

The impact of the Formula One Chinese Grand Prix on the socioeconomic

development of local small and medium-sized enterprises

by

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Abstract

Although the impact of major sporting events has been well documented, it is largely based on empirical studies of one-off events and their impacts on host cities' broad development (e.g., economic and tourism impact, and social impacts). We know little on the impact of periodic major sporting events (e.g., the F1), and more specifically their impacts on the development of local businesses - particular the group of small and medium-sizes enterprises (SMEs) - remains scant. Therefore, this research contributes to address these research gaps by exploring the impact of a periodic major sporting event—the Formula one Grand Prix (F1) on local SMEs socioeconomic development in an Asian context—Shanghai.

Through the lens of critical realism and guided by theory of change and contribution analysis, this study adopts a mixed-methods approach that incorporates evidence gathered from document analysis, surveys with Shanghai SMEs managers (n = 188) and interviews with policy makers (n = 9) as well as a follow up sample of those surveyed SME managers (n = 10). The study finds that there is a moderate effect of the Shanghai F1 on local SMEs' development evidenced both on the economic and social aspects. Sports and Automobile SMEs are the key beneficiary groups, comparing to other groups of SMEs (e.g., financial and educational SMEs) and reported growths in turnover and profits, improved corporate image and brand image and increased opportunities for cooperating with other sectors as a result of the Shanghai hosting of F1. The study also identifies clear causal mechanisms underlying the impact pathways and explains how the identified impacts are attributable to the Shanghai F1. The positive factors, barriers and success criteria are also acknowledged to contribute, impede and evaluate the

achievement of the intended outcome/impact chains.

This study provides empirical evidence of event impact on local SMEs development, and is valuable to other cities who are also interested in utilising the major sporting events local businesses and SMEs development. The combination of both theory of change and contribution analysis used in this study is one of its key advantages and enhances the rigour and robustness of impact assessment, hence is advised to be used in future government-led sports programme evaluations. Key points identified in this study, in terms of what should have been done in order to maximise the impact of the F1 on SMEs development are useful for policy makers to plan and organise their major sporting events strategically, and to provide support local SMEs for their engagement with the event.

Key words: China, the Shanghai F1, small and medium-sized enterprises, evaluation theories, the impact of major sporting events.

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Chapter 1: Introduction

Formula One (F1) motor racing has evolved into one of the most famous international major sporting events, generating more than GBP £3.03 billion per year and attracting both virtual and live audiences of more than 500 million people worldwide (Financial Times, 2019). The Formula One Chinese Grand Prix (often called the Shanghai F1), which is just one of many global Grand Prix events, has been hosted in Shanghai for more than 15 years (from 2004 to 2021) and has become one of Shanghai-branded sporting events (Liang et al., 2021). In this study, the impacts of the Shanghai F1 on the socioeconomic development of local SMEs are explored and explained.

1.1 Research rationales

A burgeoning number of studies have focused on the socioeconomic impacts of major sporting events (Baade & Baumann, 2010; Pace, 2006; Pace, 2006; Porter & Fletcher, 2008; Preuss, 2004; Scandizzo & Pierleoni, 2018; Tien, Lo, & Lin, 2011), such as the Olympic Games and the FIFA World Cup, and on explaining the generative mechanisms behind these impacts. However, two points must be noted in relation to other research: One is that most sporting event—impact studies focus on one-off major sporting events, which have been criticised for

their high cost (Li, Blake, & Thomas, 2013; Scott & Masterson, 2014) and for the short-term nature of their impacts (Fourie & Santana-Gallego, 2011; Misener & Chalip, 2014; Song, 2010). Few studies have addressed major periodic events, for the periodic major sporting events attract limited media attention around the world and leverage limited socioeconomic impacts to the city's development during a single event cycle (Ziakas, 2013, 2019).

However, it is important to examine the periodic major sporting events, for these events may have a cumulative tourism, and cultural impact over repeatedly being hosted (Ziakas, 2019; Ziakas & Costa, 2011b). In addition, major periodic sporting events are relatively 'affordable', generating minimal debt and sustainable benefits that improve local socioeconomic prosperity (Getz, 2008; Ziakas & Costa, 2011b). Therefore, given that the periodic major sporting events have ability on generating the long-term sustainable socioeconomic benefits but are little noticed, this study targets at one of the major periodic sporting events, the F1, as the research object rather than one-off major sporting events.

The second point that should be noted here in relation to other research is that the impact targets/beneficiaries examined are often at the macro level—regional economic and tourism impacts, for example. While this study focuses on the micro-level beneficiaries beyond that of

macro-level. The reason is that macro-level studies often present overarching trend but fail to provide explanations to why socioeconomic impacts can be generated as a result of hosting major sporting event. The impacts are often derived from the government-led studies (Economic Research Associates, 1984; KPMG, 2006; Porter & Fletcher, 2008) or relied on mathematical economic equations to estimate (Henderson et al., 2010; Huang et al., 2014; Preuss, 2011). Therefore, the results of assessing the tourism and economic impacts of major sporting events on city's development are often overestimated or tend to be the flaunt of political rhetoric (Madden, 2006; Preuss, 2011). However, this study by focusing on microlevel analysis, it provides rich data on the ground level which can reflect the perspectives of enterprises - the micro-level objects constituting a city's business and economic framework. In other words, the impact studies of a major sporting event can dig deeper instead of stopping at concluding its impact on socioeconomic development on the city's level.

Considering that research addressing major events' impacts on micro-level objects, such as enterprises, remains scant, this study is concerned with small and medium-sized enterprises (SMEs) as the ultimate receivers of the socioeconomic impact of major sporting events. The reason of choosing SMEs rather than large enterprises is that in China, SMEs

possess greater socioeconomic value than other types of businesses do. Since 2000, SMEs in China have evolved rapidly and produced approximately 80% of the job opportunities in China (Chen, J., 2006). As such, they play an imperative role in promoting national economic development and addressing social livelihood issues (Chen, J., 2006; Li & Matlat, 2006).

Shanghai, the host city of famous major sporting events, is selected from among China's cities to be the focus of this study. It is China's economic capital and a globally famous city, has abundant economic, financial, and political resources that are strongly conducive to the staging of a major sporting event portfolio (Liu, 2014; Shanghai Municipal Government, 2016). In turn, the aforementioned portfolio of major sporting events is expected to enhance the city's socioeconomic development and to help Shanghai achieve 'remarkable global city' status (Shanghai Municipal Government, 2020). Therefore, this study investigates how the expected impacts as a result of major sporting events contribute to the socioeconomic development of local SMEs.

In this study, the Shanghai F1 is selected from among the major periodic sporting events hosted in Shanghai because, as the pilot for periodic major sporting events in Shanghai, it has been described as the city's 'identity card' (Liu & Graton, 2010, p. 631). The Shanghai F1 has

also received the greatest media exposure (Kim et al., 2017), attracted the greatest number of tourists (Huang, 2010), and generated the greatest amount of new money for the city's economic development (Huang et al., 2014) among Shanghai's major sporting events.

To address the aforementioned research gaps (one-off major sporting events VS. periodic major sporting events; targeting at macro-level impacts VS. micro-level impacts) in the context of Shanghai, this study investigates the socioeconomic impact of the Shanghai F1 on the socioeconomic development of local SMEs by conducting the quantitative (survey) data analysis and explores the causal mechanism by several steps: (1) identifying the potential causal mechanism – causal links through literature review and document analysis, (2) verifying the existence of causal links by analysing interview data, (3) identifying the contribution of the Shanghai F1 to the causal mechanism formation and supporting the generation of any impacts that occurred through analysing both qualitative and quantitative data.

1.2 Research aims

The study uses the Shanghai F1 as an example for investigating the impacts of Shanghai F1 on the various developmental aspects of local SMEs and exploring the causal mechanism underlying the achieved impacts through the lens of critical realism. This research comprised several parts: identification of the existence of impacts, use of theory of change logic to explore the causal relationships that constitute the mechanisms underlying impact pathways, collection of evidence to trace and verify each causal relationship, and use of a contribution analysis framework to establish how attributable impacts on local SMEs were to the Shanghai F1 and how robust the respective claims were. Finally, the thesis provides conclusions and describes the implications and lessons learned from the Shanghai F1. This will inform future host cities wishing to facilitate SME development through sporting event hosting.

The study adopts a retroductive strategy using a mixed-method approach for data collection. The details of the methodology are provided in Chapter 5.

The research questions involve four main themes with lists of associated questions:

- 1. Impact of the Shanghai F1 on the economic development of local SMEs
 - a. What types of economic impacts have been exerted on local SMEs as a result of Shanghai hosting the F1? To what extent has the Shanghai F1 influenced the economic development of local SMEs?
 - b. Have differences been observed among the types of economic development demonstrated by different types of SMEs as a result of Shanghai hosting the F1?

- 2. Impact of the Shanghai F1 on the social development of local SMEs
 - a. What kinds of social impacts have been exerted on local SMEs as a result of Shanghai hosting the F1? To what extent has the Shanghai F1 influenced the economic development of local SMEs?
 - b. Have differences been observed among the types of social development demonstrated by different types of SMEs as a result of Shanghai hosting the F1?
- 3. Causal logic underlying the socioeconomic impacts of the Shanghai F1 on local SMEs
 - a. How are causal relationships identified between the hosting of the Shanghai F1 and the socioeconomic development of SMEs?
 - b. Does sufficient evidence support the causal links underlying the impact chains?
 - c. Are the causal links created plausible, feasible, and able to be tested?
 - d. Is the creation of causal links challenging in any way?
- 4. The contribution of the hosting of the Shanghai F1 to the socioeconomic development of local SMEs

- a. Have external factors and interventions (e.g., political and environmental factors) promoted or impeded the impact pathways formed by causal relationships and leading to SMEs' socioeconomic development?
- b. Are the causal relationships strong, moderately strong, or weak?

1.3 Thesis structure

Chapter 2 provides a context review of Shanghai's major sporting event hosting, including the background, history, and policy context. It also includes a review of the developmental context of Shanghainese SMEs: their features, their policy context, and their distribution in Shanghai. The context review provides understanding of the overall context for Shanghai's staging of major sporting events, the Shanghai F1, and Shanghai's SMEs and is valuable for informing the survey questions and the interview guide in Chapter 5. The theory of change map (in Chapter 6)'s 'Inputs' of political resources, knowledge resources, and physical resources were also outlined and defined in the context review.

Chapter 3 introduces the theoretical basis of this research. Theory of change and contribution analysis are combined for analysis. Theory of change is used to explore how complex programmes lead to changes in impacts through actions in specific contexts.

Contribution analysis helps to establish the extent to which a project causes an outcome and whether the project can be reasonably concluded to have made changes to the problem. The strengths and weaknesses of these two theories are examined and comparisons drawn with other relevant theories to explain the rationale for selecting the ones we did.

Chapter 4 comprises a review of the literature on two subjects: major sporting events and small and medium-sized enterprises. We review definitions of major sporting events, the typologies of their impacts, and their socioeconomic and environmental impacts. We also review (a) the definition of SMEs, (b) the operational advantages that SMEs have, (c) challenges to the development of SMEs, and (d) the impacts of major sporting events on SMEs. The chapter helps to maintain a big picture of the study areas of major sporting events and SMEs, and it also informs the subsequent survey and interview question design. The gaps, conflicts, and inconsistencies between this study and other literature are discussed in Chapter 9.

In Chapter 5, this study's research methodology is discussed. The chapter provides the rationales and applications for the selected research paradigm of critical realism with a retroductive research strategy, and it explains the use of a mixed-method approach (document

analysis, semi-structured interviews, and self-administered questionnaires), issues in relation to are considered. The chapter concludes with a summary of the overall research protocol adopted and a discussion of relevant validity and reliability issues in the study.

Chapter 6 outlines the theory of change logic underlying the socioeconomic impacts of the Shanghai F1 on local SMEs. The theory of change map is presented in two stages: (1) Through a review of policy documents and research literature, a basic theory of change logic model is created featuring five components: goals, inputs, throughputs, outputs, and impacts.

(2) The model is refined and further developed using the knowledge and experience of policy makers and independent sports policy advisers involved in bidding for and implementing the hosting of the Shanghai F1.

Chapter 7 and 8 present the findings of this research. In each of the chapters, the findings are presented in two steps. First, quantitative data obtained from surveys of local SME managers are presented. Second, contribution analysis is applied, compiling qualitative evidence to assess the contribution impacts of the Shanghai F1 on socioeconomic benefits for local SMEs as well as to examine whether the outcomes and impacts outlined in the theory of change are sufficiently robust.

In Chapter 9, the findings' implications are interpreted and described, with the help of relevant literature, to identify new understanding emerging from the study. Specifically, we discuss what can be learned from the macro- and micro-level impact analysis of changes experienced by Shanghai's SMEs as a result of the F1. The theory of change and contribution analysis are also discussed to provide some new insights. We discuss the advantages and challenges of applying these two theories to analysis as well as the necessity of combining them to evaluate the impacts of the Shanghai F1 programme on SMEs' socioeconomic development.

In Chapter 10, conclusions are drawn from the research findings to answer the main research questions regarding the socioeconomic influence of the Shanghai F1 on local SMEs and the causal mechanisms underlying the outcome/impact chains. We also detail the implications and limitations of this research and provide recommendations for future researchers.

Chapter 2: The contexts for Shanghai's major sporting events, the Shanghai F1, and local SMEs

In its role as a prominent modern metropolis and a financial and economic hub of China, Shanghai staged a series of major sporting events from 2000 to attract foreign investment and promote new cash inflow (Huang et al., 2014; Liu, 2013, 2016). The Shanghai F1 is one of Shanghai's foremost major sporting events and is a key aspect of the image Shanghai presents to the world (Liu, 2013). The event reportedly generates not only economic impacts but also sociocultural impacts in Shanghai (Liu, 2013). This study therefore investigates the impacts of the Shanghai F1 on local SMEs development.

This chapter is structured as follows: (1) China's governance structure is described, including the relationship between the central government and the local governments at various levels in China's tier system for cities; (2) the geographic and cultural background of Shanghai as well as the background and the historical and political contexts for major sporting events hosted by Shanghai are reviewed; (3) the background and the historical and political contexts of Shanghai F1 are reviewed; (4) the features, policy contexts, and distribution of small and medium-sized enterprises (SMEs) in Shanghai; and (5) the distribution of SMEs in Shanghai

are reviewed.

2.1 China's governance structure: The relationships between the central government and

local governments in various tiers

Before reviewing the history and policy backgrounds for Shanghai's hosting of major sporting events and the development of Shanghai's small and medium-sized businesses (SMEs), this chapter briefly introduces China's governance structure, particularly the relationship between the central government and local government in various tiers. The respective governance structure provides a strictly ordered process for assigning policies and decisions.

Generally, China's governance structure (Figure 2.1) has five tiers. The State Council is at the top, below which are provinces or autonomous regions, then municipalities, then counties or districts, and then towns (according to Order No. 14, the Organic Law of the State Council of the People's Republic of China, signed by the Chairman of the Standing Committee of the National People's Congress in 1982). However, special instances of four-tier governance structures exist. In China, four municipalities exist directly below the central government: Beijing, Shanghai, Tianjin, and Chongqing (approved by the National People's Congress). These four municipalities were promoted to provincial administrative regions in 1949. They

have larger built-up areas and larger populations compared with other general municipalities, and they are assigned important positions in relation to politics, economics, science, culture, and transportation in China.

In this study, the target city, Shanghai, is a municipality directly below the central government, in the second tier of the governance structure; 16 districts are positioned below Shanghai (Shanghai Statistical Yearbook, 2019). The F1 Chinese Grand Prix, the Shanghai International Circuit, and Anting Automobile City are located in Anting Town, Jiading District.

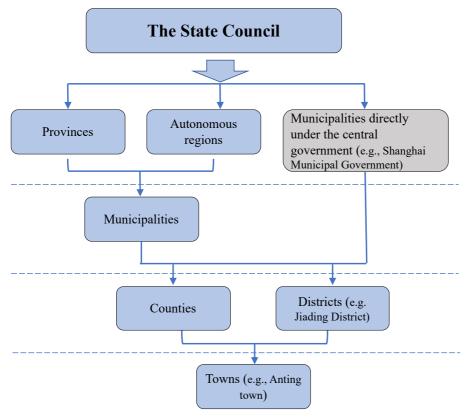


Figure 2.1 China's governance structure for the central government and the local governments in various tiers

In Shanghai, the process of assigning and implementing policies relating to sport and major sporting events is precisely ordered under the four-tier governance structure. The details are shown in Figure 2.2. The State Council directly supervises the General Administration of Sport in China. These both govern the Shanghai Municipal Government and the Shanghai Sport Bureau. Political power then descends to Jiading District and the Jiading Sport Federation. The smallest sport policy implementation unit is Anting Town and Anting Recreational and Sport Centre.



Figure 2.2 Shanghai's four-tier governance structure and process for assigning and implementing sport policies and major sporting event policies

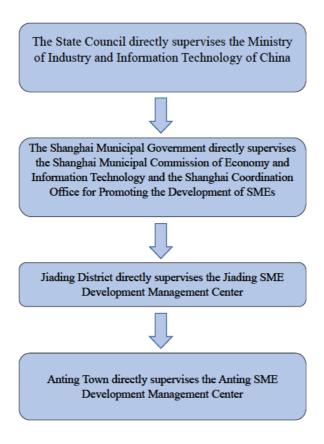


Figure 2.3 Shanghai's four-tier governance structure and process for assigning and implementing SME-related policies

The details of the process for assignment and implementation of SME-related policies in Shanghai are shown in Figure 2.3. The State Council directly supervises the Ministry of Industry and Information Technology of China. These govern the Shanghai Municipal Government, which directly supervises the Shanghai Municipal Commission of Economy and Information Technology and the Shanghai Coordination Office for Promoting the Development of SMEs. Political power then descends to Jiading District, which directly supervises the Jiading SME Development Management Centre. Finally, the smallest sport policy implementation unit is Anting Town, which directly supervises the Anting SME Development Management Centre.

2.2 Shanghai's hosting of major sporting events: Background, history, and policy context

2.2.1 Geographic and cultural background of Shanghai

Shanghai is located on the east coast of China (latitude around N31°, longitude around E121°), just at the southern mouth of the Yangtze River. According to *the Shanghai Statistical Yearbook* 2020, Shanghai had a population of 24.28 million as of 2019. The GDP reached GBP £470 billion accounting for 3.9% of National GDP.

The geographic character of Shanghai is depended on its location of the Yangtze River Delta (alluvial plain) including vast majority flat area with a few hills in the southwest corner. Thus, the altitude of the city lies between three and five meters. The alluvial plain brings two advantages to the city's development. One is reflected in the capacity on large-scale construction of the city, and another one is reflected in the city's advanced shipping development.

For the capacity on large-scale construction of Shanghai, the alluvial plain with flat terrain and the strong homogeneity of soil produces superior land development conditions which means that a large area in the city can be centralised and contiguously utilised. There are currently two large-scale urban construction cluster areas in Shanghai (Shanghai Municipal

Government, 2021). One is Huangpu River cluster aiming to become more attractive for tourists around the world. The large-scale constructions in this cluster mainly include cultural facilities (e.g., Expo Cultural Park), tourism facilities (e.g., Yangpu Riverside Cruise Terminal) and sports facilities (Xupu Bridge Sports Park). Another one is Suzhou Creek cluster attempting to become a more dynamic model area for improving the quality of residents' life. The large-scale constructions in this cluster include for instance, the Subei Green space of in Jing'an District and the "landscape wall" and "landscape bridge" along the Suzhou River. Moreover, the official statistics can also reflect the capacity on large-scale construction of Shanghai. Specifically, the city's land area is 6,787 km², which is less than 0.1% of the overall national land area, but it carries 1.7% population of China. (Shanghai Municipal Government, 2013).

With respect to the city's advanced shipping development, alluvial plain with an advanced river system mainly including the Huangpu River, Suzhou Creek, Chuanyang Lake, and Dianpu Lake flow through the urban area with ice-free waters all year round. The water networks inside the city constitute the main waterways of Shanghai and provide sufficient water to facilitate the transportation. Shanghai's water networks are the densest and the most

developed in China, providing easy access to China's interior. In addition, the water networks together with Shanghai's coastal, riverside location and warm climate resulting in Shanghai being one of the world's largest and busiest container port handling 43.3 million TEUs in 2019 (SAFETY4SEA, 2020).

The culture of Shanghai is called Haipai Culture (literally 'Shanghai style') which is a unique fusion culture in China, mainly combining traditional Chinese Wu-Yue culture and western modern culture (Note: Compared with most Chinese cultural types with a history of more than a thousand years, it is a relatively new type of culture with less than two hundred years of history). The traditional Wu-Yue culture is concerned with agricultural civilisation, individuals' self- spirit cultivation and exploration, as well as application of pragmatism. While the western modern culture associated with characteristics of modern industrial society in the late 19th century entered Shanghai, evidenced in the invation of Western settlements (the Opium war between the British and the Chinese Qing Dynasty) who hosted leisure activities in the aspects of artistic expression and sports activities. In addition, more apparent evidence is the array of physical attributes, including the Bund, architectural landmarks, and streetscapes. From the late 19th century, traditional Chinese Wu-Yue culture and western modern culture has

gradually integrated in Shanghai. The main characteristics of Shanghai culture is creative, open, and diversified. People from all over the world may find in Shanghai the same things they are familiar with as in their own countries, but no one would consider that Shanghai is very similar to another famous city (Wu, 2004). This fusion culture is accompanied by a strong merchant character in the society. In other words, commerce has been served as the major impetus of society (Wu, 2004).

2.2.2 Background and history of major sporting event hosting in Shanghai

Shanghai became the first ever city to stage an international major sporting event in China when it held the first 'Shanghai Cup' International Regatta event in 1873 (Ye & Du, 2017). The staging of the event was an indication of Shanghai's status as a modern urbanised city (Bo, 2010; Li, 2012; Wang and Ni, 2016) following the city's establishment as a commercial port in 1843 (recorded in the 'Treaty of Nanking' signed after the Opium War between the UK and China; Fu, 2002). Subsequently, Shanghai's cultural and sporting leisure activities were transformed by the influences of modern western culture (Bergère, 2008). In 1915, Shanghai also hosted the Far Eastern Games (a relatively large-scale international major sporting event) (Wang and Ni, 2016), which attracted numerous tourists and citizens, generating considerable

economic value for the event organisers (Bergère, 2008).

Shanghai's tradition and experience of hosting major sporting events between the mid-19th and early 20th centuries meant that the city was well prepared to host similar events after the reform and opening up of China (Ye & Du, 2017), when other first-tier domestic cities were only just beginning to stage major sporting events. This tradition of hosting major sporting events together with unique economic advantages (i.e. Shanghai's position as an economic centre and its pioneering role as one of the first cities in China to adopt a socialist market economy principle, whereby the market allocates resources to the most effective links under national macro-control) enabled Shanghai to stage various sporting events in the 21st century. Table 2.1 provides a brief summary of the events hosted in Shanghai from 2000-2020. Sporting events held in Shanghai have included one-off international sporting mega events, one-off sporting tournaments and championships, domestic sporting events, and international periodic (calendar) sporting events. The number of major sporting events staged in Shanghai on a yearly basis has also increased steadily from 2000 onwards (Table 2.2).

Table 2.1 Major sporting events staged in Shanghai during the 21st century

Years	Number	of	Significant sporting events	
	international	major		
	sporting events	S		

2000–2006	No official data	No official data
2007	21 items, 43 events	The first Snooker Shanghai Masters was held
2008	26 items, 45 events	Shanghai co-organised the 2008 Beijing Olympic Games
2009	30 items, 39 events	The first Shanghai Tennis Masters was held
2010	27 items, 38 events	The IAAF Gold Grand Prix was upgraded to the Diamond League
2011	29 items, 46 events	No official data
2012	28 items, 56 events	The F1, the Shanghai ATP 1000 Masters, the IAAF Diamond League Shanghai, and the Shanghai Masters (snooker) continued to be held in Shanghai
2013	26 items, 57 events	The World Golf Championship - HSBC Champions returned to Shanghai
2014	53 events	The world's five-star Universal Equestrian Championship and the 19th FINA Diving World Cup were held in Shanghai for the first time.
2015	70 events	The World Figure-Skating Championships became the highest-level singles ice-skating event hosted in China for 100 years. The Lawrence World Sports Awards ceremony was held in Shanghai for the first time.
2016	67 events	The IAAF Diamond League became a platform for players from all over the world to prepare for the Rio Olympics.
2017–2020	No official data	No official data

Note: Shanghai Statistical Yearbook 2006–2017

Compared with other domestic cities (represented by Beijing, in which major sporting events are often associated with political purposes) (Liu, 2014), Shanghai favours commercial sporting event hosting. Commercial sporting events occur periodically throughout the year in Shanghai. A wide variety of sporting events hosted at various times of the year can diversify the market and accommodate a broad audience. Moreover, commercial events are hosted rather

than sporting events associated with political agendas. This is for two reasons: (1) Commercial events are 'consistent with the ideals of Shanghai's commercialisation' (Wang & Ni, 2016); that is, 'excellent taste, a good reputation, high quality' (Shanghai Municipal Government, 2011b). (2) The staging of commercial events can generate multiplier effects (Huang, 2010) by stimulating consumer demand for goods and services; promoting the development of tourism, catering, advertising, media, and other industries; and boosting the development of the sport industry.

