	0.0004	0.0005	0.0006	0.0006
	(0.1044)	(0.1045)	(0.1045)	(0.1045)	(0.1045)
Industry	0.0011	0.0001	0.0009	0.0033	0.0046
	(0.4690)	(0.1478)	(0.5279)	(0.5700)	(0.5712)
Total endowment effects	0.5063***	0.3453***	0.3085***	0.3309***	0.2727***
	(8.2051)	(10.4973)	(11.2264)	(9.6775)	(6.4883)
Discrimination effects	0.0526	0.2838***	0.1863***	0.2855***	0.5139***
	(0.6292)	(5.7999)	(4.7748)	(6.9770)	(10.1533)

Source: Authors' calculation from the primary dataset for the period (July 2020 – April 2021). Coefficients are unbracketed, with heteroscedastic robust t statistics in parentheses. [a] Male pays is the reference category in the decomposition. A positive entry indicates an advantage in favor of males. [b] Differences in endowment or observed characteristics. The following explanatory variables are included in each group: *Saudi*. *Public sector*. *Tenure* (5 categories). *Hours*. *Education* (6 categories). Children under 16 years old (4 categories). Industry (11 categories). Region (6 categories).

* Significance at the 10% level.

** Significance at the 5% level.

*** Significance at the 1% level.

Table 6-5 reports distributional decomposition of pay gap using the unconditional quantile regressions for selected quantiles (q = 0.10, 0.25, 0.50, 0.75, 0.90). As expected, the estimated pay gap is higher at the 90th quantile, which is similar to that found in GOSI data, but it is significantly higher than that in the UK using the (LFS) dataset). This could be due to under-representation of women in SA in management and leadership positions compared to the UK. Women in the UK held 22% of senior roles (Catalyst., 2018) compared to only 7% in SA (Syed et al., 2018); this explains the widening pay gap between Saudi men and women at the upper tail of the pay distribution. The reasons behind the low representation of Saudi women in management and leadership jobs are related to the widespread gender-role stereotypes in Saudi society and the discriminatory culture that question the suitability of women for employment and management and their commitment to career progression, which may often lead them being pushed away from promotion to more senior managerial levels (see Tlaiss and al Waqfi, 2022).

Contrary to sticky floor effect[13](see Chi and Li, 2008), who found gender pay differential is bigger at the lower quantiles in Chinese context), the findings of this study provide further evidence in support of glass ceiling effect[14]; as Miller, (2005) suggest, earnings gap in bigger among high-paid employees in Australia. This study differs in the findings of exploring the glass ceiling, as most developing countries (e.g., Chi and Li, 2008; Ahmed and McGillivray, 2015; Deshpande, A., Goel, D. and Khanna, S., 2018) face a wider pay gap at the lower quantiles. The presence of a glass ceiling refers to the fact that women

[13] “Sticky floor” refers to a wider pay gap at the lower end of the pay distribution, suggesting that women in lower-paying groups are paid less than their male colleagues (Booth et al., 2003; Arulampalam et al., 2007).
[14] "Glass ceiling" indicates a larger pay difference at the top of the pay distribution, implying that women employees in higher-paying groups are paid less than their men colleagues (Booth et al., 2003; Arulampalam et al., 2007).

in higher-paying groups are paid less than their men colleagues, suggesting a larger pay difference at the upper tail of the pay distribution than at the middle or bottom. This is because women are seen by employers as having characteristics (i.e., submissive, sensitive, and less trustworthy) that are not suited to leadership positions. Additionally, the lack of experience that women have compared to men with their current employer as discussed earlier (see Section 6.2) results in difficulties for women to reach senior management positions. These aspects are discussed further in Chapter 7.

Moving to the impact of the endowment effect of men and women, as a proportion of the pay gap reveals that the differences in characteristics are in favour of men. The finding also shows that the endowment effect is positive for all quantiles. It increases by 50.6 log points (or 65%) at the 10^{th} quantile, and then decreases along with the earnings distribution. However, the differences diminish from the 75th quantile, reaching 27.2 log points (or 31%) at 90th quantile. It suggests that men have a relatively greater endowment advantage at the bottom of the pay distribution than at the top. These findings are consistent with the results from a similar study (see Ahmed and McGillivray, 2015). **Table 6-5** shows the endowment effect related to *Tenure* and being *Married* have contributed to the increase of gender pay differentials especially at 10^{th} quantile (i.e., the bottom of the pay distribution). These findings clearly show that differences in *Tenure* (a larger percentage of men have higher years of experience with their current employer than women), as well as differences in job performance between married employees (a larger percentage of married men have high productivity than married women), increase the pay gap.

However, a large portion of the contribution to endowment from the 75th quantile onwards is due to *Age*, indicating that differences between ages are in favour of men, as older men are more likely to have more work experience than women (see Chapter 4) at the upper end of pay distribution, resulting in an increase in pay inequality between men and women. In relation to the discrimination effect, the table shows positive coefficients across the pay distribution, suggesting that women on bottom and top of the earnings distribution are subject to discrimination. For example, the effect of discrimination increases from 28.3 log points (or 32%) at the 25^{th} quantile to 51.3 log points (or 67%) at the 90^{th} quantile, meaning that in particular at top of pay distributions, women in SA are more likely to face discrimination once they have reached a position where they are at the upper end of the pay distribution. This is because Saudi women in top management positions experience a lack of opportunities and advancement in the labour market (Al-Asfour et al. 2017; Kattan et al., 2016). Also, gender stereotypes in SA resulted in women becoming unable to practice leadership positions in efficient ways, due to lack of self-confidence, fear of taking responsibility, and the difficulty of combining family duties and career commitments. These topics are addressed in more detail in Chapter 7. This finding reveals that policy makers need to target different segments of the pay distribution to reduce the pay gap in the SA.

6.3 Summary

This Chapter offers a comprehensive analysis of the pay gap between men and women in SA, using questionnaires distributed across Saudi private and public companies (large-medium and small), for the period July 2020 – April 2021, so that the dataset in this chapter is more representative compared to GOSI, as mentioned earlier. The study finds

that *Age*, length of service with current employer for 1 year and above (i.e., *Tenure*), working in the *Public sector*, working longer *Hours* per day, *Education*, *Full-time* positions, *Professional qualifications*, *Saudi*, and working in *Managerial* positions play a particularly important role in determining employees' pay. Subsequently, one of the more significant findings to emerge from this study is that having *children* has no impact on either women's or men's pay. Also, the results surprisingly show that career breaks have a strong negative impact on men. Furthermore, the Blinder–Oaxaca decomposition analysis shows that *Age* is playing a large and an important role in determining the amount of gender pay gap in the Saudi private and public sector.

Finally, this study applies a distributional decomposition of pay gap using the unconditional quantile regressions for selected quantiles (q = 0.10, 0.25, 0.50, 0.75, 0.90). The results reveal that the estimated pay gap is higher at the 90th quantile, suggesting that women who break the glass ceiling in SA pay a substantial pay penalty in both sectors.

In addition, the current study finds that the difference in productive characteristics in favour of men (i.e., endowment effects) is larger at the upper tail of the pay distribution than at the bottom, where the large portion of the contribution to endowment effect at the 75^{th} quantile onward is by age. Finally, the analysis shows that women at the bottom and top of the earnings distribution were potentially subject to discrimination.

6.4 Conclusion

This chapter was designed to present a comprehensive analysis of the pay gap between men and women employees in SA. The data in this chapter was taken the form of self-report questionnaires, distributed across Saudi private and public companies (large, medium, and small), for the period July 2020 – April 2021. The most obvious finding to emerge from the OLS estimation of the earnings functions is that women in SA receive less salary than men. Specifically, the 'unadjusted' difference in the average pay between men and women is monthly earnings of men and women is 45%. This is lower than the 51% "unadjusted" gender pay gap reported for SA in 2018 using GOSI dataset (see Chapter 5), showing that the pay gap may has narrowed since then. This may partly be due to governmental policies in SA regarding women's empowerment in the workplace, which be discussed in more depth in Chapter 7. However, the pay gap is considerably higher than the 15% "unadjusted" gender pay gap in the UK using LFS database (see chapter 5).

Additionally, after controlling for the usual socio-economic characteristics, women employees in the Saudi private and public sectors receive salaries that are 27% lower than men which called the 'adjusted' gender pay gap. This is significantly higher than the 8% "adjusted" gender pay gap found in UK using LFS dataset (see Chapter5. Moreover, this Chapter has shown that along with other factors (e., g, *Age*, *Education*, *Managerial* position), gender is an important factor in explaining a considerable amount of pay difference, which matches those observed in the GOSI findings.

Finally, applying distributional decomposition of pay gap using the unconditional quantile regressions for selected quantiles (q = 0.10, 0.25, 0.50, 0.75, 0.90) has shown that women employees in the SA with the highest inequality is at the top of the pay distribution.

Where the pay gap has reached the highest point at the 90th quantile across private and public sector in SA, which is higher than that stated for the UK using the (LFS) dataset (see chapter 5). This indicates that women employees in SA are more likely to face discrimination a at the top level of the pay distribution than that in the UK, which might be related to gendered workplace dynamics in SA. These aspects are discussed further in (Chapter 7).

In general, therefore, the results of this chapter indicate that although the “unadjusted” gender pay gap has been narrowed from 51% (in 2018) to 45% (in 2021) in SA, the overall gender pay gap in SA is however still higher than that in the UK using the (LFS) dataset. These findings have thrown up many questions in need of further investigation, such as the influence of gender stereotypes, societal and cultural norms, and Islam religion on the widening of the gender pay gap in the Saudi context, which have been considered in the following chapter.

7 Chapter 7: Interview analysis

7.1 Introduction

Building on the insights developed in chapter five on the socio-economic factors that influence the gender pay gap in the Saudi private and public sectors, this chapter focuses on the description and interpretation of the results of interviews with HR managers in both sectors.

This chapter contributes significantly to the achievement of the study's primary aim by *exploring the causes of the Saudi gender pay gap and relevant effect changes* by adding HR managers' viewpoints to the examination of the Saudi gender pay gap. Age, length of service with current employer for one year or more, education, and working in managerial roles were all determined to play a significant impact in determining employee pay of men and women in SA in the previous chapter. In this chapter, the analysis is expanded to examine how contextual factors may have impact on wages in SA. Previous research on gender pay gaps has mainly concentrated on socio-economic factors, and most are based solely on quantitative analysis (Ahmed and McGillivray, 2015; Chzhen and Mumford, 2011; Costa Dias et al., 2020; Grimshaw, 2000); there has been as yet little published research has used qualitative data analysis to investigate HR managers' experiences of, and explanations for, the gender pay gap.

The analysis in this chapter demonstrates above all those Saudi contextual factors, such as patriarchy and conservative Islamic religious rules, are the key aspects that regulate working lives in SA, and that they play a critical role in producing a gender wage difference

within Saudi organizations. The analysis also reveals that the Saudi government and its policies have had as yet minimal influence overpay disparity, in part because of HR managers' view that work cannot deviate from conservative Islamic religious rules.

The remainder of this chapter is organized as follows. Section 7.2 discusses recent government reforms, including recent attempts to empower women, and their impact on the gender pay gap, followed by Section 7.3, which discusses the role of socio-cultural beliefs and traditions, such as religious conservatism and the patriarchal system, and how they may affect the existence of a gender pay gap in SA. Section 7.4 discusses Saudi women's delayed entry into the labor market. Section 7.5 considers married women and employment in SA. Finally, in section 7.6, I draw conclusions from the analysis.

7.2 Government reforms and the gender pay gap

This section focuses on how recent events in SA have impacted women's status at work. For decades, SA has suffered both internal and global criticism for how it has handled gender relating to women's rights and gender equality, which have historically been considered as a 'red line subject' for many years (Petersen, 2018). Recently SA has seen a variety of socioeconomic and political developments during King Salman's rule, starting in 2015, during which some rights have been given to women (Alshuwaikhat and Mohammed, 2017). One of the most significant reforms happened when Crown Prince Mohammad bin Salman[15] announced Saudi Vision 2030 in 2016 as a strategic framework for reducing Saudi Arabia's reliance on oil, diversifying its economy, and phasing towards

[15] Crown Prince Mohammed bin Salman Al Saud is the son of Saudi King Salman bin Abdulaziz, and deputy prime minister, and who served as minister of defence of Saudi Arabia.

greater social openness. In October 2017, the Crown Prince announced that the country will move to “moderate Islam,” an indication of his belief that the “ultra-conservative state has been ‘not normal’ for the past 30 years” (Chulov, 2017). This is shown in the government’s declaration of intent to remove any restrictions that may impact women’s participation in the economic sphere; religious conservatives denied these rights for decades, considering them to be a Western invention and based on Western values of secularism and individualism (Petersen, 2018).