Studies have reported positive economic impacts following sporting events in Shanghai: direct revenue to the transportation, accommodation, and food sectors (Huang, 2011) and indirect stimulation of urban public transportation construction and employment (He, Zhang, Wang, 2017). The 12 most important international major sporting events held in Shanghai in 2019 directly generated about GBP £0.36 billion in economic benefits, and the corresponding tax contributions reached about GBP £90 million. The 12 events in 2019 attracted 500,000 domestic and foreign tourists to Shanghai, stimulating major consumption in the catering, accommodation, transportation, shopping, and entertainment sectors and generating GBP £0.48 billion for the tourism industry, where this sum accounts for 40% of the

respective events' total economic spillover effect (Shanghai Sport University and Shanghai Sport Bureau, 2019, 2019 Evaluation Report of Shanghai Sporting Events).

In addition, these commercial sporting events in general have been used by the Shanghai Municipal Government to promote the development of Shanghai's sport industry (Huang et al., 2014; He, Zhang, and Wang, 2017). The 2019 Evaluation Report of Shanghai Sporting Events (Shanghai Sport University and Shanghai Sport Bureau, 2019) demonstrated that the 12 most important major sporting events held in Shanghai in 2019 provided economic benefits of approximately GBP £1.224 billion for the sport industry.

2.2.3 The 12 branding major sporting events (12BMSE) and the Shanghai 2010 Expo

Shanghai has gradually formed twelve brand events among those commercial major sporting events after more than 20 years exploration. The twelve brand major sporting events were formed in three phases. From 2002 to 2006, at the first stage, Shanghai owned only two branding major sporting events, the Shanghai Tennis Master Cup [its name was in 2009 changed to the Shanghai ATP Master (tennis) 1000] and the Shanghai F1. The two major sporting events were regarded by Shanghai Government as trials and pilots of the Shanghai staging commercial major sporting events whereas the full potential of major sporting events

at that period was not appreciated. However, when Shanghai governments realised that the attention of domestic and global media on the two sporting events even surpassed that on a major political and economic event - the 2001 Shanghai Asia-Pacific Economic Cooperation (APEC) meeting, they tended to host more global major sporting events and attempted to establish the brand major sporting events (Huang, 2010).

From 2006 to 2011, at the second stage, Shanghai staged an array of global major sporting events. Four events among them, the Shanghai Masters (Snooker), the WGC-HSBC Champions (Golf), the Shanghai International Marathon (SIM), and the IAAF Diamond League were with the characteristics of commercialisation, thus were regarded as effectively enhancing the Shanghai's global reputation (Liu, 2014). The four sporting events combined with the previous two pilot events, Shanghai ATP Master 1000 and Shanghai F1, constituted a portfolio of major sporting events which was called the 'Shanghainese branding events' (Shanghai Municipal Government, 2011).

From 2011 to 2015, at the third stage, another six major sporting events added were decided by the Shanghai Government to the event portfolio. They were the NBA Global Games, GrandSlam Shanghai (dancing), the Shanghai Longines Global Champions Tour, and

the Shanghai Coordinates City Orienteering Challenge, Final Shanghai Trophy (skating) and the Tour of Chongming Island UCI Womens World Tour. The twelve brand major sporting events in Shanghai, to some extent, are not only expected to generate positive economic influences contributing to different industrial sectors' revenue's growth (Chen & Zheng, 2019), but used to help improving urban brand image of Shanghai (Liu, 2013, 2014).

Moreover, socio-cultural and political factors were also seen to the selection criteria in the formation process of major sporting event portfolio, specifically the unique feature of Shanghai's Haipai culture. Haipai (海派) culture is 'Shanghai style culture'. The term Haipai has been used since the beginning of the 20th Century to describe the product of western politics, economics, and cultural lifestyles influencing and integrating with Shanghai's original culture. From this, a true Shanghainese culture gradually evolved (Xu, 2012). A more vivid description of the term Haipai culture is 'East Meets West' culture (Zhang, 2002). The same applies for the field of sport. Haipai culture endows Shanghai with uniqueness and value amongst global first tier cities. The interviewees confirmed that the staging of carefully selected events can be a sustainable force for Haipai cultural development. The events selected by Shanghai were 'modern', 'fashionable', and 'novel' and reflected the important elements of Haipai culture and 'adhered to Shanghai's urban unique characteristics' (Bo, 2010; Li, 2012; Wang and Ni, 2016).

Shanghai 2012 Expo was hosted on both banks of the Huangpu River, from 1st May to 31st October 2010. It is another international mega cultural and technology event held in China after the 2008 Beijing Olympics and the China's first registered world exposition. This Expo generated significant impacts in the city's socioeconomic development. For example, the 2010 Shanghai World EXPO reportedly attracted 73 million visitors and made a profit of GBP £5.92– £7.4 billion (BBC Travel, 2011). The EXPO was expected to act as a catalyst for Shanghai's economic and technological development (e.g., high-tech industries settled in the Expo Park after the event; new energy vehicles, solar power generation, LED, etc. transformed and updated in industry parks of different districts), and as economic glue for the whole Yangtze River Delta area (Shanghai Science and Technology Commission, 2010). Through close encounters with one another and with different cultures, visitors—both foreign and Chinese to the Shanghai EXPO had the opportunity to recognise their differences and learn to be openminded and modest (Kim.S et al., 2012).

The theme of the Shanghai 2010 Expo is 'Better City – Better Life', which is in line

with the city's development goals and reflects the needs and life pursuits of residents in Shanghai. The successful hosting of the Shanghai World Expo has conveyed its theme and provided a broad space for the development of sporting events, because sports is a vital part of urban life and a significant indicator of the quality of life of citizens. As the importance of sports shown in policy documents that 'Sports makes the city more colourful' and 'Sports make life healthier" (Shanghai Municipal Government, 2006, 2012).

2.2.4 Policy context review for major sporting events hosted in Shanghai

The analysis in section 2.2.1 indicates that the major sporting events hosted in Shanghai have been influenced by western culture and lifestyles. The Shanghai F1 provides the best exemplar of an event that has contributed to the socioeconomic development of the whole city (Liu, 2010, 2014). The following discussion provides a review of relevant policies and explains how these policies shaped the sporting events agenda from 1978 to 2018. The history of sporting events and relevant policy development can ostensibly be separated into three distinctive stages: the first stage (staging of the first major sporting events, 1978–1991), the second stage (exploration and gradual development of major market-oriented sporting events, 1992–1999), and the third stage (using major sporting events to achieve city branding and urban

development goals, 2000-present).

First stage: staging of the first major sporting events (1978–1991)

Although Shanghai started to stage major sporting events in the middle of the 19th century, it ceased to do this for more than 100 years due to various wars (the Anti-Japanese War [1937– 1945] and the KMT-CPC civil war [1945-1949]) and the failure of domestic reforms (the Great Leap Forward [1958–1962] and the Cultural Revolution [1966–1976]). Shanghai recommenced the staging of major sporting events after the implementation of China's reform and opening-up policies, when the city proceeded to recover economically, creating advantageous conditions for the hosting of major events. Specifically, because of its economic advantages, Shanghai was one of the first cities to adopt a socialist market economy principle (whereby the market allocates resources to the most effective links under the premise of national macro-control). Since 1979, Shanghai has continued to be at the forefront of the marketisation process in China, and it is often the location for the piloting of innovative and flexible policies and governmental reform.

The term 'socialist market economy' was proposed by Chairman Zemin Jiang at the 14th National Congress of the China's Communist Party of to describe its economic

developmental model and economic system. Although this economic system was described by many western commentators as a term of 'state capitalism' (Bremmer, 2008; Gabusi, 2017; Musacchio, 2014), there are two main differences between the two terms.

First, states undertake different roles in 'socialist market economy' and 'state capitalism' respectively. In the system of socialist market economy, a state undertakes a role to conduct macro-economic regulatory which only works when the overheated economy phenomenon happens, such as controlling monetary inflation when raw materials in short supply (Ding, 2009; Sigely, 2006). While in the system of 'state capitalism', a state controls all business and commercial economic activities in which the means of production are nationalised (Gabusi, 2017; Musacchio, 2014).

Second, state-owned enterprises played different roles in two systems. In the socialist market economy, although state-owned enterprises (established by local or central governments) are 'strategic sectors' of the national economy, mainly consisting of industries of finance, banking, chemistry, machinery, electronic and petroleum etc., other categories of enterprises, such as private enterprises and joint state-private enterprises are also significant parts of commercial activities (Chan, 2009; Sigley, 2006). All the enterprises need to compete

to acquire resources and benefits under the principle of marketisation (elements of supply and demand play dominant roles in the allocation of capital and production) (CPC Central Committee, 1999). However, in state capitalism, state-owned enterprises occupy the absolute position of commercial activities, control the capital accumulation process, and centralise management and labour (Bremmer, 2008). State-owned enterprises render a country act like a huge corporation, extracting surplus value from labour to conduct investment in further production (Binns, 1986). To sum up, the socialist market economy is suitable to be applied in this study, for Shanghai/China supports all categories enterprises (including state-owned sporting-events operation companies and SMEs in different industries) to compete according to the principle of marketisation. China's central government and Shanghai government do not interfere with the commercial operation of the major sporting events and the profit-making activities of local SMEs.

However, before 1991, Shanghai had no autonomy in its sport-related decisions, which continued to be directly approved and signed off by the central government. The 5th Shanghai National Games in 1983 was approved by the State Council, which commissioned Shanghai to build and renew more than 30 stadiums. These high-quality stadiums were the locations for

Shanghai's staging of various major sporting events. In 1984, the 10th Asian Women's Basketball Championship was held at the Shanghai Indoor Stadium and became Shanghai's first intercontinental championship for an individual sport to be held after New China (1949) was founded. The 4th Diving World Cup held at the Shanghai Swimming Centre in 1985 set a precedent for Shanghai to host a world championship for an individual sport. Subsequently, Shanghai received approval from the State Council to host a series of competitions (detailed in Table 2.2).

Table 2.2 Major sporting events staged in Shanghai (1978–1991)

Years	Major sporting events
1981	The 1st Shanghai Marathon
1983	The 5th National Games
1984	The 10th Asian Women's Basketball Championship
1985	The 4th Diving World Cup
1986	The 4th Asian Women's Volleyball Championship
1991	The 1st Asian Youth Rowing Championships

Second stage: Exploration and gradual development of major market-oriented sporting events

(1992–1999)

At this stage, Shanghai started to adopt a market-oriented approach rather than a government-oriented approach to major sporting events. This transformation was determined by China's macroeconomic policy: The goal of establishing a socialist market economy system' was confirmed at the 14th National Congress of the CPC. Shanghai embodied the principle of marketisation in its staging and operation of major sporting events.

Specifically, Shanghai assigned the authorities of management and operation of major sporting events to governments and to social organisations respectively. The Shanghai Municipal Government bided for and hosted events, and the Shanghai Sporting Events Centre and sporting events operation companies commercially operated events. For example, the 1993 First East Asian Games held in Shanghai created a precedent for the market-oriented staging of major sporting events. The social fundraising for this event by the Shanghai Sporting Events Centre and sporting events operation companies exceeded GBP £33.34 million from social sponsorship, patented product sales, broadcasting rights sales, and lottery coupons (Tang, 2010).

The use of marketisation in Shanghai staging and operation of major sporting events was significantly different with Shanghai's previous ways in staging major sporting events. Before 1992, Shanghai adopted a principle of 'socialism' to stage and operate the major sporting events. More explicitly speaking, the government decided to bid for the major sporting events, operated the events by using civil fiscal revenue without sponsorship from societies and private companies, dominated the allocation of tickets revenue and undertook the risk of debts as a result of hosting the events by its own (Tang, 2010). Using this approach to staging and operating the major sporting events cause the waste of social resources (Tang, 2010) and the rigidity of the operating the major sporting events (Shanghai Municipal Government, 2002), which impeded the ability improvement of Shanghai on staging more major sporting events (Shanghai Municipal Government, 2002).

In addition, policy for Shanghai's major sporting major events was documented and standardised at this stage. The details were provided in the 9th Five-Year Plan for Sport Development in Shanghai (Shanghai Municipal Government, 1996), including two notable features. First, this plan proposed for the first time that Shanghai would "actively bid for the hosting of international comprehensive major sporting events or world individual

championships in order to further expand the international popularity of Shanghai as a metropolis". Second, for the construction of high-quality sport facilities, this plan proposed that

the construction of Shanghai stadiums should contribute to the creation of a modern international metropolis. In addition to constructing an 80,000-capacity stadium and international tennis centre, Shanghai is striving to complete the basic sport facilities necessary for an international metropolis by 2010. (Shanghai Municipal Government, 1996)

The two aforementioned proposals confirm that Shanghai wished to increase the city's international influence by hosting major sporting events.

The third proposition the 9th Five-Year Plan for Sport Development in Shanghai was Shanghai's intention to use major sporting events to drive the development of the sport industry, thereby driving sport-related consumption. This included 'vigorously developing the sporting events market, organising and attracting fans, improving ticket sales methods, and gaining support from enterprises and fans' as well as 'improving the contracting methods for sport venues', to which end, sport venues would be required to 'diversify their operations, increase revenue and reduce expenditure, and broaden the channels for operating revenue'.

The development of major sporting events during the 9th Five-Year Plan expanded the popularity of Shanghai and provided a basis for the city's socioeconomic development of that in the 21st century. Specific achievements included the successful hosting of the 8th National Games, generating GBP £78 million (Shanghai Sport Yearbook, 1999), and of the 11th World Middle School Games, the World Women's Volleyball Grand Prix Finals and the Shanghai Marathon. Shanghai also built or rebuilt 38 venues with a total investment of GBP £0.67 billion Yuan (Tang, 2010). Among these were the Hongkou Football Stadium, which is the leading professional football stadium in China and, indeed, Asia, covering an area of 56,000 m² and a building area of 72,500 m². These types of venues attract companies and organisations into the industry chain for major sporting events, providing experience for the subsequent marketing and industrialisation of major sporting events (Tang, 2010).

Third stage: Using major sporting events to achieve city branding and urban development goals (2000–present)

After entering the 21st century, Shanghai set new goals in relation to the hosting of major sporting events: to host a series of high-profile international major sporting events and to become a global first-tier city as well as a first-tier sport city (Ye and Du, 2017; Yu, Xue, and

Newman, 2018). Global first-tier cities refer to cities that have a direct tangible effect on international socioeconomic affairs (Saskia, 2006) and are mainly evaluated by their financial power and high-technology infrastructure (Forbes.com, 2014; The Diplomat.com, 2015). Global first tier cities generally include 7 to 25 cities in different ranking systems among which Global Cities Index (let by KEARNEY) and Global Power City Index (let by Institute for Urban Strategies of Japan) are mostly cited by researchers and institutes in various research areas. In the two indexes, New York and London rank in top two positions from 2008 to 2021; Shanghai ranks in 10-22 positions from 2008 to 2021. The evaluation criteria in this index include seven dimensions: economic and business activity, political engagement, information exchange, human capital, environment and livability, accessibility and cultural experience. New York, London and Shanghai all have a comprehensive range of industry types, but each has its own focuses. New York has indisputable strengths in Economy and Research & Development (Institute for Urban Strategies, 2021). London is one of the major financial centre in the world with the Europe's largest concentration of higher education institutes (Institute for Urban Strategies, 2021). Shanghai is a global centre for economy and finance, manufacturing (KEEARNEY, 2021) and has the world's busiest container port (Seatrade.com, 2020).

In 2002, the Shanghai Municipal Party Committee and Municipal Government Decision Regarding the Acceleration of Sport Development in Shanghai set the goal of making Shanghai a first-tier Asian sport city (Shanghai Municipal Government, 2002), and Shanghai gradually extended its goals during the subsequent 20 years.

The goal in the 11th Five-Year Plan for Sport Development in Shanghai (2006–2010) was for Shanghai to continue developing into a first-tier Asian sport city alongside its transformation into an international metropolis; the 12th Five-Year Plan for Sport Development in Shanghai (2011–2015) reinforced the goal for Shanghai to become a 'globally famous sport city' as it transformed into a modernised socialist global city; the 13th Five-Year Plan for Sport Development in Shanghai (2016–2020) pledged to make Shanghai a 'capital of international sporting events'.

As well as continuously refining its urban development goals, Shanghai set enhanced requirements for the selection of major sporting events. The requirements were that these events be associated with "broad impact, high profile and exceptional benefits" (Shanghai Municipal Government, 2011) and with "marketisation, internationalisation, and specialisation" (Shanghai Municipal Government, 2016). In addition, Shanghai aimed to select

and nurture independent 'branding events' (Shanghai Municipal Government, 2006, 2011, 2016) befitting an international metropolis from among the high-quality major sporting events available. During the period covered by the 11th Five-Year Plan, six major sporting events were selected as the city-branding events for Shanghai; during the subsequent period covered by the 12th Five-Year Plan, another six major sporting events were added to the series of BMSE.

In addition to reinforcing the city's image as an international metropolis, Shanghai's major sporting events also provided 'leading, spillover, and multiplier effects' (Shanghai Municipal Government, 2016). Specifically, it emphasised 'strengthening the linkage between sporting events and commercial resources' (Shanghai Municipal Government, 2016) as well as 'promoting quality of life for citizens and sport-related consumption' (Shanghai Municipal Government, 2011). In order to accomplish the relevant goals, the Shanghai Municipal Government proposed some measures, including 'improving the market system for major sporting events through development of the sport intermediary market, the sport media market, the sport advertising market, and the market(s) for sporting culture and sport products...supporting local sporting-event-related enterprises' (Shanghai Municipal

Government, 2016).

To more explicitly represent the pursuit of the aforementioned goals for Shanghai's major sporting event hosting, Table 2.3 outlines the measures adopted and the results achieved during the 11th, 12th, and 13th Five-Year Plans.

Table 2.3 Sport development policies related to major-sporting-event hosting in Shanghai

	11th Five-Year Plan	12th Five-Year Plan	13th Five-Year Plan
Goals	City development:	City development:	City development:
	•Transform Shanghai into an international metropolis	•Transform Shanghai into a socialist international metropolis	•Complete the transformation of Shanghai into a socialist international
	Major sporting event development:	Major sporting event	metropolis
	•Continue to create an	development:	Major sporting event development:
	•Cultivate major Shanghai-branded sporting events	•Create a globally famous sport city and enhance the international influence of Shanghai's major sporting events	•Create a world-famous sport city by 2025 and a capital for international sporting events
		•Cultivate major Shanghai- branded sporting events	•Develop marketisation, internationalisation, and specialisation to to identify and implement top-level major Shanghaibranded sporting events that suitable for international metropolises.
			•Exploit the spillover and multiplier effects of major sporting events, and strengthen the linkage between sporting events and commercial resources
Approaches	•Speed up the construction of functional facilities, and renovate venues such as the	•Form an event- management team and professional event-	•Attract more influential, market-efficient events to Shanghai
	Shanghai Stadium and the Hongkou Football Stadium	management companies, and develop the economic	•Enhance Shanghai Stadium, the Oriental

	•Cultivate major international sporting events such as the F1 according to the principles of excellent taste, brand selectivity, and high quality	sector for (tourism from) public events •Cultivate major international sporting events such as the UCI Women's World Tour according to the principles of excellent taste, brand selectively, and high quality	Sports Centre, and Jiangwan Stadium; transform these venues into a comprehensive sport city for sporting events; and incorporate fashion retails, entertainment, exhibitions, tourist attractions, and so forth •Improve the markets linked to major sporting events by developing the intermediary sport market, the sport media market, the sport advertising market, and the sporting cultural and product marketsupporting the development of medium, small, and micro sport enterprises
Results	Constructed the modern, comprehensive, and multifunctional Oriental Sports Centre, Baoshan, Pudong Sanlin, and other sport centres; renovated sport facilities such as the Shanghai Stadium, Hongkou Football Stadium, Xuhui Swimming Centre, Shanghai Swimming Centre, and Chongming Swimming Centre Shanghai formed six major commercial Shanghai-branded sporting events	Hosted the 14th FINA World Championships, ISU Figure Skating World Championships and Short Track Speed Skating World Championships, and other major international sporting events Shanghai formed 12 major commercial Shanghai- branded sporting events	Not published in official documents.

Several years after the implementation of the 13th Five-Year Plan, the contents of the three important policy documents related to the hosting of major sporting events centred around the topic of "building a world-famous sport city and creating a capital for international sporting events". These contents were consistent with the previous policy, but the goals had been

upgraded. The Shanghai Master Plan 2017–2035 (Shanghai Municipal Government, 2018) emphasised major sporting events as part of the strategy for city development; namely, 'building a remarkable global city'. The Three-year Action Plan for Building an International Sporting Event Capital 2018–2020 (Shanghai Municipal Government, 2018) and the Outline for the Establishment of Shanghai as a World-Famous Sport City (2020) indicated that positive economic effects from major sporting events should be continually pursued. In particular, positive 'events effects' in the fields of catering, accommodation, tourism, conventions and exhibitions, cultural creativity, media, advertisement, elite sport, and mass events were to be improved. The development of numerous SMEs—particularly sporting-event SMEs with flexibility, diversity, and market potential—were to be supported.

2.3 The Shanghai F1: Background, history, and policy context

2.3.1 Background and development history of the Shanghai F1

The Chinese Governments originally planned to host the F1 in Zhuhai of Guangdong Province, for Zhuhai started to host motorsport races on its street circuit from 1993. The Zhuhai International Circuit was designed by Kinhill Engineers Pty Ltd-an Australian company, the same company which designed the Adelaide Formula One circuit and constructed from 1996.

This circuit was originally added to the calendar of 1999 F1 World Championship but ultimately cancelled, because it failed to satisfy specialized track standards set up by the FIA (Zhuhai International Circuit, 2017). However, with the active bid of the Shanghai Municipal Government and the support of the China's central governments, the F1 was eventually held in Shanghai from 2004.

In May 2001, the Shanghai Municipal Committee and the Shanghai Municipal Government decided to bring the F1 to Shanghai because staging the F1 ostensibly represented an advanced phase in the city's economic development (Huang, 2010). To satisfy criteria that the Fédération Internationale de l'Automobile (FIA) had set for cities to stage the F1, the Shanghai Municipal Government conducted the Shanghai International Circuit Project, which ensured that a high-quality international circuit could be constructed. The establishment of the Shanghai International Circuit Co., Ltd was for the purpose of maintaining and managing the circuit.

The circuit and related projects covered an area of 5.3 km², including 2.5 km², for racing and 2.8 km², for a multipurpose development area containing a commercial expo and a cultural and entertainment area. The racing area was used not only to host F1 but also for other

automobile competitions such as the MotoGP China Grand Prix, the V8 Touring Car Series, the A1 World Cup Grand Prix, and the National Auto Venue Championships. The multipurpose development area was equipped for the main functions of sport, leisure, tourism, exhibitions, advertising, culture, and entertainment. This was an attempt to develop an automobile theme park integrating the aforementioned cultural elements to promote the automobile industry.

The Shanghai International Circuit is located in the northeast of Anting Town, Jiading and received a total government investment of ¥5 billion [¥2.6 billion (GBP £0.315 billion) for the construction of the international circuit, ¥1.2 billion (GBP £0.15 billion) for seven years of hosting rights [the registration fee increased by 40% per year, and ¥1.2 billion (GBP £0.15 billion) for seven years of TV broadcasting rights] for construction and maintenance of the circuit as well as for the staging of the F1 during the initial seven-year contract (Sina News, 2008).

The huge costs for the construction and staging of the F1 were estimated to be equivalent to 10 years of potential revenue totalling at least GBP £75 million per year (Sohu Sport.com, 2008). So far, no official data exist to establish whether costs have been covered. However, mainstream media reports have indicated that the operation of the Shanghai F1

International Circuit has generated profits mainly from two sources: first, from total ticket revenue of approximate GBP £22.5 million per year from 2007 to 2020 (for 200,000 spectators paying an average ticket price of GBP £112.5) (Racing-china.com, 2020) and second, from other automobile racing competitions, corporate activities, and civic activities hosted at the circuit (Racing-china.com, 2020). Therefore, Shanghai's citizens have gradually come to recognise the potentially positive effects of the Shanghai F1 (Liu, 2014).

The long-term viability of the Shanghai F1 fluctuated from 2004 to 2015, and only started to rise steadily from 2016. In 2004, all tickets for the Shanghai F1 were sold out (150,000 tickets) because audiences, especially the foreign audiences attended on site due to curiosity of the F1 held for the first time in China (Sina.com, 2005). However, in 2005, F1 ticket sales dropped, and many tickets were donated to local Universities and enterprises because of the lack of racing culture in Shanghai (Sina.com, 2005). In the subsequent 2006 and 2007, although the Shanghai F1's tickets revenue increased slightly, it had not been profitable (Sohu.com, 2008). In 2008 and 2009, Shanghai F1 started to provide customized services to increase the extended value of parking, catering, souvenirs, etc (Sohu.com, 2008). However, ticket sales continued to decline in these two years, mainly due to the global financial crisis.

Shanghai F1 had to made considerable adjustments to fares, with a maximum reduction of 46% (Sohu.com, 2009). Shanghai F1 ultimately became profitable in 2016 after cultivation of 12 years (YTsports, 2016). Watching the F1 matches has gradually become a habit of Shanghai and domestic fans every April (YTsports, 2016).

The Shanghai F1 drove the economic development of related industries, such as the tourism industry, to provide economic benefits and job opportunities. An average number of approximately 50,000 overseas visitors came for the Shanghai F1 each year and stayed for an average of three days, spending approximately GBP £12 million on accommodation, catering, transportation, and other commerce (Li, 2005). Similarly, the investment of approximately GBP £1.62 billion created by the F1 was injected into tourism and other tertiary industries. The event also helped to generate more than 30,000 jobs, directly and indirectly (Wang, Z. & Wang, F., 2005).

Compared with other major sporting events in Shanghai, the F1 is unique in two respects: First, the F1 aimed for city branding to enhance Shanghai's global image. As the mainstream social media sohou.com (2012) stated,

more and more people know about Shanghai because of the TV broadcasting of F1 matches, which gives potential visitors a good impression of Shanghai. After years of accumulation, the F1 has become the city identity card of Shanghai.

Second, the Shanghai F1 has contributed to research and development (R&D) in the racing industry due to the large sums of money and advanced technologies involved (Sports Sina, 2005). Nowadays, the F1 is more than just a sport. The importance of R&D in the F1 is far greater than car teams' daily training (Lin, 2004). The Shanghai F1 not only contributes to R&D in the racing industry but contributes to the development of the whole automobile industry in Anting Automobile City (Xu, 2008).

2.3.2 Policy context review of the Shanghai F1

In March 2003, the Shanghai Municipal Government and the General Administration of Sport jointly reported to the State Council that Shanghai wished to host the 2004 F1. Shanghai then began a series of F1-related construction projects. The Shanghai F1 International Circuit was included among the 2004 Major Urban Construction Projects. The F1 developed in a similar manner to other major sporting events in Shanghai Table 2.4 provides details relating to the F1 in various policies.

Table 2.4 Policy discourse relating to the F1 evidenced in Shanghai's sport policies

Document	Year	Proposals relating to the Shanghai F1
The 11th Five-Year Plan	2006	•Host the Shanghai F1.
for Sport Development in		
Shanghai		
The 12th Five-Year Plan	2011	•Carefully cultivate F1 to create Shanghai city
for Sport Development in		branding for the event.
Shanghai		•Exploit the F1, an important sporting event in
		Jiading District, to actively promote the
		development of Jiading Motor Sport City.
The 13th Five-Year Plan	2016	•Consolidate the formation of 12 major
for Sport Development in		Shanghai-branding major events led by the F1.
Shanghai		
Plan for the Development	2017	•Improve the F1's operational capacity and
of the Shanghai Sport		comprehensive benefits.
Industry		
Three-year action plan for	2018	•Enhance F1 to 100-year-old Shanghai BMSE
creating an international		with an outstanding reputation.
sporting event capital		
2018–2020		

2.4 Shanghai's small and medium-sized enterprises: Features, governance structure, and

policy context

In the seven-year policies released between 2013 and 2020, the proposals for major sporting events mentioned that governments can use the events to promote the economic development of sport-related SMEs. However, this research must also clarify policies on the support and development of Shanghai's SMEs as well as the extent to which these SMEs can be supported

and funded; this helps with identifying whether the economic growth of SMEs is a result of spillover effects from major sporting events or government funding.

No policy items specifically addressed Shanghai's major sporting events before the 21st century, and, in the same manner, no specific policy items addressed Shanghai's SMEs before the 21st century. At that time, to support SMEs, the Shanghai Municipal Government established the Shanghai Coordination Office for Promoting the Development of SMEs. Various districts and counties also established special SME development management institutions. These institutions were mainly responsible for proposing practical and beneficial programs to support SMEs. These institutions are authorised by the government to communicate and negotiate with commercial banks or other financial institutions for SME funding (Ye, 2016).

In 2003, the National People's Congress (NPC) formally promulgated and implemented the Law of the PRC on the Promotion of SMEs, ending an era in which SMEs had received no official guidance, support, or services. The document comprehensively and systematically formulated specific policies for the development of SMEs in terms of technological innovation and financial support as well as standardising the development and operation mechanisms of

SMEs at all levels of government. Subsequently, provincial and municipal governments and departments had to follow specific laws to formulate regulations and policies for SME development.

In 2008, the Shanghai Municipal Government issued Several Opinions on Accelerating the Development of Shanghai's Private Sector. The respective opinions indicated that SMEs, as the main carriers of the Private Sector, would be valued and supported by the government; that SMEs should be encouraged to embody 'professionalism, innovation, specialism, and excellence/distinction; and that the government would explore the possibility of guidance funds for start-up business in Shanghai. However, the focus was on technology-innovation enterprises rather than catering, tourism, and sport-related enterprises.

This support imbalance persisted for nearly 10 years until 2018. Nevertheless, every new policy issued increased support for SMEs and proposals or guidance on governmental funding for SMEs (Table 2.5). Table 2.5 indicates that government funds were unavailable to cultural and entertainment SMEs until 2018.

Table 2.5 Shanghai's policies supporting the economic development of SMEs

Policy Document	Year	Measures and support proposed	Publisher
Implement the State	2010	 Clearly state for the first time that 	Shanghai Municipal
Council's opinions		the proportion of funding allocated to	Government
regarding further SME		support SMEs should not be less than	
development		one-third of the funding for all	

		enterprises.	
Shanghai's Regulations on Supporting the Development of SMEs	2011	•Establish a loan risk compensation mechanism for SMEs.	Shanghai Municipal Commission of Economy and
		 Encourage financial institutions to 	Information Technology
		provide loans to SMEs that invest in	
		state-sanctioned projects.	
		•Provide tax reductions and exemptions to SMEs that invest in	
		state-encouraged projects.	
Shanghai's Three-Year Action Plan for Developing SMEs According to the Principles of 'Professionalism, Innovation, Specialism, and Distinction' (2015–2017)	2015	•Support SMEs that embody the principles of 'professionalism, innovation, specialism, and distinction' to provide them with access to direct financing within the capital market. (precisely referring to the top-ten-ranked SMEs in their respective market segments).	Shanghai Municipal Commission of Economy and Information Technology
Measures for the Management of Special Funds for Shanghai's SMEs	2017	•Include special funds in the municipal fiscal budget and in the departmental budget of the Shanghai Municipal Commission of Economy and Information Technology.	Shanghai Municipal Commission of Economy and Information Technology
		•Support the development of SMEs with 'new technologies, new industries, new models, and new business formats'. The funding should not exceed 30% of the total project investment, and the maximum funding for each project should not exceed GBP £0.36 million.	
Venture Capital Guiding Fund of Shanghai	2017	•Guide private capital to invest in Shanghai's core industrial areas, particularly strategic emerging industries, and in start-ups at the early and mid-term entrepreneurial stages such as the seed stage and the growth stage.	Shanghai Municipal Government
Measures on the Use and Management of Funds for Guiding the	2018	•Support the construction of various service-industrial parks.	Shanghai Municipal Development and Reform Commission
Development of		•Support the development of service	
Shanghai's Service		trade, service outsourcing, and	
Industry		cultural and creative SMEs.	
		•Support projects with a total investment of less than GBP 1.2	

		million through district-level guidance funds. After the guidance fund support plan is issued, provide the first payment (not exceeding 40% of the total support amount). Allocate remaining funds after the project is completed and has passed the final check.	
Regulations for Shanghai's Promotion of SME Development (update version)	2018	 Offer entrepreneurs in the city loan guarantees and interest discounts from the Service Department for Guidance on Starting a Business in local districts. Offer rent subsidies to small enterprises established for less than 18 months in the city from the local districts' Service Department for Guidance on Starting a Business. 	Shanghai Municipal Commission of Economy and Information Technology
22 Measures for Shanghai to support stable and successful SME development	2020	 Offer reduction of or exemption from value-added tax for small-scale taxpayers; exemption from service value-added tax on public transportation, catering and accommodation, tourism and entertainment, culture and sport, etc. (The policy is extended to the end of 2020). Allow postponement of income tax payments by small and low-profit enterprises until the first filing period in 2021. 	Shanghai Municipal Commission of Economy and Information Technology

2.5 Distribution of SMEs in Shanghai

The business activities of Shanghai's local SMEs (except for individual microenterprises) are currently mainly concentrated in various industrial parks equipped with infrastructure that attracts SMEs and the associated talent, capital, and technology. Enterprises are enabled to integrate, reorganise, and share resources when operating in clusters (Huang, 2013; Lei, 2017).

Different districts have their own primary industry types according to the types of

industrial parks established there. In Shanghai, Pudong New District mainly contains technological innovation parks, among which the prominent Zhangjiang High-tech Park is home to more than 1,000 high-tech SMEs (Zhang, 2013); Minhang District is the main battlefield of Shanghai's manufacturing industry parks, where advanced manufacturing is accommodated (Ma, 2020; Lei, 2017); and the focus in Jiading District is on the automobile manufacturing industry and the accelerated construction of a world-class automobile industry centre. Industrial parks in other districts also focus on particular high-tech industries (Ma, 2020; Lei, 2017).

Jiading District's industrial parks are noteworthy because two are ranked among Shanghai's top five (Table 2.6) industrial parks in terms of comprehensive productivity, which is quantified as the various productivity of an industrial park (e.g., R & D, technical services, productive services) combined. Jiading Industrial Park and Jiading Automobile Industrial Park have more than 500 SMEs mainly aimed at the industries for integrated circuits and the Internet of Things (IoT), new energy vehicles, and automobile intelligence.

Table 2.6 Shanghai's key industrial parks

Industrial parks	Establishment	Leading industries
Shanghai Zhangjiang	1991	Electronic information, biomedicine,
High-tech Park		photoelectric integration

Caohejing New-tech Park	1988	Electronic information, new materials,
		biomedicine
Jiading Industrial Park	2006	Auto parts, machinery, electronics
Shanghai Qingpu	2003	Precision machinery, electronic information,
Industrial Park		printing
Jiading Automobile	2006	Auto parts, machinery, electronics
Industrial Park		

Source: Quote from Ma (2020), Analysis on agglomeration level of high-tech enterprises in Shanghai industrial parks, Industrial Innovation, issue 23

Anting International Automobile City is located in Jiading Automobile Industrial Park, which has a fully concentrated automobile industry chain and more than 200 high-tech enterprises (Ma, 2020). In many high-tech SMEs, information, technology, and experience are exchanged among employees from different enterprises through the diffusion of knowledge and technology (Ma, 2020). Production costs have been reduced for the entire automobile manufacturing industry cluster in the region, and competitive advantages have been achieved (Lei, 2017; Ma, 2020,).

One category of park that does not rank highly among Shanghai's industrial parks but nonetheless merits attention is the university industrial park. These types of parks are usually jointly invested in by the government, enterprises, and universities, but private SMEs are the primary source of development (Dong et al., 2019; Ma, 2020).

The university industrial park in China was first established in 1999 after the Ministry

of Science and Technology and the Ministry of Education jointly organised the University Industrial Park Development Strategy Conference. The idea for its construction originated from Stanford Industrial Park in the United States, which famously developed into Silicon Valley in the 1950s, and an upsurge in university industrial parks subsequently occurred in various countries (Dong et al., 2019; Fang, 2017).

In China, Shanghai has been a leader in terms of university industrial park development. At present, Shanghai has 13 national-level university industrial parks, more than any other city except Beijing (15) and Jiangsu (15). Shanghai's university industrial parks cover an area of 653,000 m² in total and contain more than 1,400 SMEs (Dong et al., 2019). Among the 13 national-level university industrial parks, 7 are located in Yangpu District, where the main focus is on technological innovation.

One of the seven university industrial parks, the National Shanghai Sport University Science and Industrial Park, is distinguished by its focus on sport and the sport industry and was China's first sport-focused national university industrial park. The sport industry was at the core of its development (sport-related SMEs account for 70% of all SMEs in this park), but this was accompanied by the development of sport-related cultural and technological industries

(Zhang, 2014). According to data provided by the National Shanghai Sport University Science and Industrial Park, in January 2019, the number of registered SMEs in the park exceeded 680 (Zhang, 2019). Figure 2.4 shows the steady growth in the number of companies in the park from 2009 to 2018.

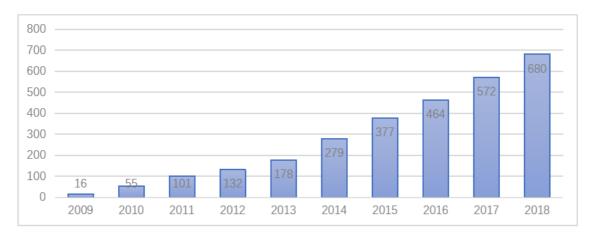


Figure 2.4 Number of Small and medium-sized enterprises in the National Shanghai Sport University Science and Industrial Park

2.6 Conclusion

This chapter reviews China's governance structure; the background, history, and policy contexts of major sporting events hosted in Shanghai and of the Shanghai F1; and the features, policy contexts, and distribution of SMEs in Shanghai. Several points emerge from the review:

(1) A strictly ordered process exists for the assignment and implementation of policies for sport, major sporting events, and SMEs under the four-tier governance structure in Shanghai. (2) Shanghai has the premium geographic advantages on large-scale city construction; Shanghai's

unique fusion culture is featured with open, creation fashion and a strong merchant character in society; and Shanghai was the first city in China to host international major sporting events. In the 21st century, Shanghai's unique economic advantages enabled it to stage various major sporting events, yielding induced effects on the socioeconomic development of the city. During the period covered by the 12th Five-Year Plan for Sport Development in Shanghai, Shanghai hosted 12 major Shanghai-branded sporting events of a commercial nature and characterised by features unique to Haipai culture (3) Policies for funding the development of Shanghai's SMEs were introduced in 2008 to support technological innovation enterprises rather than catering, tourism, and sport-related enterprises. Shanghai's SMEs (except for individual microenterprises) currently conduct business activities mainly in clusters within industrial parks. Two of Jiading District's industrial parks—which mainly supply auto parts, machinery, and electronics and contain more than 500 SMEs—rank among Shanghai's top five industrial parks in terms of comprehensive productivity. The National Shanghai Sport University Science and Industrial Park, which was China's first sport-focused national university industrial park, achieved a steady growth in the number of SMEs in the park.

Taken together, these points provide an understanding of the overall context for

Shanghai's staging of major sporting events, the Shanghai F1, and local SMEs, and they inform the survey questions and interview guide introduced in later chapters. In addition, to facilitate analysis and evaluation of the Shanghai F1 event's effects on the socioeconomic development of SMEs, the context chapter includes political resources, knowledge-based resources, and physical resources as Inputs on the theory of change map.

The next chapter provides a review of literature on the socioeconomic impacts of major sporting events, the F1, and SMEs and on the relationship between the hosting of major sporting events and SMEs both in China and globally. This review includes relevant empirical and theoretical studies.

Chapter 3: Theoretical Framework

This chapter introduces two evaluation theories applied in this study. One is theory of change, and the other is contribution analysis. We introduce four aspects of theory of change: (1) development and application of theory of change in social research, (2) theory of change elements, (3) methods for developing a theory of change, and (4) the criteria for an accurate theory of change. A theory of change was applied in this study to explore how the hosting of the Shanghai F1 affected the socioeconomic development of local SMEs. However, the robustness of causal links underlying outcome/impact chains is problematic to test in a theory of change. We apply contribution analysis to answer the question 'To what extent has a programme caused the outcomes/impacts?' Three aspects of contribution analysis are introduced in this chapter: (1) the stages involved, (2) the levels into which analysis is divided, and (3) advantages and disadvantages of the approach.

In addition, we rationalise combining a theory of change and contribution analysis by demonstrating how they fit into our research paradigm and research design and by comparing them with two other evaluation theories to establish which advantages render them suitable for this research.

3.1 Theory of Change

Theory of change is a theory-based approach to the evaluation of policies and programmes (Blamey & Mackenzie, 2007). It is used to explore how complex programmes alter outcomes through actions in specific contexts (Blamey & Mackenzie, 2007; Fullbright-Anderson, Kubisch, & Connell, 1988; Laing & Todd, 2015). It has been widely used to plan, implement, or evaluate social changes at various levels—for individuals, organisations, and communities (Fullbright-Anderson, Kubisch, & Connell, 1988).

3.1.1 Theory of change development and application in social and sport research

The theory of change was first used by Kirkpatrick (1959, 1960) to evaluate the impacts of training programmes on participants. Kirkpatrick (1976) proposed four levels of training outcomes in his training evaluation model: reaction, learning, behaviour, and ultimate results. For the evaluation, he first confirmed the ultimate targeted outcomes, then worked backwards to establish whether behaviours produced ultimate outcomes, then worked backwards again to establish whether the learning produced behaviours, and finally examined whether participants' reactions produced learning.

This evaluation approach was broadly applied and subsequently developed in various

social research areas (Stufflebeam, 1967; Suchman, 1967; Hall and O' Day, 1971). For example, Suchman (1967, p. 55) argued that programme evaluation should explicitly explore a "chain of objectives", and Stufflebeam (1967) proposed the CIPP (Context, Input, Process, and Product) model for evaluating education programmes, which incorporated context as a major part of an intervention. Hall and O'Day (1971) suggested that, in safety system evaluation, intermediate outcomes (preceding ultimate outcomes) should be used in causal chains. The role of intermediate outcomes is important because not every input leads directly to ultimate outcomes. An intermediate outcome is a bridge connecting inputs and ultimate outcomes. The consistency between achieved intermediate outcomes and achieved ultimate outcomes is a criterion to verify the strength of cause—effect relationships.

The theory of change experienced a first boom in the 1980s. Notable researchers concentrated on the challenges of evaluating complex community initiatives (Chen & Rossi, 1980, 1983; Weiss, 1995). Weiss (1995) generalised the term 'theory of change' as a pattern depicting a series of assumptions explaining stages of changes that lead to goals in the long-term as well as the relationship between throughputs and outcomes at stages of the change process. The theory of change approach has subsequently been widely applied, specifically in

community change programmes (Bolton et al., 2018; Connell et al., 1998; Kubisch et al., 2010; Mason & Barnes, 2007), public health (De Silva et al., 2014; Breuer et al., 2016) and international development (Stein & Valters, 2012; Jackson, 2013). Governments of various countries have applied theory of change in various manners. For example, the US government uses theories of change to examine how changes result from community initiatives and how researchers in this context to select relevant stakeholders, such as citizens, practitioners, and policy makers, to generate theories. However, the UK government used theories of change for top-down evaluations. The government adopted experts' views in a policy-maker-led or expertled evaluation process (Mason & Barnes, 2007).

In the field of sport, few studies have adopted a theory of change approach to sport policy research; only a limited number of studies have done so since 2010 (Armour, Sandford, & Duncombe, 2013; Chen, 2019, 2021; European Commission, 2007; Getz, 2009, 2019; Griffths & Armour, 2012; Weed, 2014). These sport programmes generally developed a theory of change logic of sports-based interventions addressing social issues of racism, marginalised youth, and antisocial behaviour. For instance, Haudenhuyse et al. (2012, 2014) applied the theory of change approach (by interviewing vulnerable young people involved in sport-based

interventions through various activities in sports clubs) to evaluate how and to what extent sport-based interventions could ultimately improve the sport participation of vulnerable young people. Another study by Bolton et al. (2018) focused on how the sport participation of 'hard to reach' groups was increased through the Calls for Action programme (by combining document analysis relating to programmes and policies with semi-structured interviews with policy makers or case officers). However, the limitation of these two studies was that the interviewees represented only one perspective each: the top level or the mass level. For building a feasible theory of change model, it is important to collect perspectives from different stakeholders. Collecting various perspectives from different standpoints in the programme implements can collectively help to avoid 'evaluation fatigue' - Inefficient cooperation on a programme involving various evaluation workstreams causes the substantial work duplicated (DCMS, 2017, p 23) and build reliable causal chains of underlying the theory of change logic (Getz, 2019).

Although those marginalised or criminal youth were investigated to progress in establishing confidence and self-worth after a period of joining sport clubs with the aspiration by coaches or mentors (Coalter, 2012; Morgan et al., 2020), their positive behaviour changes

might only stay in a short time, as many criminal youth had frequent and repetitive battles against the law. Thus, more factors or interventions, such as building long-term trusted relationships between youth participants and mentors, should be included to building the causal links in order to reach the long-term outcome/impacts of youth making positive progress under the sport intervention instead of building a simple cause-and-effect relationship (Coalter, 2012; Morgan et al., 2020; Pawson, 2006).

The issue of reliability affects government-led evaluation programme. The UK government created a theory of change for the use of sport as a public health intervention to enhance people's physical health, particularly the less active people (DCMS, 2010; Cabinet Office, 2015). Specific actions included government investment in the sport and leisure budget through Sport England to deliver sport and physical activities in leisure centres, gyms, and privately owned facilities and through events in pursuit of outcomes such as increased physical wellbeing, increased mental wellbeing, and improved general self-improvement (Cabinet Office, 2015). However, this theory of change was refuted by Weed (2016), who identified no evidence for the effectiveness of sports as a public health intervention. Therefore, when developing a theory of change logic, researchers are suggested to focus on testing for the

robustness of causal links between sport participation and ultimate policy goals (Bolton et al., 2018).

3.1.2 Theory of change elements

Generally, a basic generic theory of change (Figure 3.1) includes three main parts: an outcome pathway; causal chains; and assumptions, risks, and external factors. The outcome pathway (input-output-immediate outcomes-intermediate outcomes-ultimate outcomes/impacts) presents the change process of outcomes from a programme or initiative. Inputs are resources (e.g., sporting event resources) and activities (e.g. sporting event hosting) invested by stakeholders (e.g. policy makers) into a programme, generating outputs and outcomes. Outputs are the responses to inputs with tangible results, which are usually counted (Funnell & Rogers, 2011). Outcomes comprise immediate outcomes, intermediate outcomes, and ultimate outcomes/impacts. The immediate outcomes along the pathway are preconditions of intermediate outcomes, and the intermediate outcomes are preconditions for ultimate outcomes (Taplin et al., 2013).

Causal chains represent cause–effect relationships underlying an outcome pathway.

The cause-effect relationship refers to a logic that exists in all elements among the process of

inputs-activities-outputs-impacts, which means (1) the elements in the previous process (causes) trigger the elements in the following process (effects) happen (Suchman, 1967); (2) the elements in the process of inputs-activities-outputs can be regarded as a package of contributory causes of the process of impacts (Mayne, 2012); (3) other factors including risks, external factors, interventions are contributory or impedimentary causes of ultimate achieved or unachieved impacts (Funnell & Rogers, 2011; Mayne, 2015).