In 2018, SA made history by enabling all women over the age of 18 to drive, removing a major barrier to women's mobility and leading to the creation of an additional 50,000 work opportunities for Saudi women (Obaid, 2018). In the same year, SA was appointed to the Executive Board of the United Nations Entity for Gender Equality and Women's Empowerment; as part of this appointment, the Saudi government will implement legislation aimed at improving Saudi women's status in society. The government has also lifted several limitations on the requirement for permission from a male guardian, which severely hinders women's life in many ways. As a result, women above the age of 21 are no longer needed to obtain permission from their male guardian for a range of actions and decisions. These are significant reforms in the context; one goal is that these reforms will assist in recovering the Kingdom from the negative progress in previous decades regarding women’s rights.

Interviewees emphasized the importance several landmark changes regarding women’s status emerging from the Saudi Vision 2030. For example, one interview acknowledged that the Saudi Vision 2030 gave greater support for women:

> "There is currently **considerable support for women** [since Saudi Vision 2030]"-Participant 3.

This legal and cultural support, with the goal of encouraging women to work in the private sector, is critical to meeting Vision 2030 targets in relation to increasing female labour force participation from 22% to 30%. To protect working women, Saudi Arabia's Council of Ministers passed the country's first anti-harassment law, with penalties of up to five years in prison and fines of up to SAR 300,000 (about 80,000 USD) for violators. Furthermore, no strict segregation is required in the workplace, so employers can hire women to work among males (Al-Omran, 2017). For example, interviewee P6 discussed how strict segregation is no longer required in the workplace, noting that the Ministry has changed too:

> "[B]efore we had a problem when we hired female employees, the Ministry of Labor required of companies that women must have a separate door and a separate building from men. **Today, the Ministry of Labor has become open and empowered. Women have been working with men in the same place**."- Participant 6

Furthermore, in order to encourage women to enter the labour market, the Kingdom of SA has provided new career opportunities and higher education study specialties for women (e.g., engineering, science). As a result, women can now work in civil aviation, sales, or as executive directors, and the Saudi labour market is being forced to provide a considerably broader choice of occupations to women (Kuma, 2022). For example, respondent P3 described how, in the context of his company, security jobs, or any role formerly reserved for men, are now open to women:

> "[T]here are fields of employment that were previously reserved for men, such as security, and today any woman can apply for any position." -Participant 3.

In discussing women and employment many interviewees acknowledged there is a significant increase in women's employment quantitively since the announcement of the new Saudi Vision 2030:

> "[After the vision 2030] Women's capabilities improved, and **the number of female employees increased year after year**"-P2.

> "**We employed** approximately **one hundred and fifty women**, previously the employment was **zero**"- Participant 5

However, even given the remarkable pace and breadth of the reforms implemented in recent years which have led to rapid improvements in female labour force participation, Saudi women still constitute solely 33.7 % of the Saudi labour force (Abueish, 2023), and are consistently paid less than men (Njoud, 2021). This suggests that contextual impediments remain that restrict women's participation in the labour market; two of the most significant, patriarchal culture and Islamic religious policies, are discussed in the following sections.

7.3 The impact of socio-cultural beliefs and traditions

This section discusses how socio-cultural beliefs and traditions may affect the existence of a gender pay gap in the Saudi setting. According to Sian et al., (2020) "Saudi Arabia takes a very distinctive gendered form due to the interaction of gender with religious and cultural norms" (Sian et al., 2020, p.1). This includes Saudi Arabia's conservative norms and laws and how that conservatism is rooted in religion and patriarchal customs that have negative implications for women's status and activity.

7.3.1 Conservative interpretations of Islam

This sub-section discusses the conservative nature of contemporary Saudi Arabian society and how this conservatism is rooted in religion. In SA, how the Islamic religion is currently interpreted makes it a major spiritual and social power profoundly affecting the lives of its people (Sidani, 2005). Therefore, this sub-section discusses how Islam and the social conservatism related to its current form impacts on and plays an integral role in income disparities between men and women in SA.

SA is categorized as an Islamic monarchy where Islam, and Islamic law, known as Sharia, governs daily life. In addition, Islam is highly significant in the personal and professional life of its believers (Tlaiss, 2013, 2014), and therefore its effects on the socio-cultural values and traditions on Saudis, particularly women, should not be underestimated. The power of conservative religious groups and their interpretations of Islamic texts have created a set of values and a discriminatory gender practice that hinder the careers and advancement of Saudi women. The interpretation of the Quranic verse, “And they [the women] have [rights] like [the obligations] they are under with beneficence, and men have a degree above them” (Qur'an, Al-Baqarah: 228), has justified reinforcing gender inequality and promoted the idea that men are deemed superior to women in most, if not all, aspects of everyday life. In contrast to this Islam *could* encourage equality between men and women by allowing women to possess and dispose of their property and earnings, as well as engage in fields such as business and trade (Charrad, 2011).

Many conservative interpretations of Islamic scripture, created by men, have continually sought to illustrate men's rule over women. For example, Yusuf Ali described the notion

of Qiwamah, “men [are] in charge of women,” as “men are the defenders and maintainers of women” (Roded, 2008, p. 28). Other interpretations, such as Ibn Kathir’s, describe the meaning of Qiwamah as indicating that women’s place is in the house and that males have the right to work outside in order to provide for their families (Abou-Bakr, 2015). Despite reforms and improvements in Saudi policies aimed at improving women's status, conservative interpretations of Islamic scripture that discriminate against women continue to predominate. The quotations from “males” interviewees below show the implications of these interpretations of Quran verses on Saudi HR managers, with significant effects on gender inequality in the workplace:

> “a **man is the head of the house,** and **he is the one who spends on his house**, so the man must **receive good amount to be spent on his family”**- Participant 4 (Male)

> **“…a man is required to establish a house**, **marry**, ... **in Saudi Arabia** we consider that **a female is not like a man**, as duties, as rights, as many things”- Participant 6 (Male)

Further, these interpretations of Quran verses have financial implications; many interviewees agreed with the argument that husbands are totally responsible for paying for their families' demands, forcing them to focus on employment (Kazemi, 2000). As a result, according to a number of “males” interviewees, the reason Saudi women are paid less than men are because men are always primary breadwinners in the family, compelled to create a house, marry, and assume the right to work more than women and maximize their salary:

> “From a social standpoint, **a woman always accepts the lowest salary** due to obligations, such as living with her family, not having an electricity bill, not having a house rent” -Participant 6 (Male)

As a result of these interpretations of Quran verses, Saudi HR managers often assign women, despite their qualifications, to low-wage jobs, due to a societal construct that suggests women are not financially accountable for their families. One example of this being explained by an interviewee is as follows:

> "[E]ven though their qualifications are very good, they are forced to apply for jobs with low salaries, this is the biggest reason why a large number of females occupy jobs with **low salaries**, ..., so woman is looking for a job, and then she finds out that she only has this choice"- Participant 4 (Male)

In addition, the power of conservative religious groups and their interpretations of Islamic texts have a profound impact on the gender segregating practices in Saudi society, including in workplaces. Conservative religious groups regard women as a distinct category that should be physically separated in society. This includes segregating women in restaurants, teaching them in separate schools and universities, and segregating workplaces (Mansour, 2014). According to Alselaimi and Lord, (2012b) , while Islam allows women to work outside the home, conservative communities in SA frequently call for bans on mixing men and women, including in segregated workplaces, to prevent Saudi women from being influenced by western lifestyles, which bring very different values and choices. Previous Adherence to the religious views a propagated by conservative religious groups means Saudi labour law has prevented women from interacting with men in the workplace. According to the Ministry of Labour (2014):

> "The work of women in institutions and companies should be in a place characterized by privacy and independence so that; either in a building completely independent of the men's building, or in the same building of the institution or company, provided that the following requirements are met in the department; (i) The section should be for women, (ii) the department should be independent of the men's departments, (iii) all essential services must be provided; Chapel, restroom, sufficient number of restrooms and any other additional servicing arrangements" (The Ministry of Labour, 2014).

Gender-segregated workplaces thus became a legal necessity under Saudi labour law, with all enterprises in the Kingdom needing to provide women with their own workspace or construct high segregation barriers. Adherence to the religious views propagated by conservative religious groups regarding women's empowerment was crucial in SA (Elamin and Omair, 2010; Hamdan, 2005).

During King Abdullah's reign (2005-2015), the International Labour Organization (ILO) and the World Trade Organization (WTO) put pressure on the Kingdom to implement human resource and women's rights reforms (Quamar, 2016; Mellahi, 2007). Despite the Saudi government allowing women to work, women's employment was subject to religious and cultural barriers, which previous governments could not successfully address. Even with declining oil-wealth and changing economic needs, the government had nonetheless only made modest changes to modernize the country and had not deviated to any great extent from the social and religious values which were already in place, particularly those pertaining to women (Quamar, 2016). This was evident in 2005, when the Minister for the Economy allowed women in SA for the first time to work in retail shops; however, a storm of religious *fatwa* (a formal opinion on a point of Islamic law) hindered this and pushed the then-government to stop the initiative (Al Abd Al-Hayy, 2012). The government sought to satisfy conservative religious groups in 2011 by simultaneously introducing measures compatible with conservative religious opinions of sex segregation. All men shop assistants in, for example, lingerie stores were replaced with Saudi women, while at the same time men were banned from entering such stores (Al Abd Al-Hayy, 2012).

As a result, interpretation of Islamic text and its associated conservatism have had a significant impact on the lack of women's empowerment in the Saudi workforce and have played an important role in how women's participation in the workplace is virtually absent, influencing income disparities between men and women in SA. several of these explicitly gendered practices remained in practice in SA even during King Salman's reign (2015-to present). The majority of “males” interviewees said that employers continue to promote segregated workplaces in order to comply to this Islamic ideal, even though some laws regarding mixing between genders have been removed. As a result, religious factors, according to some interviewees, continue to be taken into account when it comes to hiring women, as companies remain committed to forbidding the mixing of sexes in the same workplace:

> “We have a disparity in opportunities, … [we] link **the employment [of women] with the religious aspect … because there may be mixing with men**”- Participate 5 (Male)
>
> “I need a [male] transport supervisor. Because the nature of the transport supervisor's job is to **deal with drivers, foreigners, and men, it is difficult to put a female employee in this environment**”- Participate 10 (Male)
>
> “The majority of female employees work in front of patients...and **because of our Islamic society**, customs, and traditions, it is difficult for men to work in the field of nursing, because more than half of patients are women”- Participate 12 (Male)

In addition, “males” interviewees acknowledged that employers prefer to hire women in “call center” occupations because it is easier to comply to conservative religious views on gender segregation and women's employment:

> “**Female employees** are **concentrated in the call center** because we want them to feel at **ease at work**, so we take the approach that **call center jobs** are for **women**”- Participate 6 (Male)

> "Most of the applicants for **call center** jobs **are women**, because the call center is **a closed place** and women are **more comfortable** to work in this job"- Participate 11 (Male)

Gender segregation in the workplace thus provides employers with a chance to sustain gender discrimination in occupations with high pay for males and low pay for females (Elveren, 2014). This is demonstrated from analysis of interviews that speak of how a ban on mixing between men and women (i.e., gender segregation of employment) results in an increasing number of female employees in particular jobs, causing an oversupply in the women's labour force due to the limited number of these available jobs. This, in turn, creates a gender pay gap alongside the existing wage discrimination against women. Some "males" interviewees explained why employers exclusively recruit women in "call center" positions, claiming that excluding men and women from working together costs employers money. One interviewee, for example, stated:

> "**A woman's cost** to me as an employer is **higher** than a man's, … the preparation of offices for male employees differs from that of female employees, implying that women require privacy and their own toilets. These issues are a burden to the organization"- Participate 6 (Male)

In conclusion, this sub-section has demonstrated how conservative interpretations of Islam have harmed Saudi women's status and pay at work. The sub-section also shows how the Saudi government and its legislation (e.g., labor law) on women's empowerment have adhered to conservative interpretations of the Quran. In addition, the sub-section also shows that employers in SA continue to comply to conservative interpretations of Islam and to maintain gender discrimination in occupations with high pay for men and low pay for women.