More intuitively, the arrows connecting each item in the outcome pathway in Figure 3.1 are causal chains, which enable us to understand to what extent, for whom, and why interventions and activities succeed or fail in a programme.

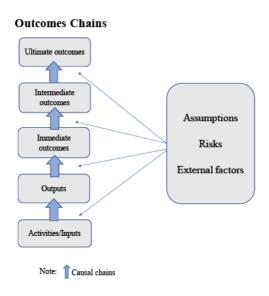


Figure 3.1 Basic generic theory of change

Assumptions are the conditions necessary for change or the "underlying conditions or resources that need to exist for planned change to occur" (Funnell & Rogers, 2011). In other words, a set of assumptions provides preconditions ensuring that each change occurs in an outcome pathway, verifying that the causal chains of outcome pathways are operative. Unlike assumptions, risks are often influences and unanticipated events outside an intervention that impede a causal link; external factors are situations beyond the control of a programme, such as socioeconomic, cultural and political contexts, which may affect the programme's achievement of an intended result. The importance of contextual factors was also reinforced in various sport programmes evaluation (Coalter, 2012; Griffths & Armour, 2013; Getz, 2019; Morgan et al., 2020).

The impact of the Shanghai F1 on local SMEs' socioeconomic development, which is the focus in this research, provides an example to explain the basic theory of change approach. Figure 3.2 shows one possible causal chain (the finalised chain was developed after data collection and is presented in Chapter 6). As seen in Figure 3.2, the input is event-related resources, the Shanghai F1 and the Shanghai International Circuit, and the activity is Shanghai's hosting of the F1 for three days per year. Subject to the first assumption that the

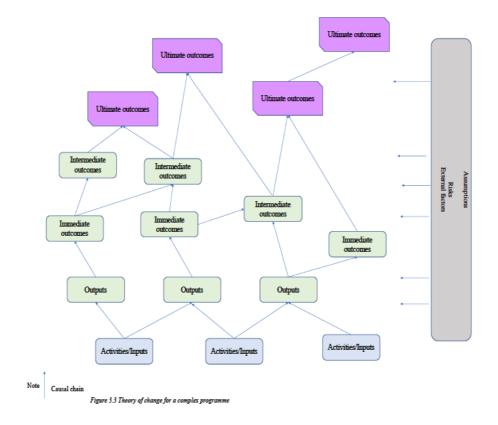
Shanghai F1 is successfully hosted, and tickets are almost sold out, the output obtained is a high audience attendance rate for the Shanghai F1. However, risks nonetheless exist. For example, an emergent pandemic in 2020 prevents Shanghai from hosting the F1, which may impede the causal chain work.

Outcome/impact chains Ultimate outcome/impact: Small racing enterprises obtain profits and achieve sustainable operation in the Assumptions: Small racing enterprises operate efficiently on a daily basis long run Risks: Small businesses are vulnerable to bankruptcy before they can profit at the start-up stage Intermediate outcome: A number of karting tracks emerge, operated by small racing enterprises Assumptions: More residents are willing to participate in motorsports Risks: Participating in motorsports is costly, and people cannot afford it in the long term Immediate outcome: After the F1, audiences participate more in motorsports and encourage their Assumptions: Audiences are encouraged by the atmosphere of the F1 and friends to participate wish to further participate in motorsport Risks: Audiences are intimidated by the sports skills of professional drivers and do not feel confident about trying the sport Output: The audience attendance rate for the Shanghai F1 remains high Assumptions: The Shanghai F1 is successfully hosted, and tickets are almost sold out Input: The Shanghai F1 and the Risks: An emergent situation, such as a pandemic, prevents Shanghai from Shanghai International Circuit hosting the F1 Activity: Shanghai hosts the F1 for three days per year Note Causal chains

Figure 3.2 Causal chain from the theory of change for the impact of the Shanghai Fl

Subject to the second assumption that audiences are encouraged by the atmosphere of the F1 to participate in motorsports, the immediate outcome is that audiences participate more in motorsports and encourage their friends to participate in motorsports more after the F1. However, the risk here is that the audiences are intimidated by the sports skills of professional

drivers and lack the courage to try this sport. Subject to the third assumption that more residents are willing to participate in motorsports, the intermediate outcome is the emergence of a number of racing tracks, such as karting tracks, operated by small racing enterprises. Subject to the final assumption of efficient daily operations among small racing enterprises, the ultimate outcome is that these enterprises achieve profits and sustainable operations in the long run.



The basic generic theory of change is introduced in Figure 3.1. However, any programme may include several interlinking outcome chains, the collective influence of which is required for desired outcomes (Funnell & Rogers, 2011). In a complex programme, the

theory of change may be depicted as in Figure 3.3. The outcome chains are shown as alternative pathways or are parallel but interlocking or spliced. Related intervention activities and a package of causal chains plus assumptions are also included (Cartwright and Hardie, 2012; Mayne, 2015).

3.1.3 Developing a theory of change

A theory of change can be structured in various ways. Three main approaches can be used to develop a theory of change (Funnell & Rogers, 2011): the deductive approach, the inductive approach, and the mental approach.

In the deductive approach, a theory of change is developed from relevant literature. Evidence is collected from other research or knowledge of how things work, and this is structured into steps of change. In the inductive approach, a theory of change is constructed from the observation of phenomena in action instead of from pre-existing knowledge or how it can work; not everything happens in the manner expected. In the mental approach, a theory of change takes into account the knowledge and experience of stakeholders with their own perspectives on the world.

The theory of change can be developed or used at any point in the lifecycle of an

initiative or project, from planning to implementation, and to subsequently review the process (Laing and Todd, 2015). One possible reason is that people are often aware of their actions/motivations when they develop or implement an initiative or project, but the change process leading up to impacts may not be easy for them to elaborate or clearly visible to them. Articulating the various changes and steps within a theory of change requires extensive consideration.

When a theory of change is used to plan, implement, or evaluate an initiative or a project, it must be assessed with evidence (data). The methods selected to collect evidence regarding the theory of change depend on the ontology and epistemology underlying the research. For some steps in the change process, data can be collected over time. Once the data are collected, whether they support or refute the theory of change (and to what extent) can be established. Data can be collected to demonstrate the individuals or groups affected by the changes and whether the changes are widespread or focused. The evidence can be both quantitative and qualitative, and a mixed-method approach to data collection is possible and desirable (Thecommonwealth.org, 2018; Riley et al, 2018).

In this research, both deductive and mental approaches are adopted. These approaches

are consistent with the research strategy (i.e. retroductive) and the research paradigm (i.e. critical realism).

In the application of a deductive approach, a basic theory of change is developed from formal official documents (e.g. policy documents related to the development of the Shanghai F1) and informal but official mass media reports (e.g. official newspapers and web news). The deductive theory of change includes logical analysis (causal analysis-analysing contributory or impedimentary elements result in achieved or unachieved impacts) that how the F1 affect the socioeconomic development of local SMEs through the transmission of causality on the chain of Inputs-Activities/Throughput-Outputs-Outcomes/Impacts in the context - Shanghai's rapid macro-socioeconomic and cultural development enhanced its status domestically and internationally from 2000 to 2020. A theory of change revised using a mental approach accounting for the knowledge and experience of policy makers and independent sports policy advisers who provide more detail and information for developing all logic model components.

The specific application and process for developing a theory of change logic in this research is presented in Chapter 6.

3.1.4 Criteria for a standard theory of change

A standard theory of change requires three attributes of assessment: plausibility, feasibility, and testability (Connell & Kubisch, 1998; Mackenzie & Blamey, 2005; Kubisch, 1997).

•Plausibility applies to the causal links of outcome pathways. It relates to the question of whether evidence demonstrates that activities, if implemented, lead to desired outcomes.

•Feasibility refers to whether the initiatives or projects can achieve long-term outcomes or impacts. It relates to the question of whether organisational resources are available for initiatives or projects.

•Testability refers to whether a theory of change is measurable. It relates to the question of whether the theory of change is sufficiently integrated for an evaluator or a practitioner to track progress in a credible manner.

However, scholars raise concerns over the possibility of "theory of change" meeting the three assessment attributes mentioned above (Hawe, Shiell & Riley, 2004). The common critiques include: (1) poorly formatted causal links (Ghate, 2018; Roger, 2008); (2) the neglection of the effects of external factors and contextual factors on the observed outcomes/impacts (Hawe, Shiell & Riley, 2004; Griffths & Armour, 2013); (3) because there

is no standard evaluation protocol to be followed, a risk may exist that different evaluators concluding different results when they track progress in the theories of change in a same or similar programme (Bolton et al., 2018; Weed, 2016).

The critique of poorly formatted causal links reflects in two main aspects (Ghate, 2018; Roger, 2008). First, the activities or interventions constituting the heart of a theory of change fail to lead the desired outcomes. The reason of the failure is that they often lack elaborations (Ghate, 2018). Some activities that lack detailed descriptions (e.g., specific transmitted messages, ordering of practices, practice methods) may seem to be related to the project goals in terms of content but work differently in functions (Ghate, 2018). If activities are not convinced to produce desired outcomes by different evaluators, they should be removed or substituted by other alternatives (Mackenzie & Blamey, 2005). Besides, the activities are often not integrated as a whole when they are developed in a complex condition (Hawe, Shiell & Riley, 2004). Ignoring the activities integration (e.g., activities tailored to participants' learning needs) but focusing on individual activity (e.g., watching video) will cause the deficiency of functions (e.g., exploring the steps of learning behaviour changes) of the process of developing a theory of change (Hawe, Shiell & Riley, 2004).

Secondly, theories of change are criticised that they lack systematic thinking (Mulgan, 2016), featured with simple models exaggerating the causal contribution of activities and attempting to incorporate complex situations (Hawe, 2015). The simplified models are in danger because the real society tends to involve multi-level interventions and activities taking places in various socioeconomic locations or settings. Therefore, theories of change models should be considered as schematics instead of formulae fully compressing and representing all possibilities (Roger, 2008).

As for the issues of the neglection of the effects of external factors and contextual factors on the observed outcomes/impacts (Hawe, Shiell & Riley, 2004; Griffths & Armour, 2012), the external factors may contribute or impede the formation of causal links; and local socioeconomic and cultural context influence the occurrence of mechanism even if for achieving the same objectives in various programmes (Hawe, Shiell & Riley, 2004). This is to call for a collective consideration – placing assumptions within their particular contexts - when measuring outcomes (Funnell & Rogers, 2011).

With respect to the critique of evaluators concluding different results when they tracking progress in the theories of change in a same or similar programme, there are two

situations: one is that government-led programmes are refuted by scholars who claim few evidences found out for the effectiveness of the activities or interventions (Bolton et al., 2018; Weed, 2016); second is that activities/interventions and factors work on the desired outcomes in the short terms but when new factors appear, the previous activities/interventions will be invalid in the long terms (Coalter, 2012; Morgan et al., 2020; Pawson, 2006). Although these issues exist, they are difficult to be resolved in reality. The reason is that the effectiveness of interventions and causal links are not easy to measure or benchmark to other similar studies applying relevant emerging theory of change model (Coalter, 2012; Connell & Kubisch, 1998). Moreover, new factors in long terms are difficult to estimate due to the projects emersed in specific contexts as well as the budgets constraints of projects (Coalter, 2012; Morgan et al., 2020).

In order to overcome the aforementioned challenges, this study adopts the following practices: First, to develop strong causal links, this study built the theory of change at two stages. The basic theory of change map was built at the first stage in which assumptions were relatively clearly identified through reviewing literature, strategy reports, and policy documents issued by Shanghai Municipal Government. At the second stage, the causal

relationship among throughputs, outputs, outcomes, and impacts of the F1 on SMEs were identified by categorised, confirmed, or deleted based on the evidence of interview and survey data. The researcher at this stage discussed with main and co-second supervisors to pick up those Shanghai F1-related activities/interventions which can effectively work on the causal links of the theory of change map and conduct the desired outputs (to the city's socioeconomic development) and outcomes (to the local SMEs' socioeconomic development) to enhance the plausibility of the theory of change.

Second, the integrity of different elements should be considered. In other words, one thing should be noticed is that one outcome/impact can be collectively yield by multiple outputs of hosting the Shanghai F1 plus accurate assumptions of the Shanghai F1 successfully hosted and other contributory and impeditive macro-economic and automobile industrial developmental factors. Third, the evidence extracted considered various stakeholders' perspectives - both of the policy makers/independent sport advisers and SMEs' managers to enhance the plausibility of the research. Finally, the adopted interview evidence should include such as event scale or event hosted time or event-related activities or socioeconomic impact indicators of the event and the statistical evidence derived from questionnaires should include

such as maximum/minimum mean values; maximum/minimum percentages and significant increases/decreases to support effectiveness of relevant indicators. If interview results and the questionnaire results are obviously contradictory, both of them should be removed (Mackenzie & Blamey, 2005).

3.2 Contribution Analysis

Contribution analysis is a methodology to identify the contribution of a programme to observed results (Mayne, 2008; Intract, 2017). It is used to validate a set of changes from the theory of change behind the programme and take other influencing factors into consideration (Mayne, 2008). Since John Mayne first developed contribution analysis in the early 2000s, it has been used to produce a credible, evidence-based contribution narrative rather than to produce conclusive proof (Intract, 2017). In other words, contribution analysis is suitable for a programme that is not experimental. In addition, contribution analysis has been suggested for use in development contexts as a means to take into account the process whereby outputs lead to outcomes and, finally, to ultimate outcomes (Kotvois, 2006).

Contribution analysis is a relatively new theory-based approach that has been advocated and discussed more than it has been applied (Delahais & Toulemonde, 2012; Lemire, Nielsen

& Dybdal, 2012). It has been applied mainly to evaluate policies or political events (Monnier & Baraket, 2009; Delahais & Toulemonde, 2012). For example, Delahais and Toulemonde (2012) applied contribution analysis to draw on five evaluations in the areas of development aid, agriculture, employment, and governance in the context of EU policies. In addition, contribution analysis was used by Van Melle et al. (2017) for medical education. He described how a six-step model and a theory of change might be applied to evaluate the link between competency-based medical education, medical training or medical practices, and ultimate patient care outcomes.

3.2.1 Steps of contribution analysis

Contribution analysis generally has six steps (Figure 3.4), as explained by Mayne (2001, p. 8–15). In this six-step process, the theory of change is tested through logic and evidence to confirm that interventions have contributed to observed results.

The first step in contribution analysis is establishing problems to be addressed. In programme evaluation, attribution issues are often ignored. Observed results are reported only as the question 'Has the programme caused the outcomes?' By contrast, contribution analysis helps to answer two main questions:

- To what extent has the programme caused the outcome?
- Can we reasonably conclude that the project caused changes?

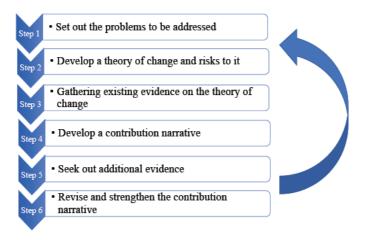


Figure 3.4 Steps of contribution analysis

The second step in contribution analysis is developing a theory of change and identifying the associated risks. Because contribution analysis is generally applied during or after a project or initiative, the theory of change may already be established. A theory of change, including a results chain, is the key tool of contribution analysis. Other potential risks or factors that influence the results chain should also be identified.

The third step in contribution analysis is gathering evidence on the theory of change.

This evidence must be verified in three areas: observed results, assumptions regarding the theory of change, and other influencing factors.

Initially, available evidence can be used to test the validity of a theory of change. The

evidence can be predetermined through previous evaluations or research studies. Alternatively, it may comprise the knowledge or opinions of programme staff or relevant stakeholders. After the available evidence is collected, the quality of the evidence must be evaluated. The strongly supported evidence may be widely accepted; the weakly supported or contested evidence may be rejected.

The next step is developing a contribution narrative. The main questions for this step are 'How has the intervention been implemented and subsequently contributed to changes?' and 'What should be the roles of other interventions and external factors?' After these questions are answered, the contribution narrative is assessed, including the credibility of the narrative and the extent to which it is supported by good evidence. Three types of narratives may be identified at this stage (Mayne, 2008): (1) A valid narrative with strong causal links in the results chain may be indicated by sufficient evidence, strong logic, low risk, and wide acceptance. (2) A narrative with weak causal links in the results chain may be indicated by little evidence, weak logic, high risk, and minimal acceptance by stakeholders. (3) A weak narrative may be identified but with further evidence available to increase the confidence of the narrative in the next step.

In step five of contribution analysis, the robustness of the causal links in step four is assessed to obtain more evidence for strengthening a provisional weak narrative. Contribution analysis is not limited to specific data collection methods. Thus, to gather further evidence, both qualitative and quantitative methods may be used to collect both primary and secondary data, as decided by the evaluators or practitioners (Thecommonwealth.org, 2018; Riley et al, 2018).

The final step in the contribution analysis is revision and strengthening of the contribution narrative. If new evidence emerges, it may indicate a more credible narrative. Contribution analysis works iteratively. Thus, if the revised narrative is insufficiently strong, earlier steps may be revisited to gather more evidence.

In the aforementioned example, the F1 is used to explain how a theory of change is developed and applied. The same example is used here to continue contribution analysis. The outcome chain (Figure 3.2) demonstrates that the Shanghai F1 affects the economic development of small local racing enterprises. However, two main questions must be asked: To what extent has the Shanghai F1 caused an outcome? Can we reasonably conclude that the Shanghai F1 was responsible for every stage/step in the changes ultimately leading to the

development of small enterprises? Contribution analysis is applied here to answer these questions. Evidence supporting the theory of change for the impact of the F1 must be verified at the various levels of outcomes, assumptions, and other influencing factors. Evidence is collected from interviews with policy executors and managers from racing companies.

The strong evidence verifying the impact of the F1 may be accepted; the weak and moderate evidence may be rejected. According to the work of Mayne (2011), the strong evidence refers to wide *acceptance* by stakeholders and *strong* logics: the weak evidence means weak logic, little agreement and little evidence available. Examples of circumstances classified as strong evidence and weak evidence are presented in table 3.1.

Table 3.1 Situations to strong and weak evidence in Contribution analysis

Strong	Weak
Stakeholders need to provide a well-	The contradictory evidence exists, and the
articulated description of the context of the	underlying assumptions present to be
project and its intended achieved aims,	invalid.
along with the project strategies used to	
achieve ultimate goals.	
Stakeholders describe the	There is no association between the
throughputs/activities and outputs produced	outcomes observed and what the project has
by the project.	been carried out.

Stakeholders point other related projects or external factors, have been ruled out, or clearly have had only a limited influence. There are a lot of gaps in the narratives built from different data sources.

Source: Adapted from Mayne (2011): Addressing attribution through contribution analysis

Guided by the description of Mayne (2011), the criteria for discerning the strong, moderate and week evidence were developed for this study (table 3.2).

Table 3.2 Criteria for discerning the level of evidence in Contribution analysis in this study

Strong	Moderate	Weak
 Majority interviewees mentioned the events/activities/experiences/views produced by the project with detailed descriptions (e.g., event goals; event scale or event hosted time or event-related activities or socioeconomic impact indicators of the event) There was a strong association between activities and statistics of intended outputs and outcomes (e.g., maximum/minimum mean values; maximum/minimum percentages; significant increases/decreases) No contradictory evidence and no gaps exist between different stakeholders. 	Less than half of interviewees mentioned the events/activities/experiences/views produced by the project without detailed descriptions Few statistics of intended outputs and outcomes (e.g., maximum/minimum mean values; maximum/minimum percentages; significant increases/decreases) support for relevant indicators.	 Very few (one or two) interviewees mentioned the events/activities/experiences/vie ws produced by the project without detailed descriptions. No statistics of intended outputs and outcomes (e.g., maximum/minimum mean values; maximum/minimum percentages; significant increases/decreases) support for relevant indicators. The interview results and the questionnaire results are obviously contradictory.

After the evidence is verified, a contribution narrative is developed. The narrative should clarify whether strong or weak causal links exist in the outcome chains for the impacts of the Shanghai F1 and whether more evidence can be collected to support the weak links and

increase the confidence of the narrative.

3.2.2 Levels of contribution analysis

Mayne (2008) identified three levels of contribution analysis yielding contribution narratives of various robustness.

•Minimalist contribution analysis

In this level of analysis, the theory of change is developed, and the expected outputs are confirmed. The contribution narrative can be asserted if the theory of change is sufficiently strong and if adequate evidence exists that the expected output is delivered. The assumed outcomes depend on the delivery of outputs. For example, the outcome of immunisation can be assumed if vaccination occurs.

•Contribution analysis of direct influence

This level of analysis is based on minimalist analysis and uses the evidence obtained to confirm assumptions regarding direct influences. Other than influencing factors should be considered in constructing the contribution narrative. However, exploring whether these

changes result in further outcomes is unnecessary.

•Contribution analysis of indirect influence

In this level of analysis, intermediate and ultimate outcomes or impacts are measured, and evidence is collected to prove the assumptions in the theory of change regarding indirect influence. For the contribution narrative, factual evidence is gathered for almost all of the key parts of the whole theory of change.

3.2.3 Advantages and challenges

Contribution analysis is a relatively new approach and has not been extensively applied by governments or organisations. However, it has several strengths. First, contribution analysis encourages rigorous and transparent methods to identify event impacts. The approach is particularly useful for organisations operating in complex areas where sole attribution is difficult to assess. Second, contribution analysis explains how and why changes occur, which is especially useful for considering how to extend or replicate actions that lead to positive changes (Mayne, 2015). Third, contribution analysis requires no baseline or control group at the beginning of the development intervention (Befani & Mayne, 2014).

However, one potential challenge of contribution analysis is that it must progress in an iterative manner. Evidence is repeatedly collected and analysed and the narrative gradually improved. However, most evaluations are conducted within a limited budget and fixed time frame, which renders these iterations difficult to perform (Mayne, 2008).

3.3 The rationale for using theory of change and contribution analysis

To evaluate the impact of the Shanghai F1 on the socioeconomic development of SMEs, the theory of change approach and contribution analysis are compatible with this study's research methodology including research paradigm, research strategy and research methods.

In terms of compatibility with research paradigm, theory of change and contribution analysis tend to explore and verify how the causal chains of the process of Input-Activities/Throughputs-Outputs-Outcomes/Impacts work on the investigated impacts of the Shanghai F1 on the socioeconomic development of local SMEs, which is in line with the critical realism paradigm exploring mechanism underlying the investigated social phenomenon (Bhaskar, 1978). Through developing theory of change map, many layers and types of impacts of Shanghai F1 on local SMEs' development will be explored, for example, the extent to which the causal link of Inputs (e.g., establishing Shanghai International Circuit)-Activities (e.g.,

hosting of the F1 and other automobile competitions)-Outputs (e.g., achieving economic benefits for the city's sport-related, tourism and service industries) has helped SMEs to increase their business revenues, whether changes to economic development differ across a spectrum of SME types, and, if so, why. Many layers and types of impacts of the case of the Shanghai F1 are associated with stratified realities of critical realism.

With the respect of suitability to research strategy, the combined application of theory of change and contribution analysis is in line with the cyclic or spiral logic of retroductive strategy (Blaikie & Priest, 2019) which starts from documenting and modelling a regularity then moves to constructing the hypothetical model of a mechanism and end up with identifying the real mechanism through observation and/or experiment (Blaikie & Priest, 2019). In this study, a theory of change map is initially developed from literature and policy documents as a hypothetical model; this map is then developed, with the mechanism broken into a step-by-step causal chain, to include the knowledge and experience of policy makers and sport experts who have their own perspectives regarding how the Shanghai F1 exerts a series of impacts on the city's and SMEs' socioeconomic development. Finally, the circle processes are used to collect survey and interview data collected from SME managers—who described

in detail various aspects of socioeconomic development and the extent to which their companies had been subject to leveraging by Shanghai's hosting of the F1—as evidence to evaluate the contribution analysis of each causal link. These steps help us to find the real mechanism-robust causal links between Shanghai's hosting of the F1 and the socioeconomic development of local SMEs.

The approaches to identifying theory of change map and collecting evidence to conduct contribution analysis refer to the mix-method approach for data collection and analysis. The study employs quantitative approach (self-administered questionnaires for evidence collection and SPSS for evidence analysis) to identify changes occur in different process of theory of change map and ultimately are reflected in aspects of socioeconomic development of local SMEs, such as companies' revenues and brand values changes. Self-administered questionnaires also provide evidence to verify whether the causal chains are strong, moderate or weak and whether other factors exist to contribute to or impede the achievement of SMEsrelated impacts. Besides, qualitative approach (semi-structured interviews for evidence collection and thematic analysis for evidence analysis) is used to explore the underlying relationship/causal linkages between the observed changes and the real causes.

The sole use of one theory has limitations, as parts of causal links established in theory of change might be verified weak after more evidence collected (Monnier, 2009; Delahais & Toulemonde, 2012; Wimbush, Montague & Mulherin, 2012). One evaluation of EU supporting Jordanian SMEs development over a 10 year-period initially developed a logic model that Jordanian SMEs can improved their capability to export to EU under the supports of such as cancelling tariffs on Jordanian products, providing free consulting services and providing technical assistance to the Jordanian SMEs and relevant governments. However, this logic link was verified weak because the evidence collected in the contribution analysis demonstrated that no measures have been taken to help Jordanian SMEs comply with EU technical standards, which was an expensive and difficult process and was a major obstacle for Jordanian products to enter the European market (Delahais & Toulemonde, 2012). For our study, it is uncertain that whether the assumptions in the theory of change render the causal chains effective and to what extent the F1 can ultimately facilitate the development of SMEs. Thus, contribution analysis is necessary to gather evidence for the theory of change and to validate its effectiveness and plausibility.

Theory-based evaluation is not exclusive to assess a programme in a complex context.

Constructivist evaluation and utilisation-focused evaluation are often applied by evaluators to assess social programmes. These two categories of theories are introduced in the following section. The reasons of why not choose them as this study's theory are also elaborated.

In addition, theory of change is not an exclusively theory-based evaluation approach suited to critical realism, and contribution analysis is not exclusively a method to validate the effectiveness of theory-based evaluation. Two similar approaches are subsequently introduced and separately compared with theory of change and contribution analysis. This study's use of theory of change and contribution analysis can thereby be understood.

3.3.1 Constructivist evaluation and utilisation-focused evaluation

Constructivist evaluation

Guided by constructivism identifying that knowledge of society is continually constructed by social actors' interaction with the social world (Lincoln & Guba, 1985), constructivist evaluation recognises the importance of involving stakeholders in evaluation process and assess how they explain an intervention or a factor working in a complex social context of a programme. All stakeholders can at first build their own understand of a programme and then reach the consensual constructions through negotiating and exchanging their concerns and

claims with other stakeholders (Lincoln & Guba, 1989). Therefore, the constructivist evaluation can be regarded as an iterative process.

For evaluators, it is important for them to hold open-minded principles in being willing to accept perceptions from different stakeholders surrounded by different circumstances. Subsequently, evaluators can investigate and explore how different stakeholders interact with each other. Ultimately, data collection methods of research design can be conducted or unfold according to the constructivist evaluation progressing (Pawson & Tilley, 1997).

Although the constructivist evaluation has been applied in social studies, there are two main disadvantages related to the nature of constructivist evaluation process. Firstly, this evaluation approach needs to involve all stakeholders in a programme and conduct constant interactions among them, which is considered as a time-consuming process (Pawson & Tilley, 1997; Stufflebeam & Coryn, 2014). Secondly, this evaluation approach ideally assumes that a consensus of impact of interventions can be reached, whereas in fact information asymmetries exist amongst different stakeholders (Pawson & Tilley, 1997). Moreover, the constructivist evaluation is not suitable to be applied in this study, for this study attempts to evaluate the evidence supporting the mechanism of the Shanghai F1 influencing the socioeconomic

development of local SMEs. The exploration of the mechanism contains the interaction with different stakeholders, while the mechanism is not depended on the stakeholders' joint construction of claims.

Pragmatic evaluation

Guided by pragmatism paradigm asserting that words and concepts can be used to predict outcomes, solve problems (Peirce, 1931), pragmatic evaluation focuses on usefulness of final results rather than on mechanism and rules (Patton, 1984). Researchers of pragmatic evaluation have demonstrated that the outcomes evaluation should be meaningful, substantial and relevant to support the decision-making process for policy makers (Alkin, 2004; Patton, 1984; Weiss 1972).

For evaluators, it is important to conduct their studies in line with intended evaluation aims, whereby research findings can be produced to help the users of intended groups apply to project improvement (Alkin, 2004). Similar to constructivist evaluation, evaluators in pragmatic evaluation seek for consensus built by values and perspectives from different stakeholders. However, they are not limited to a specific epistemology axiom and often adopt a more flexible methodology to conduct their studies (Stufflebeam & Coryn, 2014).

Although pragmatic evaluation strives to emphasize its strength in effective utilisation, its close connection with the users of evaluation may produce limitations. The main limitation is that bias and corruptions may exist in different user groups (Pawson and Tilley 1997). For instance, policy makers of project stakeholders may control over the project goals and selection of interventions to reach the intended achievements (Stufflebeam & Coryn, 2014). This limitation may prevent this study from investigating the real socioeconomic impacts of the Shanghai F1 and exploring the detailed causal mechanisms of achieved impacts. Therefore, pragmatic evaluation is not suitable to be applied in this study.

3.3.2 Theory of change versus realist evaluation

Another theory-based evaluation approach, realist evaluation, is applied in policy and programme evaluation. Similar to the theory of change approach, realist evaluation is concerned with understanding the theory of a programme and requires interventions be used to inform the evaluation. Pawson and Tilley's (1997) realist evaluation of the effectiveness of interventions relies on establishing whether the underlying mechanisms function in a specific context. The equation proposed by Pawson and Tilley is

outcome = mechanism + context

In realist evaluation, the key evaluation questions are as follows: What mechanisms work, how, for whom, and in what situations?

However, the realist evaluation mainly has three immanent critiques. Firstly, it is difficult to accurately identify the causal mechanisms of the social changes of a programme (Dalkin et al., 2015; Rolfe, 2019). Researchers usually confidently establish a causal mechanism to directly link back interventions concluded from policy documents and investigated phenomenon. They focused more on identifying promising hypotheses regarding causal triggers than on clear and unanimously supported action plans and capacity building. The realist evaluation process can be regarded as a miniature theory of change or a link in the overall theory of change with the theory depiction through interviews or general conversations and often within a limited and purposive stakeholder selection (President of the Treasury Board, 2012). But this kind of mechanism is more like a cumulate of all causal-effectpossibilities rather than analysing whether each causal link is effective (Rolfe, 2019). Such a summary may be biased, because many ineffective or project-unrelated interventions may collectively produce unreasonable explanations to the ultimate outcomes (Dalkin et al., 2015).

Second, it is difficult to tease out relevant contextual factors of a complex programme (Dickinson, 2006). In some case studies of evaluation community behaviour changes, this problem is not particularly noticeable, because the background of the community is relatively easy to sort out, such as the history of the community, population, and the number of participants in community activities (Chen & Henry, 2016). But if some studies involve more complex social environments such as urban economic development or a large project involves different case studies, social background factors will become unstable, which is difficult to control (Rolfe, 2019). To some extent, this issue is related to the configurations of CMO, because this formula lacks some intermediate joints to confirm whether the contextual factors are effective, or whether broader or more specific background factors need to be considered (Rolfe, 2019).

Thirdly, realist evaluation fails to identify other external factors influencing the programme (Dalkin et al., 2015). In fact, contributory or impeditive factors can appear in various stages of a programme. While the realist evaluation seems to emphasis on how interventions work in a specific context and ignores other external factors. The independent observations of interventions without considering external factors can weaken the strength of

evidence (Judge, 2000). These external factors in most situations are not key factors to figure out mechanism but they can be preconditions or enough conditions to complete a project evaluation (Rolfe, 2019).

In this study, the theory of change approach is more appropriate than realist evaluation is. The research aim is to explore and evaluate the impact of the Shanghai F1 on the socioeconomic development of local SMEs. From the spillover effect of the F1 benefitting specific SMEs, the theory requires different levels of outcomes to achieve ultimate goals through various interventions. Furthermore, the research should reveal causal links underlying the changes to outcomes: how the Shanghai F1 has affected the socioeconomic development of Shanghai, how the impact has spread to other areas of urban development, and how SMEs, an active part of urban socioeconomic development, have been driven by this impact. Moreover, this research involves various stakeholders, mainly policy makers, policy executors, and SME owners and managers. Therefore, the research should articulate the theory through interviews with policy executors and SMEs managers instead of with a limited and purposive selection of stakeholders.

3.3.3 Contribution analysis versus process tracing

Contribution analysis shares many similarities with another method called process tracing. For both approaches, a theory of change is developed demonstrating how change can be achieved, evidence is sought to support the theory of change, and alternative or supplementary explanations for changes are developed (Beach & Pedersen, 2012; Befani & Mayne, 2014; Bennett, 2010; Mayne, 2008).

However, key differences exist between the two approaches. Process tracing includes a series of interlocked components constituting necessary conditions for the existence of causal mechanism to exist (Beach & Pedersen, 2012). In other words, the components listed at the causal links has been formally tested (mostly mathematically tested), which are used to assess the strengths and weaknesses of explanation of changes (Collier, Brady & Seawright, 2010). The reason for the process tracing adopting the formal test is that it often entails accounts of observations occurred with historical records over time (Befani & Mayne, 2014). Thus, process tracing is also applied to study historical events. However, our study targets at the socioeconomic impacts of an evolving event-Shanghai F1. There is no systematic data on the socioeconomic impact of the event. Moreover, previous Shanghai major sporting-events

studies use different socioeconomic models obtained different results of the socioeconomic impact of the events on the city's development. Therefore, relying solely on historical records and mathematical statistics to obtain evidence cannot help to better explain whether local SMEs have benefited or not from the Shanghai hosting the F1. This study will apply contribution analysis focusing on narrating explanations of the socioeconomic development of local SMEs and recognitions of different factors contribute to their development. As long as the narrative is logically complex, both questionnaires and interview data can be used. Even in many cases, evidence from interview data have more strength to support the constitution of intermediate chains of the causal pathways.

In process tracing, evidence is not evaluated as weak or strong per se, because one step in isolation of processes is not considered as informative (Befani & Mayne, 2014; George & Bennett, 2005). Whether causal links achieved or not rely on all observations completed in previous steps of all processes. In other words, the evidence of process tracing results from a broad accumulation of history information, contextual factors and empirical observations instead of evaluating individual process (Bennett, 2010). One intuitive example is that if evidence is traced and judged in law courts, it needs to combine with discovery circumstances,

the criminal records, the history and the motives of suspects. However, in our study, the Shanghai F1-related impacts on SMEs present explicit causal relationships along the input-activity-output-outcome chains. Therefore, applying the contribution analysis to build narratives of strong or weak evidence to evaluate the quality of causal links is important. The lack of the evidence evaluation of any process will prevent us from reasonably explaining why the local SMEs is affected.

As for evaluating the causal mechanism in process tracing, this approach provides probability of the mechanism after data analysis of a given evidence observed (Befani & Mayne, 2014). The criteria of the causal mechanism refer to statistical probability, whereas to some extent is quantitative. To evaluate the causal mechanism, a specific question is asked: 'What kind of evidence is (mostly) necessary and /or (mostly) sufficient to confirm/disconfirm a causal explanation? (Befani & Mayne, 2014, p25)'. Using process tracing to evaluate historical events can generate a general conclusion for that event. However, for real life evaluation, such us for evaluating the impacts of the Shanghai F1 on local SMEs' socioeconomic development, the ultimate goals are applying contribution analysis to tease out the evidence of each change process and other influential factors contributing or impeding the observed socioeconomic

development of various industrial categories of SMEs rather than using the probability of the causal mechanism to judge the quality of the hosting the event.

3.4 Conclusion

This chapter introduces the theory of change and contribution analysis, both of which are applied to our research analysis. The theory of change enables us to develop causal logic (input-activity-output-outcome/impact) underlying socioeconomic impacts on Shanghainese SMEs as a result of the Shanghai F1. Contribution analysis allows us to move backwards through the elements within the theory of change and verify whether each causal link is robust, moderately robust, or weak. We develop a theory of change and organise the contribution narratives after research data collection, with these presented in Chapters 6, 7, and 8.

Chapter 4: Literature review

This chapter reviews the literature on two topics relevant to this study: major sporting events and small and medium-sized enterprises. Specifically, the review is constructed around (a) definitions of major sporting events and the typologies of impacts exerted by major sporting events, (b) economic impacts, and (c) social and political impacts of the F1 and major sporting events. We also focus on the following: (a) the definition of an SME, (b) the operational advantages that SMEs have, (c) challenges that hinder the development of SMEs, and (d) the impacts of major sporting events on SMEs.

Major Sporting Events

4.1 Definition of major sporting events and the impacts of major sporting events

4.1.1 Definition of major sporting events

The criteria for classifying events vary among researchers. The most recognised definition and classification are proposed by Bowdin et al (2006), Getz (2008), and Ritchie (1984). Specifically, Bowdin et al. (2006) classified events into three categories—major events, hallmark events, and mega events—according to the scale, media interest, and numbers of visitors. According to these classification criteria, Getz (2008) further sorted the events into

four more detailed categories: local events, regional events, periodic hallmark events and mega events.

On the basis of a review of previous criteria and definitions of various sporting events, Müller (2015) proposed four constitutive dimensions to further distinguish sporting events in different scales. The four dimensions are visitor attractiveness (number of tickets sold), mediated reach (value of broadcast rights), cost (total cost) and urban transformation (capital investment). In addition, Müller (2015) set up threshold of numerical value to score sporting events in each dimension. The scoring matrix is showed in table 4.1.

Table 4.1 Scoring matrix of constitutive dimensions

_					
	Size	Visitor attractiveness	Mediated reach	Cost	Transformation
		(Number of tickets sold)	(Value of broadcast rights)	(Total cost)	(Capital investment)
	XXL (3 points)	> 3 million	>GBP 1.5 billion	>GBP 7.5 billion	>GBP 7.5 billion
	XL (2 points)	>1 million	>GBP 0.75 billion	>GBP 3.75 billion	>GBP 3.75 billion
	L (1 point)	>.5 million	>GBP .075 billion	>GBP 0.75 billion	>GBP 0.75 billion

Given that the high citations (485 in google scholar) of Müller (2015)'s criteria of scoring sporting events and his four constitutive dimensions which can be measured by numerical data, this study applies the criteria to distinguish sporting events into different categories, especially to distinguish major and mega sporting events. Generally, the major

sporting events are scored 1-6 points and the mega sporting events are scored above 7 points (Müller, 2015). The Shanghai F1 is estimated to obtain 3-5 points in different years. The specific point per year depends on the socioeconomic status of that year (such as 3 points in 2008 and 2009 mainly due to the global financial crisis and 5 points in 2016 mainly due to the 12 -years- cultivation of the Shanghai F1). In addition, this study lists the scores of 12BMSE of Shanghai. Because these events are periodic events, the scores are different each year, but they fluctuate within a certain range according to the socioeconomic changes occurring in the four dimensions at specific years.

Among the 12 BMSE, 11 events are definite major sporting events according to Müller (2015)'s score criteria. One sporting event, the WGC-HSBC Champions (Golf) often lack capability to attract visitors and enhance urban transformation, whereby it cannot obtain scores to reach the criteria of being a major sporting event. However, Shanghai Government places high expectations on this event, names it a major sporting event in Shanghai Sport Development Plans (Shanghai Sport Bureau, 2006, 2011, 2016) and attempts to use it actuate the Golf industry development in Shanghai. Therefore, this study concludes the WGC-HSBC Champions (Golf) in a list of major sporting events based on the research context of Shanghai.

Another event is worth noting, the Shanghai Coordinates City Orienteering Challenge. This event is the only domestic event among the 12BMSE, whereas it can attract above 3 million people to participate in the event per year and achieve 3 points in the dimension of visitor attractiveness (Sohu.com, 2019).

Table 4.2 The scores of the 12BMSE

Names of sporting events	Scores
Shanghai F1	3-5
Shanghai ATP Master (tennis) 1000	1-3
The Shanghai Masters (Snooker)	1
The WGC-HSBC Champions (Golf)	0-1
The Shanghai International Marathon	2-4
(SIM),	
The IAAF Diamond League	1-2
The NBA Global Games,	1
GrandSlam Shanghai (dancing)	0-1
The Shanghai Longines Global	1-3
Champions Tour	
The Shanghai Coordinates City	3
Orienteering Challenge	
Final Shanghai Trophy (skating)	1-2
The Tour of Chongming Island UCI	1-2
Women's World Tour	

Source: Data derived from Sohu.com, Sina.com. Xinhua.com, Wikipedia and official websites of major sporting events.

In addition to the major sporting events in Shanghai, this chapter also refers to other well-known sporting events, such as the Olympic Games and the FIFA World Cups. Most of the Olympic Games and FIFA World Cups can be scored as the mega sporting events with above 7 points [(e.g., London 2012 Olympic Games scored 11 points and South Africa 2012 World Cup scored 10 points), Müller, 2015). According to this scoring system, except for the Olympic Games and the World Cup, other events are barely not rated as mega sporting events. However, when it comes to the socioeconomic impact of major sporting events, this chapter has discussed a wide range of sporting events, including both of mega and major sporting events, such as the Olympic Games, the FIFA World Cup, the F1 Grand Prix, the Commonwealth Games and the East Asian Games. The reasons why this research covers a wide range of both of major and mega sporting events are: (1) Mega sporting events normally receive the greatest number of studies in sport management area and are considered to have international significance (Bowdin et al., 2006), receive large scale investment (Li & McCabe, 2012), and attract significant public interest nationally and internationally (Huang et al., 2010). (2) The F1 is the object of our study, which is a major sporting event with specific characteristics: It is large scale, has a high international profile, attracts numerous tourists and

investors, and promotes socioeconomic development in the city (Bowdin et al., 2006). (3) Other major sporting events, such as the Commonwealth Games and the East Asian Games are intercontinental famous major events hosted in order to improve a tourism destination's profitability and image appeal (Ritchie, 1984). (4) Several studies, such as Emery's (2010) research on future major sport event management practice, cover both major and mega sporting events in the category of major sporting events. This shows that extensive discussion of socioeconomic impacts of both of major and mega sporting events will help this research have an overall understanding of the impact of major sporting events.

4.1.2 Typologies of impacts of major sporting events

The impact of a major sporting event can adopt many forms (Preuss, 2007, 2015): planned (e.g. planned sport stadium construction) or unplanned (e.g. bomb attack), positive (e.g. growth in tourism industry) or negative (e.g. environmental destruction of host cities), and tangible (e.g. increased numbers of tourists) or intangible (an attractive tourist destination).

Cashman (2005) categorised the contents of the impacts in six fields (Table 4.3):

Table 4.3 Typologies of major sporting events' impacts (1)

(1) Sport (2) Economics (3) Infrastructure

(4) Information and education (5) Public life, politics, and (6) Symbols, memories, and culture history

Source: Adapted from Cashman, 2005

Table 4.4 Typologies of major sporting events' impacts (2)

Typologies	Number of studies
Economics	9
Infrastructure	8
Society	8
Sport	8
Culture	7
Urban	4
Communities	3
Image, branding	4
Information, knowledge	4
Politics	5
public psychology	4
Environment	3
Networks	3
Trust funds	2
Education, skills	2
Symbols, memory, history	2
Tourism	1
Health	2

Source: Adapted from Preuss, 2015

Table 4.5 Typologies of sporting events' impacts (3)

Typologies	Number of studies
Society (public life, politics, and culture)	99
Mass sport participation	65

Economics	60
Environment	28
Physical infrastructure	25
Health	16
Information and education	12
Elite performance	9
Symbols, memory, history	8

Source: Adapted from Thomson et al., 2019

Although the aforementioned typologies have been expanded by various researchers (Leopkey & Parent, 2012; Preuss, 2007, 2015), many have overlapping categories. To avoid overlaps, the typologies for the impacts of major sporting events may be refined to several main categories. According to the systematic review of Thomson et al. (2019) on the impacts of sporting events (between 2000 and 2016) and Preuss's (2015) review on the impact of mega sporting events (between 2002 and 2005), the majority of studies focused on economic and social impacts; physical construction impacts are the next most studied type of impacts (Table 4.4 and Table 4.5). The most studied typological impacts also constitute the focal points of this research. We explore the socioeconomic impacts on Shanghai's development and the results, in terms of physical construction, of the Shanghai F1. We also explain how these impacts have benefitted local businesses. Therefore, this study reviews three aspects of the literature on the impacts of major sporting events: the economic and social impacts and the physical construction impacts (included in the subsection on regional economic growth).

Although impact and legacy are similar terms, the former is uniformly used in this research. Impacts generally describe changes, in a specific context, that compare a situation, subject to the occurrence of an activity or events, with the situation that we hypothesise would apply in their absence (Preuss, 2007). This suits the aim of this study: to explore and assess the impacts of the Shanghai F1 that influenced local SMEs. In addition, the term legacy featured with the systematically initiative design of the value and size of event-related changes, specifically used in the research of Olympic Games. By contrast, the Shanghai F1–related initiatives featured in this study were not designed to directly leverage the socioeconomic development of local SMEs.

4.2 Economic impacts of the F1 and other major sporting events

Studies on the economic impacts exerted by the F1 on the development of host cities emerged during the 1980s (Thomson, Schlenker, & Schulenkorf, 2013). The first one, conducted by Burns, Harch, and Mules (1986), described a comprehensive assessment of the economic impacts of the 1985 Adelaide F1 Grand Prix. Subsequently, a series of studies have focused on

the economic impacts of the F1 Grand Prix (Gamage & Higgs, 1996; Henderson et al., 2010; Huang et al., 2014; Kim et al., 2017). The F1 is the focus of this research, but other studies on it are limited in scope and number. Therefore, we also reviewed literature on other major sporting events, including the Olympic Games (Baade & Baumann, 2010; Porter & Fletcher, 2008; Pace, 2006 Preuss, 2004; Scandizzo & Pierleoni, 2018; Tien, Lo, & Lin, 2011) and the FIFA World Cup (Baade & Matheson, 2004; Ahlert, 2007; Szymanski, 2002). Comparing research on the F1 with that on other major sporting events reveals similarities, but the broad impacts generated by various major sporting events can fill gaps in the literature related to the F1.

The economic impact of an event/activity can be defined as its economic contribution to the local economy as measured by changes in employment and income (Ramchandani & Coleman, 2012). Income can here be measured as annual turnover, which is an important indicator of a company's economic developmental status. In the context of the F1 and other major sporting events, economic impacts depend simply on whether the income from ticket sales, sponsorship, and merchandise exceeds the costs of preparing for and hosting a sporting event (Bowdin et al., 2012). However, host governments and communities expect economic

impacts to include a wider range of benefits from tourist spending on travel, catering, accommodation, and services in the host region (Bowdin, et al., 2012). Local SMEs such as the Shanghainese SMEs in this study can benefit from tourism expenditure.

4.2.1 Two types of economic impact analysis

In relevant literature, the economic impacts of the F1 and other major sporting events are divided mainly into two categories: ex-ante studies (undertaken before a major sporting event) and ex-post studies (undertaken after the major sporting event). Both provide macro-level analysis, unlike this study, in which the economic impacts of the Shanghai F1 are assessed at the micro level. However, the crowding-out effect and the leakage effect that have appeared in ex-ante studies are also relevant to this study.

Ex-ante research, commissioned mainly by governments, predicts the economic impact of a major sporting event through the use of empirical data to estimate numbers of event spectators and their average expenditures (Economic Research Associates, 1984; KPMG, 2006; Porter & Fletcher, 2008; Solow & Kraurmann, 2020). It is often argued to exhibit potential bias caused by the application of absurdly high multipliers to exaggerate indirect impacts (Dwyer, Forsyth & Sporr, 2004; Baade & Matheson, 2004). In addition, ex-ante

research often fails to explain the crowding-out effect (Liu, Broom & Wilson, 2014; Matheson & Baade, 2006; Preuss, 2011) and the substitution effect (Matheson, 2006; Crompton & Mckay, 1994).

• Crowding-out effects

The crowds as well as traffic problems associated with major sporting events prevent spending in the host city during game days by local residents and tourists not attending the events. A typical example of this occurs during the Singapore F1. Restaurant owners and retailers near the racing track complain that their turnover decreases during the F1 hosting period because residents try to avoid the racing place; hotel owners complain that business tourists avoid the racing place due to price inflation, accommodation shortages, and problems of traffic congestion (Henderson et al., 2010). A similar example is the study of the 2010 FIFA World Cup (Preuss, 2011), which demonstrated that the limited air transport capacity and increased prices of accommodation caused a crowding-out effect that deterred visitors from South Africa during the event-hosting period.