7.3.2 The patriarchal gender system

This sub-section expands on the previous section by delving more into Saudi Arabia's conservativism, especially how this conservatism creates different challenges and limitations to women's progress in the labour market. In SA, the restrictive patriarchal gender system, a system that extends discriminatory male power over women, prevents women from having full personhood. As a result, Saudi women are seen as 'weaker' members of society and their right to work is only permissible within very specific jobs, often 'traditional' or caring professions, such as medicine, teaching, and nursing, whereas work careers in fields and industries (e.g., engineering and law) may be prohibited and mostly, if not entirely, dominated by men ((Dukhaykh and Bilimoria, 2021). The patriarchal gender system has long been promoted by Saudi cultural norms and traditions, where Saudi children are taught from an early age what it means to be a woman, or a man, based on what society considers to be conventional and acceptable gender standards. These cultural norms and traditions encouraged women to be feminine, subservient, and focused on domestic duties, whereas men are encouraged to be masculine, a way of being that is culturally mandated in terms of independence, persistence, ambition and interest in management and leadership jobs (Al-Asfour et al., 2017; Elamin and Omair, 2010). Thus men, in Saudi society, are deemed superior to women in most, if not all, aspects of everyday life, especially public and working life. In terms of women and employment then, the interview findings suggest that HR managers are being obstructive and/or more conservative than the current legislations, suggesting that women are not as capable as men in workplace:

> "**[We] do not view women as capable** no matter what their work, **we are psychologically comfortable with men** because **men** will **do the work correctly**"- Participate 8 (Female)

As noted, the patriarchal gender system was not only promoted by Saudi cultural norms and traditions but also through educational policies. The educational system in SA maintains specific social patterns, where through education women and men are guided to study specific subjects and engage in specific activities that are in line with the social expectations of men and women (Baki, 2004). This includes higher education, where students are often taught that men and women should be given various responsibilities, women are positioned as mothers and wives, and men are defined as being the breadwinners of the family. At a practical level, subjects that are accessible to women in higher education are different from those offered to men; aviation and chemical engineering are restricted to men, while Saudi women are overrepresented in humanities, religious sciences and medical sciences (Ayalon, 2003; Barone, 2011; Lorz and Volery, 2011; Parker, 2012). This obviously mean that the Saudi patriarchal system restricts some areas of study that women can join, thereby limiting women's access to the labor market by limiting their access to particular occupations (Baki, 2004). Importantly, this also means that the education system in Saudi was not preparing Saudi women for the global economy (Ibid).

Many HR managers maintain the patriarchal gender structure and acknowledge that women continue to be barred from a wide range of occupations. In doing so, they are reinforcing a powerful stereotype that positions women as less competent than males. For example, interviewee Participate 1 and Participate 2 discussed, how in the context of

their company, engineering roles could not be accessed by women because engineering subjects were not accessible to women in higher education:

> "Currently, the majority of the jobs that women are applying for are administrative jobs, not specialised jobs, such as chemical engineering, because the University of Petroleum and Minerals [only] recently allowed women to study this field… women do not have many options in our company, so we give them preference in administrative work, because men have more options and opportunities than women" -Participate 1(Male)

> "Women in our organization do not work in mines, … **because women are not educated enough** to work in it,"- Participate 2 (Male)

Also, interviewee Participate 12 stated that the majority of engineering jobs occupied by (males) employees in their company:

> "More than **90%** of technical and **engineering positions** are held by **men**, whereas **95%** of **administrative jobs** are held by **women**" - Participate 12 (Male)

It can be argued that these occupations (i.e., administrative jobs) are an extension of women's domestic roles, and utilize the stereotypical women's qualities of caring, nurturing, and service to others. As a result, this reinforces a powerful stereotype that positions women as less competent than males (Eagly and Mladinic, 1994; Eagly, Wood and Diekman, 2000), reproducing assumptions regarding women's personality, cognitive, and physical characteristics. This in turn impacts employers' and employees' perspectives on the sorts of jobs that women are capable of doing (Bielby and Baron, 1986; Martin, 1992). For example, occupations requiring stereotypically "feminine" traits (e.g., nurturance) are less valued than those requiring stereotypically "male" characteristics, such as assertiveness (Cancian and Oliker, 2000; Cejka and Eagly, 1999).

Many “males” interviewees concurred with this argument and stated that it is rare for women to work in nontraditional fields[16]. According to a number of interviewees, gendered occupational segregation in Saudi companies stems from the companies and their managers adhering to the patriarchal gender system that positions women as less competent than males:

> **“a woman is always by nature that she prefers clean places,** also there is **a second job that is difficult for women, for example, a project manager** for a restaurant because the problem is that this work does not have time to finish it, you are now a project manager, from the date that means before the budget was pumped until the shop opens, you must put all your energy into this project, you have to work at night, and you have to travel”- Participate 7 (Male)
>
> “**The jobs [nontraditional fields] are dominated by men in our organization**, the ones that have shifts until the end of the night, the jobs that have investigations, the drivers, the reception jobs late at night, the jobs that involve effort and there is fieldwork”- Participate 6 (Male)
>
> “… it is **impossible for a woman** to **be an engineer** who goes to the field and visits factories, thus it is **tough** for her to accomplish these things”- Participate 12 (Male)

According to “males” interviewees, the vast majority of men are concentrated in traditional male-dominant occupations, such as project manager, working in fieldwork, while women are centered predominantly in traditional female-dominant occupations, such as office jobs/administrative jobs. This means that part of the income disparity between men and women in SA appears to be the outcome of the patriarchal gender system which results in occupational gender segregation.

Women’s characteristics are presented by HR managers as completely different from men, and thus women are treated differently by employers in terms of the sort of jobs and

[1616] According to Dukhaykh and Bilimoria, (2021) non-traditional fields for women are construction, engineering, business, military, athletics and other jobs that are said to demand assertiveness, aggressiveness, competitiveness and physical strength.

amount of work that they are offered (Albakry, 2016; Tlaiss, 2014). For example, as interviewee Participate 6 indicated below, women are positioned as unable to exercise leadership roles efficiently owing to a lack of self-confidence, a fear of accepting responsibility, and the difficulty of balancing family responsibilities and work obligations:

> "The **employer prefers** the **man [in leadership positions]** because the **woman has a different temperament** than the man. The **man employee** is more **flexible**, while the **woman** is **not** because of the **lack of self-confidence, a fear of accepting responsibility and family and children's commitments**"- Participate 6 (Male)

In addition, because women are raised in a patriarchal system where males are regarded as dominant and women are regarded as patient and subservient, women typically believe themselves to be inferior (Alotaibi, Cutting and Morgan, 2017). This is confirmed through interviews with female participants, as one female interviewee stated:

> **"[W]oman does not do anything without taking advice from her family or the husband**. When we were children as girls, we always hear that **we have no knowledge of anything**. This is a sentence that I hear all my life"- Participate 8 (Female)

As a result, women may be afraid of making decisions when they are in leadership positions, and, therefore, an understanding emerges that both male and female employees prefer that their manager is not a woman. Interviewee Participate 4 stated that:

> "[A] **woman leader** does not **resist** as much as a man leader, and there is a big problem here, … **many females** do **not prefer** that their **manager is a female**, ... and it may be a problem that the **woman is afraid of making a decision**"- Participate 4 (Male)

Furthermore, this patriarchal system, which has an impact on women's careers and has prevented them from competing with men in many economic and political spheres, claims that God endowed men and women with different rights and obligations, and that men's

jobs are suited to their strength, minds, and willingness to confront risk (Human Rights Watch, 2012). Women's duties, on the other hand, should focus on sensitivity and femininity, as women are thought to lack strength and the ability to face danger and difficulty (Human Rights Watch, 2012). The majority of interviewees spoke of gender roles with very different attitudes toward women regarding personality, cognitive skills, and physical characteristics. For example, many interviewees acknowledged that women are seen as ‘submissive’, ‘sensitive’ and ‘less trustworthy’:

> “**Women are sensitive**, they take things **personally I can't** treat women like men”- Participate 1 (Male)
>
> “**[We] do not view women as capable** no matter what their work, they are **psychologically comfortable** with **men** because they think that **men** will do the **work correctly**”- Participate 8 (Female)
>
> “Employers believe that **male productivity** is **more** than **female productivity**... and **females cannot bear** the increase in working hours or they do not continue their work”- Participate 10 (Male)
>
> “We still have a **greater preference for men**, because we still belief that **women are not able to do anything**... It is **difficult for women to bear** the pressure of work, so why as an employer give **women** the **same tasks** as **men**”- Participate 12 (Male)

The quotations above demonstrate how a patriarchal system implemented by an HR manager promotes a specific stereotype about women that is in conflict with the requirements of leadership roles, and as a result, they are excluded from holding leadership positions due to their sensitivity and femininity, fear of making decisions, and lack of education (Bodalina and Mestry, 2022). As a result, Saudi women experience a lack of opportunities and advancement in the labour market (Al-Asfour et al. 2017; Kattan et al., 2016).

According to Hodges, (2017), women's role in companies is limited, limiting them to lower-level management positions. This is supported by Akeel, (2021), who writes that, despite the fact that the Vision 2030 calls for women's empowerment, the majority of job opportunities available to Saudi women are in lower-paying positions and involve positions traditionally held by employees from other Asian and Arab countries. While specific initiatives are aimed at the private sector, these are concentrated on the retail sector and low and middle-skilled administrative employment (Akeel, 2021). Many respondents expressed concern about the dearth of chances for Saudi women to take leadership positions or grow in their jobs. Despite the fact that the Vision 2030 aspires for women's empowerment, women continue to be concentrated in the middle and lower levels, resulting in a salary inequality between men and women. The following are examples of how interviewees explained this:

> "One main **reason** of **the gender pay gap** is the **lack of opportunities**, meaning that, I mean the difference in opportunities, if women do not take their full opportunity for all the work, it means that they will not take their full opportunity for **promotion** as well"- Participate 5 (Male)

> "**…leadership positions** are mostly for **men**, and **this is the problem** that was the selection based on competence and merit. **Women** may be **deserving**, but they have not fallen **into the right place** ... and this **constitutes a threat**, **now what happens** is that **they empower women**, **but** not as **leaders**, but **rather** that **they empower** them with **low or middle jobs**"- Participate 4 (Male)

This discussion has highlighted a significant issue that affects the existence of a gender pay gap in the Saudi context. It highlights how Saudi Arabia's social and cultural norms, notably Islam and an associated conservatism, as well as the patriarchal gender system, affect and play a vital role in not only men's and women's socialisation, but also organisational occupational systems. Men and women are susceptible to various attitudes and ideas about their competence or abilities as a result of these societal and cultural

norms and traditions, which can then affect their behaviour. As a result, employees are allocated tasks in the workplace based on attributions that are, in fact, the result of the patriarchal gender system and gender stereotyping.

7.4 Women's delayed entry to Saudi workplaces

The previous sections argued that Saudi Arabian conservativism, particularly that rooted in religion and a patriarchal gender system, contributes significantly to gender pay gap in SA. This section builds upon the previous sections by further discussing conservativism in SA and how this conservatism has influenced Saudi economic and legal policies and regulations, delaying women's entry into the labour market, and thus contributing to the gender pay disparity in SA.