• Substitution effect

This effect occurs when consumers spend money at a major sporting event rather than on other goods and services in the area of the event hosting. A practical example was described by Matheson (2006): A citizen went to an All-Star Game (baseball) and spent money at the game. The money could have been spent locally elsewhere if the game had not happened. Therefore, local consumption at major sporting events is not an injection of new money but a reshuffle of local consumption. Therefore, most researchers advocate the exclusion of expenditure by local residents from any estimate of economic impacts. The substitution effect should be noted in the investigation of SMEs' economic development as a result of the Shanghai F1. Different types of SMEs in different locations may be influenced to varying degrees.

Ex-post research is conducted mainly by academics and economists to examine the economic impacts of major sporting event hosting. Relevant studies have been conducted on the Olympic Games and the World Cup (Brückner & Pappa, 2011; Kim, Rhee & Yu, 1989; Tien, Lo & Lin, 2011) and other major sporting events such as All-Star Games (baseball competitions held in the US) (Baade & Matheson, 2004, 2011; Coates, 2006). These studies generally report little or no notable economic impact from major sporting events, whereas

economic benefits are overestimated in ex-ante research. Ex-post research reveals that, if we overestimate economic benefits in this study, we must trace back to check the validity and reliability of results.

4.2.2 Two models for assessing the economic impact of a major sporting event

Two economic models are often applied by researchers: the input-output (I–O) model and the computable general equilibrium (CGE) model. They are both macro-level economic assessment models applied to calculate economic impacts—the total flow of new money attributed to the hosting of a major sporting event—rather than to explore the reasons for economic impacts. However, the problems involved in the new money tracing processes used by the two aforementioned models may also affect our findings.

New money here refers to expenditure that would not have been produced in the host city without the sporting event (Madden, 2006), and it derives from three different tracks: event-related facility construction, event-related operations, and expenditure related to attendance and participation (Hodur & Leistritz, 2006). New money can be allocated to any of the various categories used to measure economic impact, such as transportation, facilities,

accommodation and shopping, and can be aggregated by industries corresponding with these categories, such as retail, travelling, and entertainment (Huang et al., 2014).

However, not all expenditures related to a major sporting event constitute new money.

Two main considerations should be noted (Madden, 2006):

a. Local residents' expenditures are included in new money.

Why this distorts calculations: In the absence of a major sporting event, locals would use the money they spent at the event for other leisure activities in the host city.

b. Expenditure by event attendees includes attendees who would have visited the area regardless of the event.

Why this distorts calculations: Attendees merely change the timing of their visits to coincide with a sporting event, but this does not increase expenditure.

Therefore, when we conclude that the economic development of SMEs was leveraged by the Shanghai F1, we must clarify that the increase in new money indicated by growth in companies' turnover and profits may not be only attributed to the Shanghai F1 but also to other

channels, such as a series of major sporting events attracting tourists to visit and spend money in Shanghai.

4.2.3 Regional economic growth

Major sporting events have been used to help regions or even nations achieve overall economic development (Lee & Taylor, 2005; Foley, McGillvray, & Mcpherson, 2011). The F1 is a notable case of a major sporting event with commercial appeal and broad international consumer interest (Mourâo, 2017) that researchers and governments have asserted generates economic benefits for regional economic growth (Huang et al., 2014; Ernst & Young, 2011; Strom, Jakobsen, & Nielsen, 2020). For example, the economic impact of the F1 in Austin, Texas generated US\$2.8 billion (Strom, Jakobsen, & Nielsen, 2020). Shanghai's three major sporting events, the Shanghai F1, the ATP Masters 1000 tennis tournament, and the Shanghai International Marathon (SIM), were estimated by Huang et al. (2014) to generate new money of about ¥350 million (GBP £38.48 million), ¥130 million (GBP £14.8 million), and ¥40 million (GBP £4.58 million), respectively. In addition, the study of Huang et al. (2014) not only confirmed that major sporting events boost regional economic development but proposed that local expenditure on major sporting events can be defined as new money in the context of China's high propensity for consumer saving. In China's non-consumer driven economy, major sporting events are often regarded as an effective stimulant of consumption among residents. By contrast, in the consumer-driven economies of the United States, the United Kingdom, and Australia, local residents' expenditure cannot be included in new money.

Evidence from studies of other major sporting events verifies that they do indeed assist regional economic development. For example, Brunt (1995) indicated that the 1988 Soul Olympic Games and the 1992 Barcelona Olympic Games increased regional economic growth by 1.4% and 0.03%, respectively. The study of Humphreys and Plummer (1995) demonstrated that the 1996 Atlanta Olympic Games boosted the city' economy by around GBP £3.7 billion every year. In addition to the Olympic Games, major sporting events such as the 2004 South Carolina Marathon in the United States were estimated to generate GBP £10.36 million, creating more than 300 local jobs (Davakos, 2007); the 2006 Cincinnati Marathon leveraged a 25% increase for the local economy (Cobb & Olberding, 2007).

However, other studies have declared no evidence that major sporting events, especially in developing countries, further regional economic development (Scott, & Masterson, 2014).

The original investment for major sporting events is huge, including stadium construction,

infrastructure regeneration, traffic engineering, and landscaping improvement (Lin & Lu, 2018; Owen, 2005; Scott & Masterson, 2014). Expensive investment projects, such as stadiums, may become 'white elephants' after the sporting event. The benefits obtained from the Olympics may not cover expensive investments. For example, mainland China spent over GBP £4.44 billion in direct investment and GBP £30.34 billion on hosting the 2008 Beijing Olympic Games (Scott & Masterson, 2014). Although staging the Olympic Games brought economic benefits to Beijing, the extent to the impact was considered insignificant if compared with the overall size of the macro economy (Li, Blake & Thomas, 2013).

Some major sporting events require the government to invest excessive funds in the early stage of building event-related constructions, as the host cities originally lack event-related constructions, which causes controversies in the local community (Zhang et al., 2019). For instance, Nanjing invested GBP £0.11 billion to host the 2014 Youth Olympic Games, which leaded to residents' negative perceptions of the government's investment behaviour (Zhang et al., 2019). In addition, investment beyond the budget, for example, the increase in the investment budget of the 2010 Guangzhou Asian Games from GBP£0.13 billion to GBP £0.78 billion to incredible GBP £28.6 billion reflected in the political purpose of the Mayor

Zhang of Guangzhou, which is to showcase his performance in organising the event and to bid for a higher political position in the future (Bao, Liu & Li, 2019). This hidden political purpose of hosting the major sporting events may cause the city's financial crisis (Bao, Liu & Li, 2019).

Moreover, sport venues and sport sites (e.g. Olympic parks) are often underutilised or even abandoned by host cities after the Games (Azzali, 2020). Examples include the 2014 Brazil World Cup, the 2010 South Africa World Cup, and the 2016 Rio Olympic Games. Most sport venues in these events' host cities were abandoned a few months after the events, and the host cities suffered bankruptcy (Guanella, 2016).

Although the white elephant phenomenon exists in event-related construction, a group of scholars have suggested that the low utilisation rates of sport venues can be settled with main three marketing strategies: (1) Sport venues can attract tourism with their intrinsic design merit. The Munich Olympic Stadium and Bacelona's Nou Camp Stadium, for example, which has been regarded as a sports theme park complex and top tourist destination (Thornley, 2002).

(2) Sport venues can change their focus from one-off events to 'regular ongoing profitable activity' (Thornley, 2002, p. 814). The Stadium of City of Manchester, for example, was the venue for the Commonwealth Games in 2002 but afterwards became the home of Manchester

City Football Club, staging regular football matches. (3) Sport venues can be used to host entertainment activities (Li, 2003). The Beijing Olympic Stadium staged more than 40 large-scale concerts most years after the Olympic Games (Sports Sohu, 2016).

4.2.4 Industrial development and employment

Major sporting events can potentially contribute to the development of certain industries, such as the financial market (Berman et al., 2000; Bruckner & Pappa, 2011; Samitas et al., 2008), the construction industry (Baade & Matheson, 2002; Balfousia-Savva et al., 2001), and the sport industry (Huang, 2010; Huang et al., 2014). Balfousia-Savva et al. (2001) indicated that the greatest employment growth would occur in the sporting event industry.

Several studies have demonstrated a positive correlation between preparation for the hosting of the F1 and increased local employment opportunities. For example, the construction of the Circuit of the Americas in Austin, Texas created approximately 25,000 jobs from 2012 to 2015. The Shanghai F1 was estimated to create approximately 9,000 jobs per year on average in Shanghai (Huang et al., 2014). Table 4.6 provides details of economic benefits to regional economic development (as described in section 4.2.3) and employment opportunities obtained from the most popularly discussed the F1 around the world.

Table 4.6 Economic benefits and employment opportunities obtained at various F1 stations

F1 Grand Prix	Years held	Economic benefits	Employment	Data sources
			growth	
The British F1, United Kingdom	1950–2020	A regional economic contribution of approximately €30 million was provided.	An extra 5,600 paid staff were employed during race week.	(Yumpu.com 2016)
The Shanghai F1, China	2004–2019	The new money generated was ¥350 million (GBP £38.48 million; estimated in 2012).	9,000 full-time equivalent jobs were provided (estimated in 2012).	Huang et al. (2014)
The Singapore F1, Singapore	2008–2019	GBP £94.72 million was reputedly earned from the sale of 100,000 tickets.	N/A	(The Straits Times, 2009)
The Abu Dhabi F1, United Arab Emirates	2009–2020	The GBP £1.11 billion construction cost was recouped.	N/A	(Sports Tourism Media, 2019)
The Austin F1, United States	2012–2019	GBP £3.7 billion was contributed (from 2012 to 2019).	46,100 jobs were provided (from 2012 to 2019).	Published on the circuit's webpage. (Circuit of the Americas, 2020)
The Melbourne F1 (was the Adelaide F1), Australia	1985–2019	Victoria's gross state product increased by GBP £23.7– 28.86 million (in 2011).	Between 351 and 411 full- time equivalent jobs were provided (in 2011).	Young (2011)
The Hungarian F1, Hungary	1986–2020	GDP benefited	- W	Remenyik and Molnár

contribution of GBP £4 million, and GBP £1.8	(2017)
million per year was contributed	
in tax revenues	
and other	
benefits.	

Evidence exists that sporting event–related industries contribute positively to employment growth, and this includes the Olympic Games (Moore & Zobay, 2003). For example, a 17% employment increase caused by the 1996 Atlanta Olympic Games translated into more than 290,000 extra jobs (Hotchkiss et al., 2003), and 244,000 'new jobs' resulted from the 2010 Vancouver Olympic Games (Benson, Dickson & Terwiel, 2014).

The effect of increased employment is concentrated in the industrial sectors of construction, accommodation, catering, the arts, entertainment, and leisure (Feddersen & Maennig, 2013): Labourers are required for sport venue construction as well as more employees for sectors such as accommodation and entertainment to serve tourists attracted by major sporting events (Hagn, Maenning & Süssmuth, 2009). These industrial sectors are populated mostly by local SMEs rather than large companies.

Although event-related construction can create new jobs, this effect is sometimes believed to be exaggerated. For example, although politicians use the Olympics as a

justification for expensive projects, the event does not create or reduce employment opportunities. Rather, supposedly Olympics-generated expenditure simply represents a displacement of expenditure in the normal budget of construction of infrastructure (Baade & Matheson, 2016). However, the periodic nature of the F1 distinguishes it from other major sporting events. Governments often claim that the huge investments into the F1 (e.g., GBP£0.98 billion in construction costs for the Abu Dhabi F1 circuit) can be recouped and even yield economic benefits after long-term hosting on a yearly basis (Hazime, 2011).

4.2.5 International trade effects

The successful hosting of major sporting events creates a branding image for host cities, potentially increasing national exports and attracting international investment (Rose & Spiegel, 2011; Tien, Lo, & Lin, 2011). The Olympic Games and the World Cup are considered most likely to generate this effect. Rose and Spiegel (2011), for example, found robust evidence of positive impacts exerted by the Olympic Games on national exports, with 20% growth indicated. However, Billings and Holladay (2012) analysed post-Olympic impacts for host regions from 1950 to 2005 and found no long-term impacts by Olympic Games hosting on international trade relationships. An international trade effect may nonetheless have applied in

this study. The periodically hosted Shanghai F1 exerted a branding effect on Anting Automobile City, Jiading. It may therefore have inspired automobile companies to increase trade with foreign companies.

4.2.6 Tourism impacts

Major sporting events often attract millions or even billions of international participants, audiences, and tourists (Preuss & Solberg, 2013). Expenditure by participants, non-local audiences, and tourists, which accounts for the major part of new money, contributes to regional tourism development through the expansion of tourist capacity, the updating of tourism infrastructure, the improvement of a region's general image, and the enhancement of the area's appeal to tourists (Getz, 2005; Katsoni & Vrondou, 2017; Li & Blake, 2011).

Governments have focused on leveraging major sporting events to fully achieve tourism impacts that promote regional economic development (Chalip, 2006; Getz, 2008, O'Brien, 2006; Whitford, 2009; Ziakas, 2013, 2019). Most host regions' governments formulate programme and marketing strategies related to the F1 and other major racing event to attract tourists. For example, partly because of its scale and commercialised characteristics, Macao hosted the Formula 3 Grand Prix to expand tourist demand as an alternative to its dominant

gambling industry (McCartney, 2005). The Macao Grand Prix Committee (2003) proposed that the main goal of hosting the Formula 3 Grand Prix was to attract more visitors to visit and spend money in Macao. Specifically, the Macao Government established the Museu do Grande Prémio (Grand Prix Museum) in 1993 to attract fans and tourists; the Macao Sport Bureau authorised the construction of the Art of Grand Prix Macau in 2018 to sell the Grand Prix—themed products of Macau's designers.

Singapore has attempted to develop sporting event tourism (e.g. the Singapore F1 has been hosted (since 2008) to attract visitors every year, with support from the Singapore National Tourism Organisation. The Singapore government adopted this tourism strategy to solve the problem of continually declining overseas arrivals since 2007 (Henderson et al., 2010). Specifically, the Singapore Tourism Board attempted to capitalise on the F1 by hosting activities such as a two-week Grand Prix Season including practice competitions, concerts, and motor shows (The Straits Times, 2009). Grand Prix Season targets tourists from China, Australia, and India. The distinctive characteristic of this activity is that it involves collaboration within the private sector, including local SMEs.

The tourism impact of major sporting events is often considered to be positive. Song (2010) even demonstrated the significant tourism impact of the Summer Olympic Games by studying data sets from between 1982 and 2008. However, the impacts were short-lived and were concentrated in the four years before and after the Olympic Games. Similar findings were also obtained in a study of tourism impacts with cross-national analysis, which encompassed several Winter Olympic Games events (Fourie & Santana-Gallego, 2011). This also means that impact studies may easily overestimate the benefits of major sporting events due to their short-term impacts on tourism.

However, such temporary impacts are common for one-off and individual events. Green, Misener and Chalip (2014) asserted that one-off individual sporting events, regardless of their size, were temporary and their benefits short-lived. Periodic events, such as the F1 Grand Prix hosted in a same host city every year, have been considered to generate more lasting tourism impacts than one-off sporting events do (Warren & Dinnie, 2017). In addition, a major sporting event may contribute more to long-term tourism development when it is included in a portfolio of sporting events such that it can be cross-leveraged and its impact maximised (Ziakas, 2013, 2019). The Shanghai F1, as a periodic major sporting event, is one of 12

Shanghainese city branding events that are intended to be leveraged to achieve long-term tourism impacts in the city.

4.3 Social impacts of the F1 and other major sporting events

Governments often pay close attention to the economic impacts of major sporting events because these can be used to boost regional economic development. However, many scholars have advocated going beyond research on economic impacts (Chalkely & Essex, 1999; Hall, 2006; Kaplanidou, 2012; Kim et al., 2015; Kim & Petrick, 2005). In studies of major sporting events, the social impacts examined involve a range of themes: host destination image, residents' perceptions of the major sporting event, sport participation, volunteer opportunities, cultural identity, social cohesion, and political impacts.

Because our research focuses on the impacts exerted by the Shanghai F1 on the social development of cities and local SMEs, studies targeting individuals' voluntary participation and cultural identity are not reviewed in this section. This section reviews three aspects of the relevant social and political impacts: Host destination image, residents' perceptions of major sporting event, political impacts, and mass sport participation.

4.3.1 Host destination image

Destination image can be defined as an array of ideas, emotions, beliefs and impressions of places subjectively interpretated by tourists (Beerli & Martín, 2004; Crompton, 1979) which may affect the tourists' behaviours in tourism destination selections and destination consumptions (Loi, So, Lo, & Fong, 2017). Similar to definition of destination image, event image can be defined as a cumulative tourists' interpretations including a sum of beliefs, meanings or associations of events (Gwinner, 1997). Because the destination image and event image have the parallel structures of destinations, a series of studies attempt to explore the different ways in which they can interact with each other (Dragin-Jensen & Kwiatkowski, 2019). This study mainly reviews the interactions between the image of major sporting events and the image of host places.

Most of the relevant studies refer to how major sporting events affect the image of host places, including both positive (Gribson, Qi, & Zhang, 2008; Hazime, 2010; Liu & Graton, 2010; Henderson et al., 2010; Kim et al., 2015; Kim et al., 2019; Prayag et al., 2013; and negative impacts (Andersson, Bengtsson & Svensson, 2021; Bodet & Lacassagne, 2012; Chalip, 2004;

Chalip & Costa, 2005; Knott et al., 2013; Lai, 2010; Liu, 2013; Parent, 2020; Ristea et al., 2020; Smith, 2005).

As for positive impacts, firstly, major sporting events can acquire symbolic significance to reposition or consolidate the image of a city, a region, or even a country (Gribson, Qi, & Zhang, 2008; Kim et al., 2015; Prayag et al., 2013). Generally speaking, for most/all of the locations in which the F1 is hosted the F1 is used to help create a positive image of and build public awareness of host destinations (Hazime, 2010; Liu & Graton, 2010; Henderson et al., 2010). For example, the Abu-Dhabi has hosted the F1 Abu-Dhabi Grand Prix every year since 2009 to build the Emirates' reputation as a global sports destination. The Shanghai F1, as Shanghai's most influential major sporting event, has been described as a key Shanghainese 'identity card' (Liu & Graton, 2010, p. 631).

Empirical research from other major sporting events, such as the empirical study of Kim and Morrison (2005), surveyed visitors travelling from Japan, China, and the United States to South Korea before and after the 2002 FIFA World Cup and found that perceptions of South Korea's social stability and tourist attractions improved among the visitors from all three of the aforementioned countries. Similarly, the perception of Beijing among foreigners changed

for the better in relation to safety and image of city after the IAAF World Athletics Championship (Kim et al., 2019).

Secondly, a positive image can attract greater numbers of tourists and contribute to tourism development at a destination (Gribson, Qi, & Zhang, 2008; Kim et al., 2015). Empirical studies have reported on the use of various major sporting events to create a positive image for cities or countries to attract more tourists. For example, Abu-Dhabi has hosted a series of major sporting events including the 2007 Gulf Cup, the 2003 FIFA Youth World Championship, and the F1 Abu-Dhabi Grand Prix every year since 2009, as well as other international tournaments, to position itself 'on the world tourism map' (Hazime, 2010, p. 1). Similarly, the 2010 Guangzhou Asian Games was anticipated to promote the commercial and cultural characteristics of Lingnan to potential tourists interested in visiting Guangzhou and other parts of China, providing the country with a tourism boost (Luo & Yang, 2010).

However, the impact exerted by a host destination's image is various depending on the characteristics of the tourists in question—such as their travel experiences and preferences (Gibson et al., 2008) and demographic characteristics (Baloglu & McCleary, 1999; Kim & Morrison, 2005). For example, the host country's image was found improved as a result of

the 2002 FIFA World Cup (Kim & Morrison, 2005), which attracted foreign tourists, but this impact varied according to tourists' nationalities. In this study, we survey and interview SME managers regarding their perspectives of city image changes resulting from the Shanghai F1. We predicted that managers from different types of SMEs would have different perceptions regarding the aforementioned impacts.

Thirdly, an improved image for regions hosting major sporting events not only contributes to tourism development but signals an image change to the world (Preuss & Alfs, 2011; Rose & Spiegel, 2010). As Dabiels (1996) demonstrated, Germany's hosting of the 1972 Munich Olympic Games signalled that it was rid of its Nazi past. China used the 2008 Beijing Olympic Games to signal to the world its economic potential and to seek global business partnership and investment (Preuss & Alfs, 2011). More recently, Brazil attempted to use the 2014 World Cup and 2016 Olympic Games to change its image from 'diplomatic dwarf' to 'Gulliver unbound' (Rocha & Grix, 2017). The literature reviewed here focuses on the FIFA World Cup and the Olympic Games. Whether other major sporting events can used as a tool to signal an image change is uncertain. However, Shanghai's government intends for the

Shanghai F1 and other major sporting events to facilitate the goal of achieving remarkable global city status for Shanghai (Shanghai Municipal Government, 2016).

In addition, media play a key role in shaping a host region's image and awareness (Muller, 2015). The 'media hype' surrounding this image (Essex & Chakley, 1998) enables citizens and politicians to 'bask in [its] reflected glory' (Snyder, Lassegard & Ford, 1986). From an event perspective, media, particular the social media can extend the short-term impacts of major sporting events, because it allows audiences to participate in online activities (like, comment, share) before and after the sporting event and even reach and attract those who have not engaged in the sporting events through the stories, pictures as well as videos posted by participants or organisers (Dragin-Jensen & Kwiatkowski, 2017).

Although the positive impacts of events on the host places are well documented, the negative impacts cannot be ignored. The negative impacts mainly include three aspects. Firstly, event organisers fail to prevent the downside of the awareness of the host destination after major sporting events (Chalip, 2004; Chalip & Costa, 2005; Parent, 2020). Major sporting events, especially a single or one-off major sporting events are featured with passing effects on the destination image enhancement (Chalip & Costa, 2005; Whitelegg, 2000). For a new host

chosen destination, it lacks the systematic strategies to plan and promote the major events in the long-term (Chalip & Costa, 2005; Whitelegg, 2000). Therefore, the emotions and perceptions of tourists and audiences keep confined to within the successful atmosphere of hosting the major sporting event and the awareness of the host place (Kapanidou, 2007). In the long-term, tourists around the world show no significant intention to visit or revisit the host place (Liu, 2013).

Secondly, major sporting events are not distinctive enough to increase host cities' image and familiarity (Andersson, Bengtsson & Svensson, 2021; Lai, 2010; Liu, 2013; Smith, 2005). Given that tourists with different characteristics perceive distinctly to the major sporting events (Gibson et al., 2008), part of tourists feel sport or major sporting event is a universal feature for all modern cities and not special for some (Smith, 2005). If major sporting events are marketed as brand features of host cities, the implementation of the marketing strategy cannot be guaranteed (Lai, 2010). Besides, cities already branded by famous sport clubs, such as the Manchester, are difficult to increase their familiarities through hosting other major sporting events (Smith, 2005). The recent sporting event initiatives in these cities may suffer

overshadowed situations by established associations between sport and city image (Richard & Wilson, 2004).

Thirdly, social media exposes unwanted attentions of major sporting events to negatively affect host cities' image (Ristea et al., 2020; Bodet & Lacassagne, 2012; Knott et al., 2013). Although major sporting events attract much media attention to promote themselves during the host period, it also means negative news is exposed on the spotlight (Knott et al., 2013). Issues such as event organisation corruptions and event-triggered violent behaviours that will be widely discussed on social media to the extent that the image of the venue will be implicated (Ristea et al., 2020; Bodet & Lacassagne, 2012).

A destination image can also positively influence the major sporting event image in two main aspects. Firstly, host places images such as eco-friendly environmental image (Jago et al., 2003), advanced city infrastructure image (Dragin-Jensen & Kwiatkowski, 2017), transparent governmental image can add authenticity and believable associations to the major sporting events (Frost, 2008). In addition, tourists' positive cognition to image of destination can enhance the major sporting events' symbolic elements (Florek & Insch, 2011). A vivid example is provided from the Singapore hosting the F1. The sufficient and advanced night street race

image of Singapore contribute to Singapore F1 become the 'modern jewel in F1's crown' (Readmotorsport.com, 2016). Secondly, a positive image of destination contributes to tourists' intentions to visit or revisit a major sporting event (Liu & Graton, 2010). This mostly occurs in reoccurring major sporting events. Destination images such as friendly people and culture and history attractions are positive contributors to improve tourists coming to the city again while the event hosted (Gibson et al., 2008).

With respect to the negative impact or no significant impact of destination on the major sporting event, relevant studies remain scant. One possible reason is that major sporting events are often hosted in different places each time and tourists and audiences leave the host destination after the event, which causes the difficulties to measure the impact of destination on a specific major sporting event from the perspectives of tourists and audiences (Kaplanidou & Vogt, 2007). The current related negative impact research mainly focused on the unwanted attentions of image of destination exposed by media during the event hosting period (Heslop et al., 2010). Media representatives are not entirely controlled by politicians or event organisers and can expose negative information on the host region, such as terrorist bomb attacks,

institutional corruption, and environmental destruction (Boyle, Clément & Haggerty, 2002).

Negative news may cause damage to image of major sporting events.

4.3.2 Residents' perceptions of major sporting events

A burgeoning number of studies have focused on residents' perceptions of major sporting events. Residents' perceptions depend mainly on the question of whether they care about or support mega sporting events. Most of these studies suggest that residents' perceptions of sporting events' impacts are as important as the actual economic benefits (Karadakis & Kaplanidou, 2012; McGehee & Andereck, 2004; Ritchie & Aitken, 1985). Local residents are often influential groups, and their support for or opposition to event hosting may influence policy makers' planning and promotion of major sporting events (Bull & Lovell, 2007). Event planners and policy makers can use community perceptions of major sporting event hosting as an indicator to measure the success or failure of an event (Williams & Lawson, 2001).

Support among residents for major sporting event hosting is not considered in this research. However, if residents perceive event hosting in a positive light, they may attend event-related activities and engage in consumption. One empirical example is a study surveying 96 Singaporean residents' perceptions of the Singapore F1's sociocultural impacts

(Cheng & Jarvis, 2010). The findings of this study demonstrated a positive perception of the F1, which provided an opportunity for citizens to participate in F1-related activities and entertainment. Citizens felt it worthwhile to participate in and spend money on these event-related activities. In Shanghai, a series of F1-related activities are staged every year before and after the Shanghai F1. Citizens who positively perceive the F1 may participate in these activities and engage in consumption, potentially benefitting SMEs involved in providing services for the activities.

Various factors influence residents' perceptions, such as their age (Kim & Petrick, 2005; Müller, 2012), interest in an event (Cegielski & Mules, 2002; Ma et al., 2013), knowledge of the event (Müller, 2012), income (Vetitnev, Kruglova & Bobina, 2015), length of residency (McGehee & Andereck, 2004), and sense of community pride and local attachment (Li & Wan, 2016). However, different studies may produce contradictory findings in relation to particular factors. For instance, Müller's (2012) study found younger residents to have more positive perceptions than older residents did, whereas Kim and Petrick's (2005) study found younger residents to have more negative perceptions. Residents' high level of interest in major sporting events influences opposite perceptions in different studies. Cegielski

and Mules (2002) found that residents with high levels of interest in sporting events held positive perceptions, whereas Ma et al. (2013) found that residents with high levels of interest had more negative perceptions.

The findings in the aforementioned examples demonstrate that residents' perceptions rely on individuals' subjective interpretations. The social exchange theory (SET) helps to account for the differences in citizens' subjective perceptions. The SET was developed by Ap (1992) and originally applied to evaluate tourism's social impacts. Taking into account similarities between tourism events and sporting events, the SER has increasingly been used to evaluate the social impacts of major sporting events (Giannoulakis, Wanless & Brgoch, 2015; Liu, 2016; Yao & Schwarz, 2018). Generally, SET assumes that seeking benefit and reward is a key factor in the decision of starting a social exchange. In the major sporting events context, the occurrence of social exchange between event organisers and citizens is based on the result of citizens estimating whether their expected benefits can exceed possible costs with events. If residents believe that the benefits, such as community pride and community attachment, exceed the costs (such as the use of their tax dollars to build stadium and increases in city congestion caused by event spectators), they may participate in the exchange (Zhou & Ap, 2009) and

support event organisers and politicians plans for a major sporting event. Conversely, if residents feel that benefits are lower than costs, they may oppose the event.

Major sporting events hosted in China often receive positive perceptions from residents (Fredline & Faulkner, 2000). The possible reason is that Chinese people under the traditional Chinese culture influences are more tolerant to accept the decisions of higher political authorities than that of western people (Chen, 2011; Yao & Schwarz, 2018). Even if for the World Golf Championships tournament annually held in Shanghai with low public awareness were investigated positively supported by Shanghai residents to be continually hosted (Yao & Schwarz, 2018). Residents can be persuaded by government' rhetoric that hosting this event can help younger generations to know more about golf culture and promote the golf industry's development in the city (Yao & Schwarz, 2018).

4.3.3 Mass sport participation

Whether and how the F1 inspires has not been researched. Participation in car racing is difficult to popularise. This may be because car racing is costly and requires that participants master professional skills to a high level. Nonetheless, as described in the context chapter, we found that the Shanghai government planned to promote the sport of karting (beginner-level car rating

generally operated by small and medium car-racing companies or clubs) and to use the Shanghai F1 to cultivate participation in this sport among young people. Thus, we reviewed the mass sport participation impacts of other major sporting events and sought similarities and differences with the findings of our own research.

Research on the social impacts of major sporting events focuses largely on increases in mass sport participation (Veal, Toohey & Frawley, 2012; Frawley & Cush, 2011; Ramchandani, Coleman, & Christy, 2019). This type of impact is regularly cited by the host cities' organisational committees and governments to obtain community support for sporting events (Veal, Toohey & Frawley, 2012). Governments also attempt to use major sporting events to promote healthy lifestyles; to address diseases such as obesity and cancer (Kavetsos & Szymanski, 2009); and to enhance confidence, self-esteem, and wellbeing (London East Research Institute, 2007). In addition, the direct positive connection between sport activity participation and employees' workplace performance demonstrates that employees who engage in physical activity require significantly less sick leave than do their colleagues who do not participate in sports, particularly in sedentary working environments (Van den Heuvel & Boshuizen, 2005).

Most of the evidence collected from relevant literature shows that increased sport participation is leveraged by major sporting events. However, evidence of no effects and of negative effects also exists.

• Increased sport participation

Research suggested that Australian rugby participation increased after 2003 it staging of the Rugby World Cup, as reflected in a positive trend in registration data after the event (Frawley & Cush, 2011). Specifically, junior and senior rugby registration increased by around 20% and 5.5%, respectively, during the 2003–2004 period. Olympic-related studies claim that the Olympic Games increases participation in sports activities (Toohey, 2010; Truno, 1995; Veal & Toohey, 2005). In 1989, Barcelona's sport participation rate was about 47%, and this rose to 51% after the Olympics (Truno, 1995). In particular, the number of women in Barcelona participating in sports increased from 35% in 1989 to 45% in 1995. Another example of positive effects comes from the Sydney Olympics. Veal and Toohey (2005) reviewed data from the Australian Bureau of Statistics and found a trend for increased sport participation after the Sydney Olympics.

• No change or negative evidence of sport participation

Although many studies have reported increased sport participation after major sporting events, several have suggested that this type of impact may be short term (Edcoms, 2007; Murphy & Bauman, 2007). No clear evidence exists that the 2012 London Olympic Games or the 2016 Rio Olympic Games encouraged people to participate more in physical exercise (Reis, Frawley, Hodgetts, Thomson, & Hughes, 2017). A study conducted by MORI (2004) in the context of the 2002 Manchester Commonwealth Games demonstrated that sports participation in the Manchester area dropped by 2%.

In addition, two systematic reviews on sport participation impacts from major sporting events have been noteworthy. One was from McCartney et al. (2010) and the other from Weed et al. (2009). Both demonstrated the low quality of evidence supporting the positive relationship between major sporting event hosting and the trend of increased sport participation.

An interesting finding from Shanghai International Marathon is that it implants more 'right' attitude such as achievement and persistence into resident's cognition rather than promoting mass sport participation (Ronkainen et al.,2018). Even among residents who participated in the marathon affected by this event, some of them is only to show their middle-

class status instead of the health improvement purpose, because the marathon symbolised modern and fashion in China (Ronkainen et al.,2018).

Despite the lack of positive evidence suggesting that sport participation is leveraged by major sporting events in the long term, two factors that increase sport participation in the short-term merit explanation: the trickle-down effect and the elite role model effect. For the Shanghai F1, a trickle-down effect may apply only to those who are already interested in and participate in racing sports. Shanghainese racing and karting SMEs may receive extra business from racing sport enthusiasts. However, these SMEs may struggle to expand the scope and scale of their businesses because the elite role model effect may prevent mass sport participation due to perceived capacity gaps.

• Trickle-down effect

The concept of the trickle-down effect means that a major sporting event produces sport-related benefits even in the absence of explicit sport development strategies (Potwarka & Leatherdale, 2016; Toohey, 2010). This effect occurs when government support for a major sport event is combined with elite athlete success and related media reports, leading to increased people participating physical exercise, increased number of memberships of related

sports clubs and enhanced working performance on administrators and coaches (Hindson, Gidlow, & Peebles; 1994). Amongst major sporting events, the Olympic Games are most frequently considered to exert such effects (Gratton, Shibli, & Coleman, 2005; Hindson, Gidlow, & Peebles, 1994; Potwarka & Leatherdale, 2016; VANOC, 2007). Specifically, evidence from the Vancouver Olympic Games and the Barcelona Olympic Games demonstrates a strong effect (VANOC, 2007; Hindson, Gidlow, & Peebles, 1994).

Although this effect can be automatic, several studies suggest that, to systematically generate a trickle-down effect, long-term development strategies must be embedded in sporting events (Coalter, 2004; Hindson, Gidlow, & Peebles, 1994). Otherwise, the trickle-down effect simply inspires members of the public who already engage in sport activities regularly (Weed et al., 2009).

• Elite role model effect

Elite role was related to the proposition that elite sport role models encourage and inspire broad participation on sport exercise (Dunn, 2016). Positive evidence was found by (Edcoms, 2007), whereas difficulty was also reported in distinguishing it from other influences, such as that from friends and other broader initiatives to encourage physical exercises. In

general, relevant literature shows that the elite role models are not a direct motivator in promoting mass sport participation. As summarized in the systematic review let by Weed et al. (2009), little academic evidence proves a causal relationship between elite sport success and mass physical participation. Therefore, the impact of elite role on community-level participation is difficult to evaluate (East London Institute, 2007) because the potential assumptions regarding the causal relations between elite sport role and broader sport participation cannot account for the learning and behaviour change processes (Payne et al., 2003).

In addition, Coalter (2004) further argued that the success of elite athletes may even deter those who do not feel confident participating in sport. Similarly, Hindson, Gidlow, and Peebles (1994) indicated that, although elite athletes can become inspiring role models for amateurs, they may prevent mass sport participation due to perceived ability gaps. Notably, compared with the elite role model, the "real life" role model exerts ostensibly greater effects, for example, among groups of elderly people from different ethnic backgrounds or teenagers (Lacroix et al., 2008).

Small and medium-sized enterprises

Globally, small and medium-sized enterprises (SMEs) represent the majority of all businesses in a country or region and account for the greatest proportion of employment (Parrilli, 2007; Ardic, Mylenko, & Saltane, 2011). For example, SMEs comprise 99% of all EU businesses (European commission, 2020), 99.9 % of all UK businesses (Department for Business, Energy, & Industrial Strategy, 2020), and 99.8% of all Chinese businesses (the State Council, 2019).

SMEs play a key role in the development of all economic sectors in a country. Significant attention has been devoted to the growth and evolution of SMEs, in both developing and developed countries, particularly on strengthening their competitiveness. This is because SMEs are considered to comprise the backbone (Amini, 2004; Singh, Garg & Deshmukh, 2008) and engine (Sinngh, Garg & Deshmukh, 2008; North & Smallbone, 2000) of the national economy, driving economic growth, providing job opportunities (Hammann, Habisch & Pechlaner, 2009), and creating intangible social assets (Liao, Fei, & Chen, 2007; Sulistyo & Ayuni, 2020).

Given the prevalence of SMEs and their importance for national economic success and social development, these enterprises are the focus of this study. The following discussion

provides a review of the literature encompassing (1) the definition of SMEs, (2) the operational advantages that SMEs possess, (3) the challenges hindering SMEs, and (4) the impacts of major sporting events on SMEs.

4.4 Definition of SMEs

Because macroeconomic conditions vary, the definition of an SME varies across countries (Etuk, R., Etuk, G., & Baghebo, 2014). In general, two primary indicators are used to judge the size of an enterprise: the number of employees and annual turnover. For example, the lower and upper limits for an SME in the European Union are 10 employees with turnover of €2 million and 250 employees with turnover of €50 million, respectively (OECD, 2005). However, the upper thresholds for the number of employees are 200 employees in Australia and 500 in the United States (OECD, 2005). Other economic indicators include capital and financial conditions, market share, and relative size within the industry (OECD, 2005).

In China, the criteria for SMEs are consistent across regions and cities. Specifically, two indicators—turnover and number of employees—are the only criteria used for classifying enterprise sizes (Table 4.7). Notably, only one of the two aforementioned indicators need be met for SME status to apply (Ministry of Industry and Information Technology, 2011). In other

words, for an enterprise to be considered large-scale, its turnover should exceed \(\frac{\pma}{1}\)100,000,000

Yuan (about GBP £12,000,000) meanwhile it should hire more than 300 employees.

Table 4.7. China's SME classification standards

Size	No. of employees	Turnover (unit: ¥10,000 ≈ GBP
	1 7	£1, 2000)
Micro	X < 10	Y < 100
Small	$10 \le X < 100$	$100 \le Y < 2000$
Medium	$100 \le X < 300$	$2000 \le Y < 10000$

Source: Ministry of Industry and Information Technology (2011) Document No. 300. Notice on the Issuance of the Standard Provisions for the Classification of Small and Medium-sized Enterprises

4.5 Operational advantages of SME status

This section maps out a range of operational advantages supposedly possessed by SMEs.

Understanding this is important because it enables us to understand why certain socioeconomic developmental aspects of Shanghainese SMEs can be affected the Shanghai F1 but other aspects may not be affected in Chapter 7 and Chapter 8.

4.5.1 Flexible operation and small, specialised market segments

Benefiting from relatively smaller corporate scale, SMEs operate more flexibly than large-scale enterprises; if a market or environmental change occurs, SMEs can adapt and change effectively (Aspelund & Moen, 2004; Gunasekaran, Patel & Tirtiroglu, 2001; Vinas et al.,

2001). Studies have noted such flexibility in areas such as working arrangements (Dex & Scheibl, 2001), production efficiency (Viñas et al., 2001; Aspelund & Moen, 2004), and market orientation (Alpkan, Yimaz, & Kaya, 2007).

SMEs often target niche markets or market segments that are neglected by large-scale enterprises (Zikmund, 1999; Kachba et al., 2012). Moreover, restricted by their limited human, financial, and material resources, SMEs identify small markets and focus on specialised production to form and continuously develop efficient growth paths. Such operational settings help SMEs to survive amid fierce domestic or international market competition (Kachba et al., 2012; McDonald & Dunbar, 2004).

4.5.2 Innovation advantages

SMEs are credited with offering innovative products and services (Bos-Brouwers, 2010; Hansen, Rand & Tarp, 2009; Klewitz & Hansen, 2014). This contributes to countries' sustainable economic development (Bos-Brouwers, 2010; Hansen, Rand & Tarp, 2009).

Here, innovation is used for new or significantly improved products or services (Aragón-Correa et al., 2008; Klewitz & Hansen, 2014). In general, three types of innovation exist: process innovation, product innovation and organisational innovation. Process

innovation is often related to the improvement of eco-efficiency in whole product chains (whereby raw materials become intermediate products and, finally, end products; Wimmer et al., 2008). Organisational innovation is related to new forms of corporate structure and management (OECD, 2005), such as sustainable supply chain management and more attention to employee development and training. Product innovation is an attempt to improve the goods and services of enterprises (Bos-Brouwers, 2010), mostly through ecological design (i.e. recycled materials and low energy consumption) in life-cycle production (Lefebvre et al., 2003: 267). Moreover, product innovation requires constant evolvement of product concepts, architecture, individual components, production, and logistics (Noci and Verganti, 1999).

This does not mean that innovation is absent from large enterprises. However, for large enterprises to transform innovation into practice, managerial obstacles are often involved (e.g. bureaucratic rigidity and a high level of formalisation; Hausman, 2005), and more time and resources are required (human, physical, and financial) (Bos-Brouwers, 2010) than for SMEs. SMEs can make relatively faster progress in transforming innovative ideas into practice because they tend to be smaller than non-SMEs, and they can therefore operate more flexibly (Bos-Brouwers, 2010; Klewitz & Hansen, 2014). Wadhwa, McCormick, and Musteen (2017)

revealed in their study of 153 SMEs in the Czech Republic that, thanks to the founders' research experience and scientific backgrounds, these businesses had the ability and decision-making power to create new technological inventions, propose interaction with research institutes, and immediately apply the results of innovation in a practical manner.

4.5.3 Awareness of brand image building

The importance of brand image is recognised in the literature in general, and its value for SMEs' long-term success was also specifically noted (Krake, 2005). Building brand image is often associated with large costs; nevertheless, scholars suggest that a strong company image can generate both monetary and non-monetary benefits for companies (Shocker & Weitz, 1998). Moreover, brand image building facilitates the transformation of SMEs into large enterprises (Boyle, 2003). This has been seen in some successful enterprises, such as Nike, Coca Cola, and Shell, which devoted attention to brand image when they were small businesses (Krake, 2005).

To create a strong brand image, a strategy of differentiation has been suggested for SMEs to distinguish themselves from other competitors in the market (Keller, 1998; Krake, 2005). In addition, SMEs were encouraged to develop secondary associations by associating

their brands with other entities not directly linked with their core products/services (Keller, 2013). According to Keller (2013), such secondary associations may include enterprises, celebrities, events, channels of distribution, alliances, and sponsorship activities. Collaboration with other entities to boost the value of a company is also called co-branding (Krake, 2005). Evidence from Khan and Ede's (2009) research revealed that connections and partnerships with different types of entities help to establish co-branding effects and raise brand awareness.

4.5.4 Corporate social responsibility strategies of SMEs

Corporate social responsibility (CSR) can be defined as a series of socioeconomic, ethical and charitable activities carried out by an organisations or institutes, which is fundamental for organisations or institutes to build relationships with other community stakeholders in a society (Du, Bhattacharya & Sen, 2010; Byers, Slack, & Parent, 2012). The Commission of the European Communities (2019) noted that effective CSR should be enterprise-led, and social, environmental, ethnical, consumer, and human rights concerns should be integrated into CSR strategies.

Traditionally, research attention to CSR has focused on large enterprises or organisations. For instance, FIFA and Streetfootballworld created the global Football for Hope

Movement, which aimed to create 20 football centres to promote public health, education, and football in poor communities across Africa (Filizöz & Fisne, 2011). NBA Cares set goals to contribute GBP£87 million to charity; provide 1.5 million volunteer service' hours to the worldwide's communities; and establish more than 400 basketball courts in which children can live a life there, and be trained to play (UN Foundation, 2009).

A group of scholars have argued that SMEs are morally obligated to have CSR awareness (Saulquin & Schier, 2007; Turyakira, 2017; Jenkins, 2009). For example, Kechiche and Soparnot's (2012) study found that SMEs managers had attempted to incorporate CSR into overall daily management.

For SME operations, three areas of focus normally exist in relation to CSR: (1) Internally, working conditions and employee-wellbeing can be improved (Santos, 2011), (2) externally, activities such as funding and sponsorship for sporting and cultural events and activities help to boost local reputation (European Union, 2018; Santos, 2011), and (3) environmentally, effort can be made to enhance the ecological efficiency of the production chain (e.g. a reduction in the product cost through recycling; Kechiche & Soparnot, 2012; Santos, 2011).

SMEs engage in CSR activities to varying degrees. The degree to which this occurs is often restricted by the characteristics and capabilities of SMEs (Kechiche & Soparnot, 2012), such as the company's age, company size, and economic and financial conditions. In relation to company age, Santos (2011) found that long-established companies tend to engage more with CRS activities than younger companies do. Similarly, larger companies show that they are more willing to involve in CSR practices and aware that engaging in CSR can return economic benefits their business in the long run (Kechiche & Soparnot, 2012). In relation to economic and financial conditions, SMEs with insufficient financial resources are less likely to consider CSR.

4.6 Challenges affecting SME development

Although SMEs have discernible operational advantages, they confront various challenges (Paul, Parthasarathy, & Gupta, 2016). Externally, these challenges mainly involve the barriers of governmental regulations (Irjayanti, 2012), insufficient knowledge of markets (Baykal & Gunes, 2004), and financial constraints (Bellone, et al., 2010). These challenges are difficult to control (Paul, Parthasarathy, & Gupta, 2016), and strategic alliances with large enterprises

are the best means to overcome them. Large enterprises are often well endowed and can respond better to the aforementioned barriers than SMEs can.

Internal challenges are specifically concerned with the improvement of performance standards in mainly three respects: cost and quality of production, productivity and production design, and the business and manufacturing process (Carlson, Upton & Seaman, 2006; Corbett & Campbell-Hunt, 2002; Singh, Garg & Deshmukh, 2008) in the long run. Singh, Garg and Deshumkh (2008) indicated that these challenges stem from inherent constraints on SMEs (limited scale) and the fact that they are often focused on narrow specialised fields and/or local markets (Singh, Garg & Deshmukh, 2008).

Human resources challenges are often ignored by SME managers but deserve more attention (Boermans & Roelfsema, 2013; Sala & Yalcin, 2015). Specifically, employee retention and development are neglected (Delerue & Lejeune, 2010; Paul, Parthasarathy, & Gupta, 2016). SMEs often face barriers to retaining proficient and experienced workers who 'keep knowledge in house' (Paul, Parthasarathy, & Gupta, 2016). The loss of these personnel is disadvantageous in terms of preventing competitors from copying the most valuable productions of a company and maintaining the company's competitive advantages (Delerue &

Lejeune, 2010; Paul, Parthasarathy & Gupta, 2016). The challenges of employee development include difficulties training SME employees, because training methods and courses at SMEs are mostly informal and serve short-term objectives (Johnson, 2002). Furthermore, managers and trainers may not attain the qualifications and requirements (Johnson, 2002).

Another challenge often ignored by SMEs is inadequate social capital resources, such as social networks, inter-enterprise connections, and informal relationships (Ellis, 2011; Pollard & Jemicz, 2010). SMEs often lack collaboration with customers, distributors, suppliers, competitors, and other research institutes to enhance the supply chain (Bennett and O'Kane, 2006). Nevertheless, social capital as an important intangible resource has been suggested to strategically build thereby can endow SMEs with the sustainable advantages (Lages, Silva, & Styles, 2009; Presutti, Boari, & Fratocchi, 2016).

4.7 Impacts of major sporting events on SMEs

Major sporting events as a valuable resource have become a 'necessity' for promoting regional economic development that ultimately benefits urban enterprises' interests (Hall, 2006) because enterprises obtain economic benefits mainly by selling goods and providing services to the tourists attracted by major sporting events (Hall, 2006; Huang et al., 2014). SMEs, as the

main participants in urban business activities and the majority of all businesses, are known to be affected by major sporting events (Solberg & Preuss, 2007). Literature has identified both positive and negative impacts.

4.7.1 Positive impacts of major sporting events on the development of SMEs

Economic gains are the primary positive impact of major sporting events on SMEs. The assumption is that major sporting events provide economic stimulation, which can generate positive externalities or spillover impacts ('the result of an activity that causes incidental benefits to others'; Solberg & Preuss, 2007, p. 232) for various industries. These industries benefit from major sporting events but may not be involved in organizing or funding the events. The spillover impacts are often measured by indicators such as income and employment.

Evidence from Huang et al.'s (2014) assessment of the economic impacts exerted by three BMSE in Shanghai [the F1, Shanghai ATP Master tennis 1000 (ATP), and Shanghai International Marathon (SIM)]demonstrated that new money inflow into a host city influenced the development of industrial sectors dominated by local SMEs, such as catering, tourism, urban public transport, culture, sports, and entertainment; the F1 yielded \$69 million of income and around 9,000 full-time jobs, the ATP yielded \$20 million of income and around 2,600 full-

time jobs, and the SIM yielded \$6 million of income and around 800 full-time jobs. Similarly, Baade, Baumann, and Matheson (2008) assessed the economic impact of the 2002 Winter Olympic Games in Salt Lake City and concluded that several sectors dominated by local SMEs, such as hospitality and catering, gained \$70.6 million during the Games period.