SA has had the lowest female labor-force participation rates in the world for decades. The current Saudi government has taken steps to reduce the high unemployment rate, improve the education system, open the job market to educated women, and to work towards fulfilling promises in respect of greater political and social openness. Nonetheless, despite these recent reforms, the gender pay gap remains considerable, negatively impacting women 's labour force experiences. In part, this disparity persists due to a long history of gender inequality, as women's participation in political and economic development was previously prohibited, resulting in a substantial gender gap in supply of labour and, as a result, a structural imbalance in the Saudi labour force. Interviewees all emphasised that women still have less work experience, and they need more years to enhance their career because of delays entering the labour market:

> "**Women** are still **new** to the market, and **they need more experiences**"- Participate 2 (Male)
>
> "**Women lack experience**, as they did not actually begin to enter the labor market until mid-2013, as **they have only nine years of experience**, **they are required** to have approximately additional **four years to fifteen years of experience**, to develop their career"- Participate 7 (Male)

The Nitaqat initiative, which was started in 2011, was one of the Saudi government's key policies regarding women and work. It intended to boost job opportunities for Saudi women in the private sector, especially banking and telecommunications, in order to reduce the country's unemployment rate. Women were permitted to work in such areas, but they were separated from males, and workplaces were designated into distinct women's sections (Al-Deghaither,2019). However, despite this and other government efforts to expand opportunities for women, a number of factors have long limited Saudi women's participation in the labour force. Key amongst there are the guardianship system, women's lack of independent mobility, and lack of childcare facilities ((Albelali, 2020; Al-Shetaiwi, 2002; Bahudhailah, 2019). The male guardianship system in particular, as discussed in previous sections, has had a crucial impact on women's independence in every part of their lives (Human Rights Watch, 2016). Women were not allowed to carry out any activities such as studying, working, travelling to study, undertaking training, or attending conferences, without a male guardian's prior approval. A Saudi woman needed to obtain permission from her male guardian before accepting any job offer until 2014 (Human Rights Watch, 2016). This created a substantial barrier for Saudi women seeking to contribute to the country's economy, limiting employment choices and resulting in a lack of engagement. Many interviewees acknowledged that conservatism in the Saudi

economic and legal policies and regulations has had a crucial impact on women's participation and thus men were more experienced in the labour market:

> "The **experience** was **limited** for **women**, and it only **opened recently**, so **men** had a **greater role** in the labor market"- Participate 3 (Female)

While the ministry of labour in SA eliminated the requirement of male guardian consent to hire women in 2014 (Ministry of Labour, 2014), women's mobility has become yet another obstacle for Saudi women to participate fully in the labour market. In the rest of the world, women have access to transportation, whether through government-funded public transportation or through the ownership and usage of their own automobiles. However, in SA women were not allowed to drive their own car until 2018, and public transportation was insufficient to assist and support women's transit to and from their homes. Women therefore depended on male family and taxi drivers. Al-Asfour et al (2017) acknowledged this and stated that one of the major factors limiting Saudi women's participation in the workforce was a lack of mobility, due to the Kingdom's restriction on women driving. The postponement in lifting the ban on women driving until 2018 therefore resulted a delay in women entering the workforce effectively, affecting their level of experience. Commenting on this, one interviewee said:

> "While there have been some **improvements** for women [allowing women to drive], they are **still lack experience** in the labour market." - Participate 13 (Male)

Taken together, these factors clearly have a historical and continuing influence on delaying women's entry into the labour market, identified by interviewees as one of the key causes for the existence of the gender pay gap in Saudi Arabia's private sector. According to the interview findings, the most significant difficulty for women to progress is lack of experience. This demonstrates that Saudi women may encounter hurdles inside

their own communities, restricting their opportunities for progress (Alsror, 2021). Despite the fact that SA is undergoing enormous transformation, initiatives such as these may take a long time to change the labour market and women's experiences, limited as they are by long-standing societal norms and local customs.

7.5 Married women and employment in Saudi Arabia

Based on the regression results (see Chapter 6), which show that having one or more children has no effect on women's salary, this section explores whether the regression result is due to women with children being unable to find work in the first place due to childcare.

According to Al-Zahrani (2017), many lawyers and legal experts have criticized the requirement of "singlehood" for hiring Saudi women. He suggests that employers fear women's ability to commit to regular work, especially since a married woman is entitled to 10-week maternity leave and an hour each day to breastfeed her infant. Rashad (2023) reported how married Saudi women looking for work claim that they face hidden barriers in the private and public sectors, as hiring managers exclude or reject married women looking for work, particularly those with children, and to offer jobs to single women, claiming that the family life of married female employees has a direct impact on performance. This is supported by Al-Sadawi (2017), noting four job advertisements that required single or divorced women without children for a medical coordination service position, a receptionist job, a marketing position, and a phone-based customer support job.

Talking about this issue, interviewees observed:

> "**Married female employees** in our organization **do not exceed five** employees"- Participate 10 (Male)
>
> "We have **a large number of women** in our organization, but most of them are **unmarried** women"- Participate 2 (Male)
>
> "Regarding the number of **married female employees** in our organization, they constitute **a small percentage** compared to the unmarried female employees"- Participate 6 (Male)
>
> "In general, an employer seeks profitability. For example, if the employer hires a woman and she becomes pregnant or something and gives birth, the system requires the employer to provide her with paid leave, so the employer will lose approximately a certain period in addition to other things"- Participate 5 (Male)

These findings echo prove what has been observed by journalists and researchers: that employers prefer to hire unmarried women rather than hire married women.

Regarding the Saudi labor system's view on this matter, Al-Zahrani (2017) states that the labor system and workers made no distinction between married and unmarried women at work. Furthermore, Al-Zahrani (2017) claims that not hiring married women is a denial of citizenship and human rights because it violates married women's right to work. Despite this, one of the company owners interviewed by Al-Eqtisadiah (2011) argues that the Saudi labor legislation is the primary reason for his company's requirement that female candidates be unmarried in order to work for him. According to Al-Eqtisadiah (2011), Dr. Fahd Al-Takhifi, former Assistant Undersecretary of Labor for Development, the Ministry simply controls the contractual connection, and it is up to the employer to interpret the requirements in a way that does not break the law.

This confusion over responsibility may indicate reasons behind the reluctance of HR managers toward talking about women having children. None of the interviewed HR

managers talked about children as a key influence on women's pay in particular. This might be a result of employers simply not hiring married women, particularly those with children, as there are no clear penalties for employers for such practices. This shows again how SA has a very different labour market to those established in, for example, Europe, as children are not present in working life or in labor market dynamics in SA.

7.6 Conclusion

This section concludes with remarks on the causes of the Saudi female wage gap and associated effect adjustments. Based on data from interviews with male/female HR managers in the private and public sectors, this chapter investigated the likely causes of gender wage disparities in SA. The major findings indicate that patriarchal culture and Islamic religion policies influence Saudi society's setting in general, and HR managers in particular, who play a crucial role in establishing gender wage gap within Saudi organizations.

The chapter has introduced the idea patriarchal system as a key factor in existing gender pay disparity in SA. Socio-cultural beliefs and norms regarding women and women’s empowerment in Saudi society result in gendered occupational segregation in Saudi companies. Men tend to work in companies operating in industries such as engineering, whilst females are mostly engaged in "traditional" feminized fields (e.g., call center). In addition, this chapter reveals that interpretations of the Islamic religion play an important influence on the HR managers, in the fact that females are paid less than males. In SA, conservative religious institutions perpetuate gendered norms and gender discrimination that help create barriers to Saudi women's growth at work. The strength of Conservative

religious groups, as well as their interpretations of Islamic teachings, has a significant impact on Saudi society's gender discriminatory policies. These conservative segments in SA advocate for a prohibition on mixing men and women, as well as separate workplaces, to prevent Saudi women from being influenced by western lifestyles. This leads HR managers to occupied female employees in certain jobs, resulting in an oversupply of women in the labour force owing to restricted available employment. This can then produce a gender pay gap to add to existing pay discrimination against women, where gender segregation in the workplace is a chance for employers to protect jobs with high pay for men, and reserve low-paying jobs for women. Another significant influence of conservative interpretations of Islam on Saudis is that they believe men require more employment possibilities than women and must earn higher incomes. As a result, religious interpretations of Quran verses (performed by men) enable employers to pay less to women because they are not financially responsible for their families.

Finally, perhaps most importantly, this chapter demonstrates that, despite recent government reforms in women's rights, the gender gap remains significant. Women no longer needed permission from their male guardian to travel or work after the release of Saudi Arabia's new 2030 vision, and they were allowed to drive. Nonetheless, despite these improvements, Saudi women continue to face significant impediments to labor-force participation imposed by HR managers. For example, Saudi women still mainly have access to lower-paying jobs, and cultural conventions continue to limit women's ability to work. As a result, Saudi women face another barrier, a lack of confidence in their talents as working women, as well as difficulty obtaining a quality professional opportunity that meets their goals. The interviews analysis with HR managers confirmed a key reason

behind women receiving lower salaries is in fact discriminatory practices within organisations, related to key contextual factors such as patriarchal culture, Islamic religion, and resistance to Saudi government policies.

After all, the data indicates that men might be experiencing a loss of control within the job market, which until recently had been the exclusive domain of men. In turn, this increased their perceived financial insecurity and worry about losing their jobs and their ability to support their families as the main breadwinners. The data clearly show that state-driven policies were implemented in organisations in a way that ultimately conformed to social norms that are slow to change, and HR managers might be reproducing a particular type of enduring structural precarity (the gender pay gap).

The next chapter concludes the findings of the thesis. The final chapter discusses the stud's contributions to knowledge and provides limitations and some recommendations for future research.

8 Chapter 8: Discussion and conclusion

8.1 Introduction

This chapter concludes the thesis, with the first section 8.2 presenting a discussion of the quantitative, first phase results and then the qualitative, second phase results. The first phase included an analysis of GOSI data, followed by an analysis of questionnaires; these two analyses addressed the determinants of pay differentials between men and women in SA. The second phase included an analysis of semi-structured interviews with 13 male and female HR managers from eight companies working in various industries, particularly banks, telecommunications, hospitals, and food industries with varying sizes (i.e., large, medium, and small) across private and public sectors. These follow up interviews provide a more in depth understanding of managers' thoughts on the reasons for gender pay inequality in SA; particularly of factors that the quantitative model does not account for, such as patriarchal culture or the Islamic religion. This chapter starts with the empirical analysis linkage in section 8.2. Then section 8.3 discusses the key findings of the research. Section 8.4 considers the implications of the study. Section 8.5 sets out the contributions to knowledge made in respect of the thesis. Section 8.6 discusses limitations of the research project. Finally, section 8.7 makes suggestions for future research.

8.2 Empirical analyses linkage

The empirical analysis in **Chapter 5** starts first with the General Organization for Social Insurance (GOSI) dataset for the year 2018. This is official data that are collected at a national level by the statistical association of SA, which provides an insight into what official Saudi data says about the GPG. The GOSI dataset has good coverage in terms of the number of workers, with 18,068 employees in the sample for 2018. However,

the GOSI dataset lacks detail on each individual employee. Studies show that in many economies, employee characteristics such as education, parenthood, training, working hours etc, are essential to determine earnings (Bertrand, Goldin and Katz, 2010; Healy and Ahamed, 2019), but these are missing from the GOSI dataset. GOSI only collects data on age, tenure, occupation and industry. To emphasise the importance of such characteristics when modelling wage formation, another analysis is conducted, this time for the UK using the much richer LFS dataset. We will see that many employee characteristics are important in determining UK wages. This may be the case for SA too, but the GOSI data are insufficient to allow for such an investigation.

This highlights a need for the statistical association of SA to have greater scope of coverage, where it needs to reflect considerably more characteristics than those accessible from GOSI. This improvement is required as understanding the reasons that create pay differentials is crucial in any society. Also, GPG statistics that are based on a poorly specified regression will be biased, and therefore controlling for all important characteristics is necessary before drawing any conclusions about gender pay differences or the level of gender discrimination in society.

The results from this UK study using the (LFS) dataset in Chapter 5 hint at the need for a more comprehensive Saudi dataset. This led to the creation of a new primary dataset, the information from which have been collected through self-reporting questionnaires distributed across Saudi private and public companies (large, medium, and small), over the period (July 2020 – April 2021). The questionnaire aims to address many of the deficiencies of the GOSI dataset by including important employee characteristics like education, actual hours worked, number of children, marital status,

etc. bringing it closer in variable coverage to LFS. The results from an investigation of wage determination using this new dataset are to be found in Chapter 6.

The findings of Saudi self-reporting questionnaires have raised many questions behind the presence of the gender pay gap in the Saudi context. For example, the influence of gender stereotypes, societal and cultural norms, and Islamic religion on creating a gender pay gap in SA. Such influences cannot be accurately assessed in the regression model. This resulted in the qualitative analysis (interviews) in chapter 7, to develop deeper insights into the role of the factors stated above to pay differentials in SA. This has been conducted by listening to the different perspectives of HR managers working in the private and public sectors to reinforce our understanding of the gender pay gap phenomenon. Also, it provides an in-depth discussion about the positive, negative, and ambivalent perceptions and beliefs held by the individuals who might be affected by the gender pay gap in the private and public sectors.

8.3 Summary of results of the thesis:

First, the findings of the quantitative phase are as follows:

- The analysis of the GOSI dataset indicates that gender is as an important factor in explaining a considerable amount of pay variability. This line of analysis is consistent with evidence regarding the effect of gender on the pay differential between men and women for Canadian and Indian labour markets (Boudarbat and Connolly, 2013; Duraisamy and Duraisamy, 2016).
- The GOSI findings reveal that Saudi female employees have less job experience with their current employers than male employees, which in turn reduces their pay. The previous research suggests that the lack of work experience affects women's investment in skills and occupational choice, making women accept low-pay

occupations due to their lack of knowledge of the labour market (Costa Dias, Joyce and Parodi, 2020).

- The analysis of the questionnaires reveal that gender, age, length of service with current employer, working in the public sector, working longer hours per day, education, full-time positions, professional qualifications, nationality, and working in managerial positions all play particularly important roles in determining employees' pay.
- One of the more significant findings of the questionnaire analysis is that having children has no impact on either women's or men's pay. This is because women with children are unable to find jobs in the first place due to their childcare responsibilities, and the ones that do find jobs are the ones with good childcare support that allows them the opportunity to go to work.
- The findings from using both the GOSI dataset and the questionnaire data suggest that female employees who break the glass ceiling pay a substantial pay penalty in the Saudi private and public sectors, which could be due to under-representation of women in SA in management and leadership position (see Syed, Ali and Hennekam, 2018). This is consistent with prior research that the estimated pay gap is greater at the higher end of the pay distribution curve (Healy and Ahamed, 2019).

Second, in-depth interviews were conducted with 13 male and female HR managers from the private and public sectors to provide deeper insights into other possible reasons for pay inequalities in SA that the regression model could not account for (such as a patriarchal culture and the Islamic religion). The analysis of the interviews provides further evidence in support of the conclusions drawn from the quantitative analysis. Most notably, the findings indicate that there is discrimination against women in terms of their access into the labour market, managerial positions, and the

segregation and concentration of women in low-paying, career-limiting positions, and industries.

SA is traditionally characterized as being socially conservative in terms of gender relations, thus creating an environment conducive to male entitlement, gender oppression, patriarchy, and sexism. Such an environment does not enable women to take control of their lives, but rather champions women's roles as submissive mothers who stay at home to care for their children. This cultural mandate can translate in terms of employment and work as limited independence, lack of persistence, low levels of ambition and an apparent lack of interest in management and leadership jobs (Al-Asfour et al., 2017; Elamin and Omair, 2010).

Our analysis of the interview data reveals that men are concentrated in traditional male-dominated occupations, such as project managers and working in field work, while women are centering in traditionally predominantly female occupations, such as office and administrative jobs. This finding is consistent with prior research (Dukhaykh and Bilimoria, 2021b) demonstrating that Saudi women are positioned as ‘weaker’ members of society and their right to work is only permissible within traditional caring jobs, such as medicine, teaching, and nursing. Careers in industries such as engineering and law remain dominated by men, perhaps because the Saudi continues to be that these jobs suit men’s strength, minds, and willingness to confront risk The concentration of Saudi women in these certain occupations may be a result of how they are positioned within the society and its current social norms, which suggest women are less intelligent, and less capable than men. The reproduction of this social norm was evident in the HR managers’ responses as they highlighted those women are seen as ‘submissive’, ‘sensitive’ and ‘less trustworthy’. They also stated that

women’s characteristics are completely different from men, and thus women are treated differently by employers depending on their attributes in terms of the sort of jobs and amount of work they are offered.

As highlighted by the study’s interviewees, gender stereotypes about the role of women and the glass ceiling can also encourage women to think they are unsuitable for such responsibilities, reducing their interest in management positions. In Saudi society, women therefore focus on women’s professions (e.g., those related to health, education or personal services), which are less strategically important than men’s professions. Reaching a management position is more difficult for women because of the lack of experience and the lack of work- life balance practices and policies; Saudi women often have to choose between a professional career and taking care of their families. This finding resonates with previous studies (Albakry, 2016; Tlaiss, 2014) which stressed that gender stereotypes resulted in women becoming unable to practice leadership positions in efficient ways, due to lack of self-confidence, fear of taking responsibility, and the difficulty of combining family duties and career commitments.

Although Islam has always granted Muslim women the right to work and advance their careers, the combined effect of the conservative interpretations of Islam and the normative and cognitive Saudi culture continues to be disadvantageous to the advancement of the careers of Saudi women (Tlaiss and al Waqfi, 2022). In that sense, conservative Islam has had a negative impact on Saudi women's status. Some theological interpretations of Quran verses (provided only by men) support gender inequality practices in SA. For example, paying less to women since they are not financially liable for their families, where men are compelled to create a house, marry,

and assume the right to work more than women, and maximize their salary as the family breadwinner. Also, calling for bans on mixing men and women, including in segregated workplaces, to prevent Saudi women from being influenced by western lifestyles, which bring very different values and choices. Again, this was reflected in HR managers' responses, as they believed that men should have more work opportunities than women, and therefore should be paid higher salaries than women. This produces complex managerial effects and encourages employers to pay less to women because they are not financially accountable for their families. One example of this was explained in detail by an interviewee, to account for the fact that women are only offered low-paying employment, despite having good qualifications.

The findings of interviews further indicate that the guardianship system, women's mobility, and the lack of childcare facilities, (Albelali, 2020; Al-Shetaiwi, 2002; Bahudhailah, 2019) which were existed as a result of the factors mentioned above (e.g., patriarchal culture, specific interpretations of Islamic teachings), clearly have an influence on delaying women's entry into the labor market. Hence, this created a barrier for Saudi women to contribute to the country's economy, limiting employment choices and resulting in a lack of engagement. As noted by many of the HR managers, women often have less work experience and therefore need more years to enhance their careers as they faced delay in entering the labour market. Also, HR managers acknowledged that conservatism in the Saudi economic and legal policies and regulations has had a crucial impact on women's participation and thus men were more experienced in the labour market. This is consistent with the results obtained in Chapter 6, suggesting that women in SA usually have less work experience compared to men.

In addition, the analysis shows that Saudi employers prefer to hire unmarried women rather than married women to avoid paying maternity benefits and other dues (e.g., childcare costs). Thus, married female employees constitute a small percentage of the overall labour force, compared to unmarried female employees. This finding thus supports previous research (Rashad., 2023) suggesting Saudi married women believe that there is a hidden agenda and a general trend in the private and public sectors to exclude and reject married woman when applying for jobs, particularly those with children. As revealed by HR managers, there are very few married female employees in their companies, and the majority are single women. In support of these findings, it is notable that the quantitative analysis using the Saudi survey indicates that having children has no impact on women's pay. This might be returned to that woman with children are unable to find jobs in the first place due to their childcare responsibilities, while women that do find jobs are the ones with childcare support.

Recently, there have been significant changes to Saudi social and cultural norms in terms of formally granting women freedom and encouraging empowerment, following the remarkable advancements made by Saudi women in levels of educational attainment and participation in the labour force (General Authority for Statistics., 2017). However, based on the discussion above, a patriarchal, conservative religious culture continues to exert pressure on women's employment, career progression, and ultimately HR practices, which include pay discrepancies, limited education and training opportunities, and limited availability of childcare arrangements, flexible working hours or other family-friendly initiatives. In particular, the findings suggest that women often encounter additional challenges which include, but are not limited to, recruitment barriers, unsupportive working environments, and attitudinal barriers that call into question their suitability for paid employment. In addition, despite the

increasing levels of education and experience among HR managers, there is still a general lack of HR professionalism. For example, despite progressive legislative changes, gender stereotypes pervade every aspect of women's careers with minimal if any HRM initiatives to reduce this discrimination (Al-Asfour et al., 2017; Al-Rasheed and Azzam, 2012 ;Hamdan, 2005). This lack of attention paid by HR managers to salient gender discrimination is further aggravated by the absence of regulative and professional entities that could enforce gender-equity policies with clear implementation strategies.

8.4 Implications of the research:

The results of the thesis have some policy implications for Saudi government, employers, and for female employees. In line with Saudi Vision 2030 towards closing the gender pay gap, Saudi government should enforce private companies with more 250 employees to disclose information about their gender pay gap. Particularly, private companies, should submit to the Saudi Ministry of Labour by an online portal that includes the following information: (i) the basic salary for female and male employees; (ii) differences in men's and women's average gross hourly wages; and (iii) the rewards or premiums paid to female and male workers. Also, the above information related to gender pay gap should, be published on companies' website on a specific date each year, and thus make this information approachable to companies' stakeholders.

Furthermore, the Saudi government should issue penalties for employers for not reporting the gender pay gap information, where employers that fail to report on time or report inaccurate data, will be in breach of the regulations and risk facing enforcement action from the Equality and Human Rights Commission (EHRC), leading

to court orders and fines. Publishing such these information increases transparency within organisations and motivates employers to take any male-female difference seriously and act on it. This in turn can improve an employer's reputation among both potential recruits and existing employees. It reveals that the organization is transparent about how it treats men and women and is committed to tackling inequality. The gender pay gap information should not solely be a series of figures published, but rather should include an explanation of why there is a gender pay gap as well as information on the company's policies on recruiting, employee development, and equality. Hence, the Saudi government's creation of such legislative guidelines would encourage Saudi companies to improve and minimize the pay gap between men and women.

In terms of the study's implications for employers, it is important that employers clearly communicate the salary range on offer for a role to encourage women to negotiate their pay. This is due to women are known that they are less likely to negotiate their pay compared to men, where they are put off if they are not sure about what a reasonable offer is (Leibbrandt and List, 2015). In addition, earlier findings form the secondary and primary analysis in the thesis indicated that women female employees who break the glass ceiling pay a substantial pay penalty in the Saudi private and public sectors. this is an urgent call for employers in both sectors to create more chances for women to held leadership roles, even in male-dominant workplaces. This is essential step to advance women and to set role models for other women to follow. Employers might provide these opportunities by paying and promoting employees based on deliverables and quality of work rather than the number of hours spent completing a task or years of experience. Accordingly, the correlation between time, years of experience, and quality will cease to exist and will be replaced by that of

performance, skills and know-how, and how these three factors are the real influencers of quality. When companies begin to apply some, if not all, of these steps, closing the gender pay gap in SA, particularly in high-level jobs, would no longer appear to be an unachievable objective that may take more than a century to achieve. It will become a potential reality that encourages women to take on a more active role in the workplace.

Moreover, this study has implications for female employees that they should consider. Before joining the labour force, women must have selection skills. This implies that rather than looking for low-paying jobs like call centers, which are solely available to women, women must instead choose high-paying fields like engineering and computer science and seek to expand their abilities and education to be qualified for these positions. Furthermore, women should put themselves up for new and larger initiatives in order to get leadership experience and exposure to decision-makers. This will need some smart self-promotion abilities, but it is required to assist advance your career and compensation. Also, actively pursue promotions or other roles even if you do not meet all of the job's standards.

8.5 Contributions to knowledge

Despite that the gender pay gap has been largely studied and intensively investigated for a number of decades, previous research on gender pay gaps has mainly concentrated on quantitative analysis, without taking into account different HR managers' perspectives on the factors that influence the existence of the gender pay gap (Ahmed and McGillivray, 2015; Chzhen and Mumford, 2011; Costa Dias, Joyce and Parodi, 2020; Grimshaw, 2000). Only a limited number of prior studies have used interviews to investigate HR managers' experiences of, and explanations for, the gender pay gap. For example, Jamali, Sidani and Kobeissi, (2008) examination of the

gender pay gap goes further than most prior studies, but this study has limitations such as focusing on specific sectors (e.g., banks and nursing sectors). In the same line, while Healy and Ahamed (2019) combined quantitative analysis with interviews to examine the gender pay gap in the UK, the researchers concentrated solely on British financial services without taking into consideration other sectors. As a result, these studies have focused on certain sectors and have not extended their study to other sectors, which may have a greater or lesser gender pay gap in order to provide a comprehensive picture across multiple sectors of the reasons of why women are paid less than men. Consequently, the thesis contributes by building on the insights developed in chapter five (i.e., quantitative analysis), through providing a description and interpretation of the results of interviews with HR managers in a comprehensive way, which includes private and public sectors in SA.

The Second contribution this thesis makes to the field of management research is in respect of its using SA as the research base for examining the gender pay gap. There are very few prior Saudi studies published which examine the gender pay gap, or gender pay inequality matters, and those which are published are limited in their scope. Prior Saudi-based studies have been limited to examining gender equality in employment and HR practices toward empowering women in the labour market. Using SA as the research base for this thesis adds to the existing literature, by examining the country in regard to the gender pay gap issue, by considering the role of tradition and religion, as well as the history and development of female education, as these factors have a more significant impact on shaping Saudi society, and thus allow for understanding the issue of gender in Saudi society. Of course, it would be inappropriate to choose SA as the study site solely on the basis of its under-researched status. The fundamental reason for selecting SA for this study is because,

while there is a temptation to have a one-dimensional view of SA, as Lawson, (2011)observes, “(a)mong the Arab states of the Middle East and North Africa, SA is at once paradigmatic and exceptional” (p. 737). SA is the birthplace of Islam, as well as the location of Mecca, Islam's holiest city. In addition, it is considered one of the most conservative and orthodox Muslim countries in the world (see, for example, Lobo and Elaluf-Calderwood, 2012). Therefore, SA has enormous importance and influence in the Gulf area, the Middle East, and beyond. All of this states that SA deserves to be explored. Through this study, we now understand the socio-economic factors that affect the gender pay gap in the Saudi context and how the contextual factors play a crucial role in establishing a gender pay gap in Saudi organisations as set out in chapters 5 and 6.

In line with the second research contribution, the third contribution is, in their Si, Nadolnyak and Hartarska, (2021) study of a gender wage gap between the earnings of men and women, the authors indicate that research on the gap in developing countries is limited and less common. This means to call for further research into developing countries as previously stated that SA is classified as developing country by the International Monetary Fund (IMF). This is consistent with the purpose of this thesis as it provides a comprehensive and in-depth analysis of the gender pay gap issue in Saudi private and public companies. As a result, by adopting SA as the study of research for examining the gender pay gap, the thesis adds to the relatively modest but expanding body of information about the factors that influence the gender pay gap in developing countries.

Fourth, little prior literature considers contextual factors on the gender pay gap in their studies. For example, as Jamali et al (2008) studied the gender pay gap in the

Lebanon context, they make no reference to the role of contextual factors, such as a patriarchal culture and Islamic religion on the gender pay gap. Instead, the researchers mentioned that national culture needs to be accorded systematic attention when examining a gender pay gap issue. As a result, this study confirms the importance of taking context into account to fully understand the gender pay gap in SA, by making interviews with HR managers to explore the impact of contextual factors, such as a patriarchal culture, and Islamic religious policies, on establishing the gender pay gap in Saudi organisations. Hence, these factors are significant since they govern working lives in SA. As stated above, there are aspects unique to SA that must be integrated into the thesis analysis in order to adequately address the research issues given below. Lawson (2011) for example, urges scholars to avoid a one-dimensional picture of SA, describing the country as “at once paradigmatic and exceptional” (p. 737), when compared to other neighboring countries in the Middle East. Moreover, this study is not trying to repeat previous research in the 'Western literature’. The employment of the contextual factors of gender pay gap is one way in which it differs from prior studies in the ‘Western literature’. Where this study beside the quantitative analysis, draws on interviews conducted with Saudi HR managers to answer the research questions.

8.6 Limitations of the research

In every research project there are limitations and boundaries that must be considered. One limitation is in respect of the analysis of the questionnaires. Despite the fact that using self-reported to collect information on the determinants of gender pay inequality was undertaken on a large scale with less cost, using questionnaires may provide poor response rates due to missing data for the variables, where some questions are skipped by the respondent.

Another limitation is that the interviewers could not have been completely honest in their responses. This is due to number of reasons. Interviewees may be driven by a desire to share a certain viewpoint that improves the reputation of their company. Additionally, respondents may present opinions that they believe to be socially acceptable and indicative of what the interviewer wants to hear, or they may refrain from talking about controversial subjects.

To minimize these methodological limitations, the triangulation methodology was applied to present a more comprehensive understanding of the research topic by providing different alternative explanations and interpretations. In addition, employing quantitative analysis of the survey with interviews, aids in overcoming the limitations of relying on a single method and should lead to achieving a better understanding of gender pay inequality in SA.

8.7 Suggestions for future research:

Detailed examinations of gender pay gap within a Saudi context might usefully be undertaken. In economics, non-cognitive skills, or “soft” skills—including psychological attributes, preferences, and personality—are widely recognized as important factors that affect various individual outcomes, including wages and employment (Heckman and Kautz, 2012). Blau and Kahn, (2017) criticism that there are too few published studies that determine the quantitative importance of these differences for the gender wage gap. Consideration of the choice of which studying non-cognitive skills in Saudi country to select for further study is important. Testing non-cognitive ability in a pay determination setting in SA is a new to the literature and could provide some interesting insights into the debate around the causes of the gender pay gap.

Further research that is worthy of exploration might also involve an examination of the gender pay gap pre- and post-Saudi vision 2030. Such research might focus on all employees working in the public and private sectors. For example, as evidenced by the empirical chapters, HR managers reveal that women's status after introducing the Saudi vision improved in terms of women's empowerment in leadership positions, increasing women's participation in the labour market, and releasing new laws to protect women employees' rights. Therefore, future research could study whether the gender pay gap in SA is improved after launching Saudi vision 2030 or if the gap is the same as before introducing the vision. The thesis has noted how SA is often seen from a one-dimensional perspective and future Saudi studies might give the reader of the research a more nuanced understanding of the country and different aspects relevant to the Saudi context.

Finally, the effect of the COVID-19 pandemic on the gender pay gap is a suggested direction for future research. As the pandemic occurred after the research was completed, this thesis does not address the pandemic and its impact on the gender pay gap in SA. Governments all around the world are not only dealing with medical problems, but also economic problems that ideally force them to put in place measures to prevent the spread of the virus. Additionally, the pandemic put enormous burden on the world's corporations. Future studies could look at how companies reacted to COVID-19's worldwide uncertainty and how this affected the pays of men and women employees. By conducting this kind of research, it may be possible to gain deeper understanding of the effect of global uncertainties on employment and on the pays for men and women employees in the labour market.

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Appendices

Appendix I: Variables definitions for GOSI

Variable	Definition
Dependent variable	
Log (monthly pay)	The natural log gross pays per month worked (including overtime)
Independent variables	
Female	1 if individual is female
Tenure (Months of service with current employer)	A number of months of employment with current employer used to capture the effect of experience.
Tenure^2	The square term of experience captures a non-linear relationship between pay and experience
Age	The age of employees.
Age^2	The squared term of age captures a non-linear relationship between pays and age
Industry	
Agriculture, forestry, and fishing	1 if industry category is Agriculture, forestry and fishing
Mining and quarrying	1 if industry category is Mining and quarrying
Manufacturing	1 if industry category is Manufacturing
Transportation and storage	1 if industry category is Transportation and storage
Wholesale and retail trade; repair of motor vehicles and motorcycles	1 if industry category is Wholesale and retail trade; repair of motor vehicles and motorcycles
Information and Communication	1 if industry category is Information and Communication
Real estate activities	1 if industry category is Real estate activities
Public administration and defense; compulsory social security	1 if industry category is public administration and defense; compulsory social security
Water supply; sewerage, waste management and remediation activities	1 if industry category is Water supply; sewerage, waste management and remediation activities
Advertising and market research	1 if industry category is Advertising and market research
Education	1 if industry category is Education
Human health and social work activities	1 if industry category is Human health and social work activities
Accommodation and food services activities	1 if industry category is Accommodation and food services activities
Administrative and support service activities	1 if industry category is Administrative and support service activities
Other services	1 if industry category is other services
Occupation	
Management, Business, and Financial Occupations	1 if occupation category is Management, Business, and Financial Occupations
Computer, Engineering, and Science Occupations	1 if occupation category is Computer, Engineering, and Science Occupations
Education, Legal, Community Service, Arts, and Media Occupations	1 if occupation category is Education, Legal, Community Service, Arts, and Media Occupations
Healthcare Practitioners and Technical Occupation	1 if occupation category is Healthcare Practitioners and Technical Occupation
Service Occupations	1 if occupation category is Service Occupations
Sales and Related Occupations	1 if occupation category is Sales and Related Occupations
Office and Administrative Support Occupations	1 if occupation category is Office and Administrative Support Occupations
Farming, Fishing, and Forestry Occupations	1 if occupation category is Farming, Fishing, and Forestry Occupations
Construction and Extraction Occupations	1 if occupation category is Construction and Extraction Occupations
Installation, Maintenance, and Repair Occupations	1 if occupation category is Installation, Maintenance, and Repair Occupations
Production Occupations	1 if occupation category is Production Occupations
Transportation and Material Moving Occupations	1 if occupation category is Transportation and Material Moving Occupations

Appendix II: Alternative major of Tenure (Age and Age²)

Variable	Overall sample	Male sample	Female sample
Female	-0.4173***		
	(-28.8594)		
Age	0.0723***	0.0775***	0.0437***
	(20.8536)	(21.3121)	(6.5717)
Age²	-0.0005***	-0.0005***	-0.0006***
	(-9.9781)	(-9.2085)	(-6.4343)
Constant	6.7030***	6.6508***	7.2768***
	(88.8916)	(81.0280)	(57.9586)
Observations	**17,920**	**15,200**	**2,720**
R-squared	0.5204	0.5233	0.3448
F-test	924.97***	848.32***	151.78***
Industry fe	YES	YES	YES
Occupation fe	YES	YES	YES

Source: Authors' calculation from the GOSI dataset for 2018. Heteroscedastic robust t statistics in parentheses.
* Significance at the 10% level.
** Significance at the 5% level.
*** Significance at the 1% level.

Appendix III Variable definitions for LFS

Variable	Definition
Dependent variable	
Log (hourly pay)	The natural log gross pay per hour worked (including overtime)
Independent variables	
Female	1 if individual is female
Tenure (Years of service with current employer)	
Less than 3 months	1 if length of time with employer is less than 3 months.
3 months, less than 6	1 if length of time with employer is between 3 months but less than 6
6 months, less than 12	1 if length of time with employer is between 6 months but less than 12
1 year, less than 2	1 if length of time with employer is between 1 year but less than 2.
2 years, less than 5	1 if length of time with employer is between 2 years but less than 5.
5 years, less than 10	1 if length of time with employer is between 5 years but less than 10.
10 years, less than 20	1 if length of time with employer is between 10 years but less than 20
20 years or more	1 if length of time with employer is between 20 years or more.
Age	The age of employees.
Age^2	The squared term of age.
Hours	Estimates of weekly hours worked per week (excluding overtime) for full-time employees. Full-time is defined as employees working more than 30 paid hours per week. This variable is winsorized at the 5th and 95th percentiles.
Training	1 if individual has received any training
Education	
No qualification	1 if no qualification
Other qualification	1 if other qualification
GCSE grades A*-C or equivalent	1 if GCSE grades A*-C or equivalent
GCE A level or equivalent	1 if GCE A level or equivalent
Higher education	1 if higher education
Degree or equivalent	1 if degree or equivalent
Children	
No. of children under 2	No. of children under 2
No. of children 2-4	No. of children 2-4
No. of children 5-9	No. of children 5-9
No. of children 10-15	No. of children 10-15
Occupation	
Managers, Directors & Senior Officials	1 if occupation category is Managers, Directors & Senior Officials
Professional Occupations	1 if occupation category is Professional Occupations
Associate Professional &Technical Occupations	1 if occupation category is Associate Professional &Technical occupation
Administrative & Secretarial Occupations	1 if occupation category is Administrative & Secretarial Occupations
Skilled Trades Occupations	1 if occupation category is Skilled Trades Occupations
Caring, Leisure &Other Service Occupations	1 if occupation category is Caring, Leisure & Other Service Occupations
Sales & Customer Service Occupations	1 if occupation category is Sales & Customer Service Occupations
Process, Plant & Machine Operatives	1 if occupation category is Process, Plant & Machine Operatives
Elementary Occupations	1 if occupation category is Elementary Occupations
Industry	
Agriculture, forestry, and fishing	1 if industry category is Agriculture, forestry and fishing
Energy and water	1 if industry category is Energy and water

Manufacturing	1 if industry category is Manufacturing
Construction	1 if industry category is Construction
Distribution, hotels, and restaurants	1 if industry category is Distribution, hotels, and restaurants
Transport and communication	1 if industry category is Transport and communication
Banking and finance	1 if industry category is Banking and finance
Public admin, education, and health	1 if industry category is public admin, education, and health
Other services	1 if industry category is other services
Region	
Northeast	1 if the region is Northeast
Northwest	1 if the region is Northwest
Yorkshire and Humberside	1 if the region is Yorkshire and Humberside
East Midlands	1 if the region is East Midlands
West Midlands	1 if the region is West Midlands
East of England	1 if the region is East of England
London	1 if the region is London
Southeast	1 if the region is Southeast
Southwest	1 if the region is Southwest
Wales	1 if the region is Wales
Scotland	1 if the region is Scotland
Northern Ireland	1 if the region is Northern Ireland
Other variables	
Trade union	1 if an individual is a trade union member
Public sector	1 if an individual works in the public sector
Married	1 if an individual is married
Ethnicity	1 if an individual is white

8.8 Appendix IV: Interpretation of the control variables for UK LFS analysis

Regarding the length of service *Tenure*, the findings from **Table 5-8** indicate that employees who worked with their current employers for *5 years and over* received higher pay compared to other tenure groups. This show that longer work experience leads to a significant increase in employees' salaries. The pooled results in **Table 5-8** also reveal that *Age* has a positive impact on pay, suggesting that being an older employee is associated with a higher probability of gaining high pay. In terms of *Hours* worked, the results interestingly demonstrate that employees, who work long hours per week, are paid well.

It can be noticed from the table that *degree level* qualifications had the greatest impact on employees' pay (31.2 log points). The finding is comparable to prior research with (see for example, Sugihashi 2003; Leaker, 2008). The results for the pooled sample demonstrate that employees with *children under 2* tend to receive higher salaries, while those with mature children *(i.e,.10-15)* receive lower salaries, which is further discussed below. **Table 5-8** reveals that being a *Trade union* member employee had a positive effect on pay. Turning to *Married* or living with a spouse, employees, who are married or living with a spouse, has a positive and statistically significant impact on pay (07.8 log points.). This is consistent with the findings of Hellerstein, Neumark and Troske, (1999) who found evidence that married workers received higher pay compared to non-married workers since marriage makes employees much more productive than unmarried employees. Taking *Ethnicity* into account, the coefficient is positive and statistically significant at 1% (β=0.092, t-statistic= 5.295), indicating that white employees on average obtain high pay compared to non-white ones, suggesting a discrimination against non-white employees. This is a remarkable result because pay discrimination exists not only against women but also against non-white employees. The ethnic pay gap has importantly attracted great attention from academics and policy makers (see for example, Corlett, 2017; Green, Heywood and Theodoropoulos, 2014; Heywood and Parent, 2012).

Table 5-8 reports the estimated coefficients after splitting the whole sample into two subsamples: men and women. The results from the table show that men and women, who have longer *Tenure* with their current employers, tend to have significantly higher pay than relatively lower-tenured counterparts *(less than 5 years)*. It can be seen from the table above that the returns to *Tenure* groups *(5 years less than 10 years)*, and *(10 years less than 20 years)* appear to be slightly higher for men. However, women, who had been working with their current employer for 20 years or more, received higher pay than men. This result is likely to be related to the fact that woman are more attached to work with their employers compared to men, as employers may provide a flexible working environment for women to manage their family responsibilities. In line with the length of services (i.e., *Tenure*), it can also be seen that there is a positive effect of *Age* on pay for men and women (Male: β=0.043, t-statistic=9.658; Female: β=0.031, t-statistic=8.180). *Age* is often assumed to be related to pay for several reasons, not least of which is the ability to acquire skills over the period of time the employee has spent working (Becker, 1962). Interestingly, the quadratic for both men and women are negative (as predicted) and statistically significant, which indicates that pay initially increases with *Age* and gradually declines. The latter is an indication of a curvilinear (inverted U-shaped) relationship between *Age* and pay (the inflection point for the curve is 47); after this point the effect of *Age* becomes negative. This finding is **in line** with prior research (see Lindley, 2009).

In addition, results show that the coefficient on the number of hours worked (*Hours*) is positive and statistically significant for women sample only (β=0.004, t-statistic=6.241), suggesting that women receive significantly higher salaries when they increase their worked hours per week. This implies that increasing working hours for women is crucial to increasing their pay, thereby minimising the gender pay gap. In accordance with this finding, Bertrand, Goldin and Katz, (2010) demonstrated that working hours are a key driver of the pay gap among employees. Large increase in the gender gap in pay for MBAs during their

first 15 years out of school, is primarily due to gender differences in weekly hours worked. Thus, working more hours per week plays a significant role in increasing employees' pay.

The coefficients on *Education* in both groups are significant and positive; however, men seem to benefit more from educational attainment than women. This is because in the UK, men have a greater concentration in (higher paid) science-related subjects such as engineering/technology, and physical/mathematical sciences, whereas women have a higher concentration in (lower paid) for arts subjects (see Machin and Puhani, 2003). Consistent with this view, Busby (2021) found that in the UK, women graduates in economics account for less than one third of graduates, while in creative arts, they account for nearly two-thirds; employees in fine art receive low financial returns.

In regard to the number of dependent children, the results indicate that having a child *under 2 or between 2 and 4* in the household have a positive impact on pay for women only; but a negative impact for women workers with children aged between *10 and 15*. An explanation for these results might be attributed to the timing of children arrival/ birth rather than to the age of the children. To illustrate, in the United States, women who have become mothers for the first time after age 30, are paid 6% higher pay compared to nonmothers, and 13% more if they had college degree. This suggests that postponing first births is correlated with increased pay (see Amuedo-Dorantes and Kimmel, 2005). This can be referred to the fact that women who postpone their first births accumulate greater investments in human capital (Blackburn, Bloom and Neumark, 1993; Miller, 2011), and obtain more work tenure (Amuedo-Dorantes and Kimmel, 2005; Laughlin, 2011). This would, in turn, minimise work-family conflict and promote job commitment, resulting in better pay prospects (Kossek and Distelberg, 2008; Waldfogel, 1998). Interestingly, when compared to women, who became mothers for the first time before age 28, women get less pay throughout their carriers regardless of college education, because of career interruptions in their twenties (Leung, Groes and Santaeulalia-Llopis, 2016).

Overall, the results indicate that women, who had a child *under 2 or between 2 and 4*, tend to delay having children in order to invest more in their human capital before becoming mothers (i.e., they have more work tenure and work longer hours, etc.); and this in turn, have influenced their pay positively. However, women with children aged 10 to 15 appear to have had children early in their careers, leading to employment interruptions before they get established in their career, which negatively influence their pay. This indicates that not all mothers experience a pay penalty; the existence and degree of the pay penalty differ depending on the socio-economic characteristics of women. **Table 5-8** shows that being a *Trade union* member is beneficial for both women and men, indicating bargaining success for unions by decreasing the pay gap (see Healy and Ahamed, 2019).

Being *Married* or living with a spouse in both groups is significant and positive; however, the coefficient on *Married* is higher for men than for women due to their household responsibility sharing. This is inconsistent with previous studies (see Loughran and Zissimopoulos, 2009); maybe because in the UK, women who are married or live with their spouse share child-rearing's responsibilities with their partners, and thus women's marital status does not affect their work performance (and hence their pay). In regard to ethnicity, the coefficient for men is positively associated with income (β=0.127, t-statistic=4.627), suggesting that white men receive higher pay than non-white.

Appendix V : Variable definitions for Saudi survey

Variable	Definition
Dependent variable	
Log (monthly pay)	The natural log gross pays per month worked
Independent variables	
Female	1 if an individual is female
Saudi	1 if an individual is Saudi
Public sector	1 if an individual works in the public sector
Age	
18-29 years old	1 if the age of employee is 18-29 years old
30-39 years old	1 if the age of employee is 30-39 years old
40-49 years old	1 if the age of employee is 40-49 years old
50 and over	1 if the age of employee is 50 and over
Tenure (Years of service with current employer)	
Less than 1 year	1 if length of time with employer is less than 1 year
1-2 years	1 if length of time with employer is between 1-2 years
3-5 years	1 if length of time with employer is between 3-5 years
6-10 years	1 if length of time with employer is between 6-10 years
Over 10 years	1 if length of time with employer is over 10 years
Education	
No qualification	1 if No qualification
High School	1 if High School
Diploma	1 if Diploma
Bachelor's degree	1 if Bachelor's degree
Postgraduate (Master's/Doctoral Degree)	1 if Postgraduate (Master's/Doctoral Degree)
Training	1 if an individual has received any training
Professional qualification	1 if an individual has Professional qualification
Hours	Numbers of hours worked per day
Full time	1 if an individual is a full-time employee
Managerial	1 if an individual is in managerial position
Career break	1 if an individual had any career breaks
Married	1 if an individual is married
Children under 16 years old	
No children	1 if an individual has no children under 16 years old
1 child	1 if an individual has 1 child under 16 years old
2 children	1 if an individual has 2 children under 16 years old
3 children and above	1 if an individual has 3 children and above under 16 years old
Region	
Riyadh	1 if the region of work is Riyadh
Jeddah	1 if the region of work is Jeddah
Dammam	1 if the region of work is Dammam
Mecca	1 if the region of work is Mecca
Madinah	1 if the region of work is Madinah
Other regions	1 if the region of work is in other Saudi regions (i.e., Abha, Ad-dilam, Al Ahsa, Al baha, Al ghat, Al hofuf, Al jowf, Al jubail, Al kharj, Abqiq, Al khurma, Al namas, Al qassim, Al qatif, Al qunfudhah, Al qurayyat, Al quwaiiyah, Al zulfi, Al-bajadiyah, Al-khobar, Arar, Aseer, Dhahran, Hafar Al batin, Hail, Haradh, Jazan, Khafji, Khamis mushait, Majmaah, Najran, Neom, Shaqra, Tabuk, Sakaka, Taif, Rafha, Turaif, Yanbu, Ras Al khair, Sharorah, and Rabigh)
Industry	
Education	1 if industry category is Education
Hospitals	1 if industry category is Hospitals
Authorities	1 if industry category is Authorities
Corporations	1 if industry category is Corporations
Energy	1 if industry category is Energy
Financials	1 if industry category is Financials
Manufacturing	1 if industry category is Manufacturing
Ministries	1 if industry category is Ministries
Petrochemical sector	1 if industry category is Petrochemical sector
Telecommunication services	1 if industry category is Telecommunication services

Other industries	1 if other industry categories (i.e., Postal and courier activities, Construction, Retail sale of other goods in specialized stores, Professional, scientific, and technical activities, Water supply; sewerage, waste management and remediation activities, and Transportation)

Appendix VI: Survey

Welcome to My Survey

I am Hind Alsudays, a PhD researcher at Birmingham Business School, University of Birmingham, UK. This questionnaire forms part of my research project, which explores pay inequality between workers in private sector in Saudi Arabia. Participation in this survey will help us better understand the causes of pay inequality and what we can do about them.

Notes:

1. Aims: to collect data that will help understand the factors that determine the wages of all employees within the Saudi private sector.
2. Confidentiality: all data provided are confidential and will be used for scientific research purposes only.
3. Time: the questionnaire takes approximately 10 minutes to complete.

Your participation in this research is voluntary. You have the right to withdraw at any point during the study, for any reason, and without any prejudice. If you would like to contact the Principal Investigator in the study to discuss this research, please e-mail HAA451@student.bham.ac.uk.

By clicking the button " Next", you acknowledge that your participation in the study is voluntary, and that you are aware that you may choose to terminate your participation in the study at any time and for any reason. re

Many thanks for your participation research – like this relies on people like you giving a little time to help us understand workplace.

أنا هند السديس، باحثة دكتوراه في كلية برمنغهام للأعمال، جامعة برمنجهام، المملكة المتحدة. هذا الاستبيان جزء من مشروعي البحثي، والذي يتطلع الى الكشف عن ظاهرة عدم المساواة في الأجور بين العاملين في القطاع الخاص في المملكة العربية السعودية.المشاركة في هذا الاستبيان ستساعدنا على فهم أسباب عدم المساواة في الأجور بشكل أفضل وما يمكننا القيام به حيالها

ملاحظات:

الهدف: يهدف الاستبيان الى جمع معلومات، والتي ستساعد الباحثه في دراسة العوامل التي تحدد أجر العاملين في أغلب شركات القطاع الخاص السعودي

.السرية: سيتم التعامل مع جميع المعلومات المقدمة بسريه تامة -علما بان المعلومات المقدمه ستستخدم لغرض البحث العلمي لا غير, ولن تشارك الباحثة المعلومات التي ستحصل عليها مع أي جهة أخرى

.الوقت: يستغرق الاستبيان ما يقارب 10 دقائق لإكمال هذا الاستبيان

مشاركتك في هذا البحث تطوعية وبدك الحق في الانسحاب في أي وقت أثناء الدراسة، لأي سبب ودون أي تحيز. إذا كنت ترغب في الاتصال بالباحث الرئيسي في هذه الدراسة لمناقشة هذا البحث، فيرجى إرسال بريد إلكتروني إلى:

HAA451@student.bham.ac.uk

بالنقر فوق الزر "التالي"، فإنك تقر بأن مشاركتك في الدراسة اختيارية، وأنك تدرك أنه يمكنك اختيار إنهاء مشاركتك في الدراسة في أي وقت ولأي سبب

Individual Demographics:

(Socio-Economic Questions) - (أسئلة اجتماعيه-اقتصاديه)

(1) The section of basic information about yourself: **(قسم المعلومات الأساسيه عن نفسك)**

1.1 Gender: (الجنس)

Male

Female

1.2 Age: (العمر)

18-29 years old

30-39 years old

40-49 years old

50-59 years old

60 or older

1.3 Nationality: (الجنسيه)

Saudi

Non-Saudi

1.4 Gross (monthly) Income (i.e., Salary) in Saudi Riyal: (كم هو راتبك الشهري الإجمالي بالريال السعودي)

(2) Education and Training section: **(قسم التدريب والتعليم)**

2.1 What is your highest qualification? (أعلى مستوى تعليمي حصلت/ حصلتي عليه)

High School

Diploma

Bachelor ‘s degree

Postgraduate (Master's/Doctoral Degrees)

No qualification

2.2 Do you have professional qualifications related to your current job? (هل لديك شهادات احترافيه / مهنيه متعلقة بوظيفتك الحالية)

Yes

No

2.3 How many training courses have you undertaken since you started your job at your present company? (كم عدد الدورات التدريبية التي قمت بها منذ انضمامك إلى الشركة الحالية التي تعمل بها)

None

1-2

3-4

5-6

Over 6

2.4 How long have you been employed at your present company? (منذ متى وانت تعملين/ تعملين في الشركة الحالية)

Less than 1 year

1-2 years

3-5 years

6-10 years
Over 10 years

2.5 Have you had any career breaks of more than three months since you joined your present company?
(هل سبق لك أن انقطعت عن عملك الوظيفي للأكثر من 3 أشهر منذ انضمامك للشركة الحالية التي تعمل/ تعملين بها)

Yes
No

2.6 How many times have you been promoted since you started your job within the company?
(كم عدد المرات التي تم ترقيتك منذ بداية عملك في الشركة)

Once
Twice
Three times
More than three times
None

Employment Conditions:

(3) Employment Conditions section: **(القسم الخاص بظروف العمل)**

3.1 What is the nature of your work:(ماهي طبيعة عملك)

Full time
Part time
Distance working

3.2 How many hours do you work (per day)? (كم ساعه تعمل / تعملين في اليوم)

3.3 How many days do you work (per week)? (كم يوما تعمل / تعملين في الأسبوع)

3.4 Do you work overtime (night shifts, weekends, or holiday, etc.)? (هل تعمل/ تعملين ساعات عمل إضافية)

Yes
No

3.5 Where do you live? (أين تعيش/ تعيشين)

Riyadh
Jeddah
Dammam
Mecca
Medina
Other- please specify

3.6 Which city do you work in? (في أي مدينة تعمل / تعملين)

Riyadh
Jeddah
Dammam
Mecca
Medina
Other- please specify

3.7 How far do you travel to work? (ماهي المسافة المستغرقة للذهاب الى العمل)

3.8 How long does it usually take for you to get to work? (كم من الوقت يستغرق عادة بالنسبة لك للوصول إلى العمل)

Occupational Segregation:

(4) Working Context section: **(القسم الخاص بسياق العمل)**

4.1 What is your occupation? (ماهي مهنتك الوظيفية)

4.2 A title for your industry group: (ما هو القطاع التي تعمل/ تعملين به)

Energy
Materials
Financials
Telecommunication services
Real estate
Insurance
Other- please specify

4.3 What gender is your line manager? (ما هو جنس مديرك المباشر)

Male
Female

4.4 What best describes your occupational status? (ما هو أفضل وصف لحالتك المهنية)

Managerial (i.e., you do manage people)
Non-managerial (i.e., you do not manage people)

(5) Family Characteristics section: **(القسم الخاص بخصائص الأسره)**

5.1 What is your marital status? (ما هي حالتك الاجتماعية)

Married
Widowed
Divorced
Single

5.2 Does your spouse work? (هل زوجك/ زوجتك يعمل أو تعمل)

Yes
No

5.3 Please indicate your current (annual) household income in Saudi Riyal: (الرجاء الاشارة الى السنوي بالريال السعودي)دخل الأسرة

60,000-100,000 SR
100,000 -200,000 SR
200,000-300,000 SR
300,000-400,000 SR
Over 400,000 SR

5.4 Do you have children? (هل لديك أطفال)

Yes
No

5.5 How many children under 16 years old live in your household? (كم عدد الأطفال دون ال 16 عاماً اللذين يعيشون في منزلك)

None
1
2
3 or above

5.6 What is the mode of childcare when you are at work? (من يتحمل مسؤولية أطفالك عندما تكون/ تكونين في العمل)

You
Partner/ spouse Babysitter
Day care centre Housemaid
Other family member

5.7 How many hours per week do you spend on childcare? (كم عدد الساعات في الأسبوع التي تقضيها/ تقضينها في رعاية الطفل)

Less than 5
5-10
10-15
15-20
More than 20

5.8 Do you provide care to any family member who is ill, disabled or elderly? (هل تقدم/ تقدمين الرعاية لأي فرد من أفراد أسرتك)

Never
Rarely
Sometimes
Often
Always

5.9 Is there anything about your job that makes it especially difficult for you to balance your work and care responsibilities? Please choose all that apply.
(هل هناك أي عوائق تجعل من الصعب عليك الموازنة بين مسؤوليات العمل الخاص بك وبين مسؤوليات الرعاية التي تقدمها/تقدمينها)

Long working hours
Unpredictable schedule
Long commute
Demanding job
Lack of support from employers or colleagues
Another difficulty

End of the survey

Appendix VII: Interview questions

Section A: General:

1. Could you give me a brief introduction about HR department (i.e., the culture of the department) and your career history?

Section B: Company's hiring practices:

2. What are the key factors that the HR manager looks for in a job applicant? (e.g., education, experience, professional qualification, and soft skills).
3. To what extent is the company's female workforce underrepresented? If this is the case, what does the company plan to do about it?
4. Have you noticed any patterns specific to women or men in the jobs they apply for, and in how they approach selection processes?

Section C: Company's gender pay gap/ gender equality awareness:

Objective – To understand the company's strategy towards gender pay gap/gender equality

5. Does the company have gender pay gap and does the company publish gender pay gap figures? If yes what measures that your company put in place to minimise the pay gap between men and women? Why/ why not?
6. To what extent does the company have a strategy, or has it acted, to narrow any gender pay gap identified? For example, paid primary carer leave, flexible working hours and/or flexible work locations?
7. To what extent does the company promote gender equality such as provide training and education programmes for both genders?

Section D: The Causes of Gender Pay Gap:

Objective – to investigate the determinants of Gender Pay Gap (relevant to RQ1)

8. What are the root causes of Gender Pay Gap in the Saudi private sector?
9. What can employer, colleagues and family members do to reduce wage differences between gender?

Section E: Based on the findings:

10. There is a notable decrease in GPG percentage in Saudi private sector from year 2018 (77%) to 2021 (60%). In your opinion, what could be the cause of this decrease?
11. To what extent does the salary policy take into consideration if the employee is married or have children? And how?
12. What impact does being a parent have on the employee's performance? Is there a difference in this effect between male and female employees' performance?
13. Does the company provide childcare facilities for employees?
    - Are the facilities used?
    - Would people use them if they were provided?
14. Why do you think women are underrepresented in managerial positions compared to men? (28 % for women vs. 54 % for men).

Section F: COVID questions:

Objective – to understand the impact of COVID on the gender pay gap

15. To what extant has the pandemic contributed to wage differences between gender? (E.g., women being suspended, laid off, or forced to work reduced hours). (Based on gulf news, 2021).

1.6 Appendix VIII: Consent form

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A research project investigating The Determinants of Wage Differentials between Men and Women: Evidence from Saudi Arabia

Consent form

Name of Researcher: Hind Alsudays

- I understand that my participation is voluntary, and I can withdraw at any time without prejudice
- Any information which might potentially identify me will not be used in published material.
- I agree to participate in the study as outlined to me and give permission to record the interview.
- I confirm that I have read and understood the participant information sheet provided by the researcher.

Name of Participant

Signature

Date

Appendix IX : Occupational classification

2018 SOC major groups

Code	*Title*
11-0000	Management Occupations
13-0000	Business and Financial Operations Occupations
15-0000	Computer and Mathematical Occupations
17-0000	Architecture and Engineering Occupations
19-0000	Life, Physical, and Social Science Occupations
21-0000	Community and Social Service Occupations
23-0000	Legal Occupations
25-0000	Educational Instruction and Library Occupations
27-0000	Arts, Design, Entertainment, Sports, and Media Occupations
29-0000	Healthcare Practitioners and Technical Occupations
31-0000	Healthcare Support Occupations
33-0000	Protective Service Occupations
35-0000	Food Preparation and Serving Related Occupations
37-0000	Building and Grounds Cleaning and Maintenance Occupations
39-0000	Personal Care and Service Occupations
41-0000	Sales and Related Occupations
43-0000	Office and Administrative Support Occupations
45-0000	Farming, Fishing, and Forestry Occupations
47-0000	Construction and Extraction Occupations
49-0000	Installation, Maintenance, and Repair Occupations
51-0000	Production Occupations
53-0000	Transportation and Material Moving Occupations
55-0000	Military Specific Occupations

Intermediate aggregation	Major groups included	Intermediate aggregation title
1	11–13	Management, Business, and Financial Occupations
2	15–19	Computer, Engineering, and Science Occupations
3	21–27	Education, Legal, Community Service, Arts, and Media Occupations
4	29	Healthcare Practitioners and Technical Occupations
5	31–39	Service Occupations
6	41	Sales and Related Occupations
7	43	Office and Administrative Support Occupations
8	45	Farming, Fishing, and Forestry Occupations
9	47	Construction and Extraction Occupations
10	49	Installation, Maintenance, and Repair Occupations
11	51	Production Occupations
12	53	Transportation and Material Moving Occupations
13	55	Military Specific Occupations

High-level aggregation	Major groups included	High-level aggregation title
1	11–29	Management, Business, Science, and Arts Occupations
2	31–39	Service Occupations
3	41–43	Sales and Office Occupations
4	45–49	Natural Resources, Construction, and Maintenance Occupation
5	51–53	Production, Transportation, and Material Moving Occupations
6	55	Military Specific Occupations