In grey literature, government and events report also noted positive impacts by major sporting events on SME development. For instance, an examination of the economic impact on small tourism enterprises by the Tourism Enterprise Programme (TEP) of the 2010 FIFA World Cup revealed that the TEP helped SMEs with business growth and job creation (Tourism Enterprise Programme, 2006). Specifically, the TEP contract required a total of 55,000 nonhotel star-grated rooms (provided by SMEs) for visitors attending the World Cup and launched a four-year job-creation initiative with funding from the Business Trust. For the London 2012 Olympics, the Olympic Delivery Authority (ODA) reported that business benefits to SMEs were generated as a result of the Games. For instance, nearly 70% of firms that won contracts to provide services for the Olympic Games were SMEs. Involvement in the London Olympic project also prepared SMEs to compete for major contracts in the future (Small business, 2008).

4.7.2 Negative impacts of major sporting events on the development of SMEs

Although major sporting events can generate positive impacts on SMEs, the positive impacts may apply only in the short term. In the long term, negative impacts also require consideration.

First, even the optimism of hosting sporting events negatively impacts SMEs development in the long run. It sometimes leads to overinvestment by SMEs. When the Games finish, SMEs face financial challenges as customer demand wanes, and SMEs may struggle to sell products in the longer term (Solberg & Preuss, 2007). Second, the aforementioned positive externalities of major sporting events benefit event-related SMEs in the tertiary sector, but the SMEs that benefit may have free-rider motives and be unwilling to provide private resources in return. This creates a risk of market failures, which is detrimental to all SMEs in the long run (Solberg & Preuss, 2007). Third, regional rent and operational costs often increase during major sporting events, which means that some SMEs struggle to survive (Pappalepore & Duignan, 2016). Some SMEs also move out and are replaced by event-related construction (Duignan, 2016). For instance, more than 200 local SMEs were displaced to allow for the construction of Olympic Park before the 2012 Olympic Games (Raco & Tunney, 2010). These SMEs were not compensated by governments after the events.

In some cases, host cities or countries experience a decline in the number of tourists during and after sporting events because of a crowding-out effect by major sporting events (Liu & Wilson, 2014; Burgess and Robinson, 2013). For instance, the number of tourists that visited the United Kingdom actually declined by 4% during and after the London Olympic Games (Burgess and Robinson, 2013). The crowding-out effect negatively impacts local tourism, hospitality, agricultural, retail, and other service sectors. Not only did the Games fail to provide the tourism benefits predicted but it also resulted in the wastage of perishable goods after SMEs in the industries producing perishable goods anticipated business activity that never materialised (Oyelade, 2016).

4.8 Conclusion

This chapter provide a synthesis of the impacts exerted by major sporting events, the development of SMEs, and the impacts of major sporting events on the development of SMEs.

The specific economic impacts of major sporting events include regional economic growth, industrial development, international trade, and tourism impacts. Although these types of impacts are leveraged by major sporting events, the extent of the impact is generally moderate. Regional monetary growth and increased job opportunities are major contributions

generated by the F1 and major sporting events that may contribute to turnover and employment growth among SMEs. In addition, major sporting events often attract consumption by millions or even billions of audience members and tourists at the host destination. Local SMEs benefit from providing services to these tourists. One negative economic impact that needs to be vigilant is several major sporting events require the government to invest excessive funds in the early stage of building event-related constructions, which may cause the city's financial crisis. However, the macro-level financial crisis may only generate weak impact to the event-related SMEs in achieving economic benefits.

Most studies on the image of host destinations demonstrate that one of the social impacts of the F1 and major sporting events is the symbolic significance that they acquire and that repositions or reinforces the image of a city, a region, or even a country. The city image established can attract greater numbers of tourists and contribute to tourism development. If residents perceive event hosting in a positive light, they may attend the event and engage in consumption at event-related activities. In addition, mass sport participation is a focal point in the discussion of social impacts exerted by major sporting events. In the short term, it can be either positively or negatively influenced, depending on trickle-down effects, elite role model

effects, and facility effects. Local sport SMEs may benefit from additional expenditure by sport enthusiasts.

This chapter provides a descriptive account of SMEs including the definition and features of an SME, advantages SMEs may possess and challenges they may face in business operations, and evidence of the impacts that major sporting events might exert on SMEs.

Different countries and regions have different criteria to define SMEs, but the numbers of employees and annual turnover are most frequently used as indicators for company size. The thresholds for judging this study's objectives (relating to SMEs in Shanghai) are a maximum of 300 employees and a maximum turnover of ¥100 million. The various definitions of SMEs reveal that they are often limited in size and economic scale but focus on small, specialised market segments and have the operational advantage of intrinsic flexibility in working arrangements, production efficiency, and market orientation.

SMEs also possess operational advantages: (1) Their innovation processes, whereby they can immediately apply the results of innovation in a practical sense; (2) their increased awareness in brand image building, which facilitates transformation from SME status to a

large-enterprise status; and (3) the development of CSR, whereas various SMEs with different characteristics and capabilities engage with different levels of CSR activities.

Although SMEs have discernible operational advantages, they are subject to various external challenges (barriers from governmental regulations), internal challenges (reduced productivity), human resources challenges (barriers to retaining proficient and experienced workers), and challenges in terms of social capital resources (lack of collaboration with suppliers). Therefore, SMEs should/can develop internal strategies and establish relationships with other institutes to overcome these challenges.

SMEs represent a relatively unexamined area in study in sport management. This is particularly the case in the field of event management. We know little about how the hosting of sporting events impacts SMEs and how. Therefore, our study aims to address these gaps.

This chapter provides a general overview of the research on major sporting events and SMEs, and it also informs the subsequent survey and interview question design. The discussion chapter covers the gaps, conflicts, and consistencies between previous literature and this study. In the next chapter, we introduce our research methodology.

Chapter 5: Research Methodology

This chapter provides the following outline of the research methodology for this study: (1) a review of philosophical assumptions—including ontological and epistemological assumptions and the research paradigms derived from these assumptions—to provide the rationales for the selection of critical realism as the paradigm for this study; (2) a presentation of the research strategy that was designed and an explanation of research methods/techniques selected for this study; and (3) issues in relation to validity and reliability. The chapter concludes by presenting a summary of the overall research protocol adopted in this study.

5.1 Philosophical assumptions and research paradigms

5.1.1 Ontological assumptions

Ontology is a branch of philosophy assumptions concerned with the study of what exists (Smith, 2012). In the context of social sciences, ontological assumptions set the parameters for the nature of the investigated social reality and how it presents (Blaikie, 2007; Bryman, 2008). Here, social reality is distinctive from individual cognitive reality or scientific reality, "representing as it does a phenomenological level created through social interaction and thereby transcending individual motives and actions" (Berger, 1967, p. 3–28). Ontological

assumptions constitute the core of a range of research paradigms, which form the broader philosophical frameworks in which research strategies are involved.

Two mutually exclusive categories of ontological assumptions exist, called idealist and realist (Bhaskar, 1978; Blaikie, 2007; Goertz &Mahoney, 2012). Generally, an idealist ontology assumes that the external world is illusory and does not exist independently from our thoughts. While a realist ontology assumes that either social or natural phenomena exists independently from the activities of human actors.

Realist and Idealist

The basic idea of realist is that "the kinds of things which exist, and what they are like, are independent of us and the way in which we find out about them" (Caig, 2005, p. 887). As an ontological position, the concept of realism can be described as "what is for an X to exist does not involve any such factors" (Caig, 2005, p. 888). The essence of realist is that things exist independently. In the context of social science, this means that the existence of reality is independent and not influenced by any social actors or observers.

Idealists recognise that reality in society is not external in relation to observers. In fact, reality and its assigned meanings are constantly influenced by social observers and actors

(Blaikie, 2007): First, social reality is constructed and constituted through social interaction. Second, knowledge in the society is considered to be indefinite; various researchers keep different versions when they interpreting phenomena of social reality.

Compared with realists, idealist researchers confirm the interactive connections between social reality and the perspectives of social actors. They claim that basic differences exist between social and natural phenomena because human beings create cultures and live in a world for which they have common interpretations (Blaikie, 2007). Therefore, social actors have their own interpretations of reality and can influence the development of social phenomena.

<u>Depth realist ontology</u>

Blaikie (2007) summarised a set of categories for ontological assumptions to help understand research paradigms commonly used in social science; these include shallow realist, conceptual realist, cautious realist, depth realist, idealist, and subtle realist. The key to distinguishing these categories is to find the conditions for the existence of social reality.

In this research, the most emphasis is placed on depth realist, which is the ontological basis of the critical realism on which this study rests. The rationales for choosing critical

realism as the philosophical foundation of this research are provided in Section 5.2.4. The basic concepts of depth realism are first explained.

In depth realist, Bhaskar (1978) proposed that reality includes three domains: real, actual, as well as empirical (details in Table 5.1). The domain of the empirical is the world we can experience through our senses; it is considered the superficial hierarchy of reality as it involves only what can be experienced. The domain of the actual contains events that may or may not be observable by actors. The domain of the real, considered a substantial hierarchy of reality, includes the processes and mechanisms that can generate events. It is concerned with the structures and powers of objects, which can be natural or social.

Table 5.1 Bhaskar's three domains in critical realism

	Domain of the Real	Domain of the Actual	Domain of the Empirical
Mechanisms	✓		
Events	✓	✓	
Experiences	✓	✓	✓

Source: adapted from Bhaskar, 1978:13

Bhaskar's (1979, 1986) work in the realm of reality is stratified and independent of our knowledge; it includes what can be observed and underlying causal structures and mechanisms.

This is also the reason for the name depth realist. The aim of social research based on depth

realist is thus to account for observable phenomena or events by using underlying structures and mechanisms.

5.1.2 Epistemological assumption

Epistemology is related to knowledge of reality. As a philosophical grounding, an epistemological assumption explains what types of knowledge are reasonable? and it establishes a criterion for judging both legitimation and adequacy of knowledge of the reality (Blaikie, 2007). When discussed in social sciences, epistemological assumptions provide answers to the questions of in what ways social reality is known by us? and offer propositions about what specific procedures can reliably generate social knowledge (Blaikie & Priest, 2019).

Researchers assign meanings to reality primarily through empiricism (objectivism), rationalism (subjectivism), and constructivism. According to empiricism, things have intrinsic meanings, and things take precedence over observers (Blaikie, 2007). The aim of empiricist researchers is to discover meanings that already reside in reality. This meaning is independent of consciousness and simply awaiting discovery. Hence, different observers perceive the same meaning when observing the same things. Subjectivism adopts the opposite position to empiricism. In subjectivism, things do not contribute to their meanings (Blaikie, 2007); rather,

the observer imposes meanings on things. No interplay occurs between observers and things. Therefore, different observers may assign different meanings to the same things. Constructionism rejects the views of both empiricism and subjectivism. In constructionism, observers play an active role in creating meanings. As such, meanings are neither discovered nor reside in things. Instead, meanings are constructed. The process of meaning construction is restrained by the nature of things and is derived from the social actors' engagement with reality (Harel & Papert, 1991).

Empiricism epistemology and constructionism epistemology

Empiricism epistemology: It is mostly connected with realist ontology (shallow realist). It is on account of the key opinion that knowledge is from "observing" the social world (Blaikie, 2007, p. 19). By observing this external world objectively, researchers observe the external world (in an objective manner) and use scientific concepts and theories to express the meaning of reality. A central tenet of empiricism is that anything we show to be aware of the society is true only when it can be empirically tested (Blaikie, 2007). Hence, any idea or scientific theory that are not confirmed by observation is judges as meaningless. The form of explanation advocated by empiricism is called constant conjunctions which are generalised from observed

regularities between events and able to be applied to account for or predict events (Mingers, 2004). This is also known as the pattern model. However, some pattern models cannot be established in social science to the same extent that they can in natural science.

Constructionism epistemology: It is connected to the idealist ontology. Constructionism is an alternative to empiricism and rationalism that suggests reality is not known through the use of human senses to form an impression of the external world, because fallible humans cannot observe the external world without being affected by their previous knowledge and experiences (Fuller & Loogma, 2009). In other words, all observation is theory-laden, and theory-free knowledge is impossible to generate. When constructionism is applied to social science, social actors socially construct their reality in social activities. The activities included in building knowledge occur in our shared language, perspectives and interpretations and are influenced by our cultural and historical context (Blaikie, 2007).

Neorealism epistemology

In addition to the three main types of epistemologies, others also exist such as falsificationism, neorealism, and conventionalism. As this research selects a research paradigm of critical

realism incorporating depth realist ontology and neorealist epistemology, more detailed discussion on neorealism are discussed.

As mentioned in depth realist ontology, reality has certain structures, causal relationships as well as mechanisms, which may operate even if without event or any change being observed. The epistemology of neorealism is associated with depth realist ontology and attempts to describe causal powers. In neorealism, as Keat and Urry (2011) pointed that scientifical theories described generative causal mechanisms which produced the observable phenomenon and can be explained by us.

Neorealism holds a view in common with empiricism that an external and independent reality result in producing experiences in the empirical domain (Scott, 2009). Nevertheless, neorealism also rejects the view of empiricism that a pattern model of explanation can be achieved by establishing constant conjunctions of events or phenomena (Scott, 2009). Instead, it argues that the regularities observed are only the start. What is required next and most importantly is the location of the mechanisms and structures that have generated a pattern or causal relationship. The mechanisms here are nothing more than the tendencies or powers of things to act in a particular manner.

5.1.3 Research paradigm

Research paradigms outlining ontological and epistemological assumptions are important for any type of social studies; they constitute the design of research strategies and research method selection, and they help to make sense of research data (Blaikie, 2007).

Combinations of various ontological and epistemological assumptions form various research paradigms. Table 5.2 displays the ontological options against the relevant epistemological options. A detailed explanation for this study's critical realist position is provided in Section 5.2.4

Table 5.2 Ontological and epistemological categories

	Epistemology				
Ontology	Empiricis m	Rationalism	Falsificationism	Neorealism	Constructionism
Shallow realist	✓				
Conceptual realist		✓			
Cautious realist			√		
Depth realist				Critical realism	
Idealist					✓

Source: summarized by Blaikie (2007:26)

The different research paradigms provide alternative means to build connections between social experiences and social reality. Thus, the specific research paradigm that a

researcher adopt is to express the researcher's ontological and epistemological assumptions - show his or her way of observing the world and his or her ideas on how to understand the observed world.

In Blaikie's (2007) classical research paradigm camp, four research paradigms are identified: positivism, interpretivism, classical hermeneutics as well as critical rationalism, which is derived between the 19th century and the start of the 20th century, representing the earliest effort to apply natural science research methods to social science research. The attempt to use natural scientific methods for social science continued into the 21st century, during which another range of typical contemporary paradigms appeared (Blaikie, 2007): critical realism, ethnomethodology, critical theory, structuration theory, contemporary hermeneutics, as well as feminism. Particularly, the term critical in critical realism refers to emancipatory. As such, it describes the extent to which critical paradigms explain and provide solutions for the issues of imbalances among social powers.

Two main paradigms: Positivism and Interpretivism

Two major camps of research paradigms exist, constituting mutually exclusive ontological assumptions, realism and idealism, and two epistemological assumptions, empiricism and

constructionism. In the first camp, positivism, accepts that social reality has an independent existence that can be observed and explained.

Positivism: It regards reality as what can be observed by the people senses. The acceptable knowledge of the reality is derived from experience (Bryman, 2008). Positivism claims that experience is the human knowledge' ultimate foundation (Kolakowski, 1972). Hence, the argument advanced is that anything that cannot be verified by experience is meaningless (Blaikie, 2007). The language used to describe this knowledge contains concepts that correspond to real objects. Moreover, the judgements values are suggested to be rejected from scientific knowledge because their validity of them cannot be tested by experience (Blaikie, 2007).

It is assumed that there are regularities in reality based on constant conjunctions between observed events or objects. These regularities are considered to apply across time and space and to constitute general laws (Blaikie, 2007) but not causality in nature (Paley, 2008)

Advocates of positivism point that it can give precise measurements and an objective interpretation of findings (Duekheim, 1964; Keat, 1979; Smith et al., 1996). However, the idea that reality can be perceived by the senses of human beings has been criticized and discredited

from many perspectives. The process of observing reality can involve both conscious and unconscious interpretation (Blaikie, 2018). Moreover, positivism tends to provide a pattern model of explanations, typically statistical associations occurring in a closed system to produce regularities with consistency, and this is fairly unachievable in social science contexts because of the difficulty in creating a closed and experimental system in the real social world (Sayer, 2000).

Interpretivism: The representative from the second camp is interpretivism. Interpretivism has its origins in hermeneutics and phenomenology. It seeks to establish the subjective science with the aim of generating verifiable knowledge that constitutes the social world (Blaikie, 2018; Lewis-Beck, 2004). Various terms have been used to define this research paradigm, such as antinaturalism or antipositivism. The main strength of interpretivism is that it advocates the existence of the causal relationships and the explanatory understanding of social action rather than claiming that external powers involved in are meaningless (Blaikie, 2018; Bryman, 2008). One criticism of this approach is that natural science methods cannot be applied to social sciences because of fundamental differences between the research themes of natural sciences and social sciences.

However, interpretivism has its own limits. As Bhaskar argued, interpretivism cannot recognise stratified structures deeply in social reality. These deeper and stratified structured are termed mechanisms or intransitive structures in critical realism (Blaikie, 2007, 2018). Furthermore, interpretivism emphasises only interpretations for the social actions rather than the relevant forces and factors that cause the actions (Fay, 1975; Myers, 2008).

Pragmatism

Pragmatism is a research paradigm asserting that words and concepts can be used to predict outcomes, solve problems, support actions and find process instead of describing, representing or reflecting the reality (Peirce, 1898; 1931). Pragmatism was originally promoted by Charles Sanders Peirce in the late 19th Century and further evoluted by John Dewey and William James and in the late 20th Century. The three philosophers explicated that the concepts only work when they can support actions in different contexts. The following advocators of pragmatism considered that theories, hypotheses and research findings should not be formed in a specific abstract; the social reality can be regarded as practical effects of concepts and ideas, and knowledge is only valid for enabling interventions and actions to be implemented successfully (Saunders et al., 2009).

For pragmatists, their values contribute to the reflexive process of social inquiry, which is triggered by suspicion and perceiving that something is inappropriate or even wrong and rebuilds belief after the issue is settled (Elkjaer & Simpson 2011). As pragmatism emphasises more on practical outcomes, its ontology and epistemology assumptions are not devoted to any single philosophical system and reality. In other words, pragmatism would not use the terms 'subjectivist' or 'objectivist' to manifest its standpoint in reality, for reality is actively created by the actions of individuals in the world, it is constantly changing, and based on experience of human beings, and oriented towards dealing with practical issues (Frey, 2018).

As for research strategies and research methods, there are no specific type of strategies and methods that should be adopted by pragmatism (Saunders et al., 2009). Pragmatists consider that multiple methods can be applied in a study to interpret the social inquiry and conduct the research process as long as these methods can collect credible and reliable data to solving research questions (Kaushil & Walsh, 2019; Kelemen & Rumens, 2008).

This research attempts to solve the question that how and why the hosting of Shanghai F1 can contribute to the local SMEs' socioeconomic development among the process of causal links. Pragmatism seems to be a potential guided paradigm to solve the research question, for

it to some extent can help the research starting with a question of how the Shanghai F1 generate socioeconomic impacts to the city's development and aims to seek for practical solutions for local SMEs receiving benefits from the impacts on city's development. Moreover, it can guide a research strategy of reflexive process tracing of the impact chains by adopting both qualitative and quantitative research methods which can help tease out which activities and interventions work or not on the impact achieved.

However, this paradigm relies on researchers' views (Elkjaer & Simpson 2011). Different researchers may conclude different ways of how SMEs achieve desired socioeconomic outcomes by taking advantage of the Shanghai F1. These ways may serve the practical uses.

While this research aims to explore how a fact unchanged by researchers' view (the socioeconomic impact of the Shanghai F1 indeed exists through investigating the survey data) contribute or impede the development of local SMEs. The generative mechanism should exist independent on observers rather than manifesting itself by practice and stay dormant otherwise. Therefore, the pragmatism is not suitable to be applied in this study.

Critical realism

Critical realism combines the ontology of depth realist and the epistemology of neorealism. As introduced in the aforementioned sections, the reality proposed by Bhaskar contains three domains: empirical domain, actual domain, and domain of real. One key point on which Bhaskar focused is that the real domain incorporates the existence of the underlying mechanisms of causal relationships and potential structures instead of investigated regularities and patterns among phenomena, providing explanations in things presented in a particular manner in a particular context (Bhaskar, 1978).

Mechanisms and causal relationships are independent of the events (Bhaskar, 1978) but may be or not be observed directly (Bhaskar, 1978; Outhwaite, 1987). This is an obvious contrast to positivists, who claim that the acquisition of knowledge can be achieved only through direct observation (Bryman, 2008; Fuller, 2002).

Regarding the dimensions of knowledge, Bhaskar (1978) distinguishes it between intransitive dimensions and transitive dimensions. The knowledge of transitive dimension is associated with physical items; namely, scientific research objects or social phenomena that

constitute the world. While transitive knowledge refers to theories that scientists structure to explain reality from various perspectives and discourses, namely media.

The two opposite dimensions demonstrate that, in addition to the basic realist concern with the independence of the world from the thoughts of human beings, critical realists also concern themselves with the socially constructed world and the knowledge that it contains, which cannot exist independently (Sayer, 2000). In other words, social actions and interactions in the social world are the results of social actors' behaviours subject to the influence of external forces. External forces may exist in different places and contexts.

Compared with paradigms of positivism and interpretivism, the paradigm of critical realism is considered to be more compatible with various research methods, including both quantitative and qualitative methods.

5.1.4 Rationales for selecting a critical realist paradigm

In modern social research, critical realism has been applied in various sub-disciplines, particularly, as well as in sport studies (Antchak & Pernecky, 2017; Byers 2007; Chen, 2013; Green 2004; Ziakas, 2020) and evaluation-based research (Clark, MacIntyre & Cruickshank, 2007; Funnell and Rogers, 2011; Greenhalgh et al., 2007; Pawson, 2006, 2013).

This research is based on critical realism with the following reasons. First, the ontological reasons for the use of critical realism are as follows: (1) the Shanghai F1 has indeed affected local SMEs' social and economic development since it was first hosted in 2004. (2) The existence of the impact is not affected by our observation. If another researcher conducts a similar study, the observed impact will be the same. (3) Many layers and types of reality are associated with the case of the Shanghai F1. For example, we aim to explore, in relation to economic impacts, the extent to which the hosting of the F1 has helped SMEs to increase their business revenues, whether changes to economic development differ across a spectrum of SME types, and, if so, why. Regularities and patterns can subsequently be established. (4) It is necessary to explore and understand how underlying mechanisms and structures produce observed patterns. Therefore, interview and survey approaches allow us to explore how and why the impact of staging the F1 can generate impacts on the socioeconomic development of local SMEs. If the external factors of exist, there is a need to find out what specific policies, political structure, governance structure, environmental factors, and other interventions affect changes or impacts.

Second, the study uses critical realism for epistemological reasons: One reason is that the study employs questionnaires to identify changes (in numbers) in SMEs' business revenues, the other is that interviews are used to explore the underlying relationship/causal linkages between the observed changes and the real causes.

Third, the social science basis for this study, according to which social reality exists in an open and complex social world with endless elements and forces (Pawson, 2006; Sayer, 2000), further supports our decision to adopt critical realism principles. These elements and forces include, for instance, historical background, institutional forces, and various human behavioural patterns (Pawson, 2006; Weber, Current & Benton, 1991). For example, the Shanghai F1 is a distinctive case because it is managed by a commercial company with the support of the Shanghai government.

5.2 Research strategy and design

5.2.1 Research strategy

Social researchers generally adopted four fundamental research strategies: inductive strategy, deductive strategy, abductive strategy, as well as retroductive strategy. Considering our research questions and purposes, the retroductive strategy is most suitable to this study. The

retroductive strategy (Table 5.3) adopts the ontological and epistemological paradigms as critical realism does and reflects its aims: to establish 'how to arrive at structures and mechanisms that are postulated to explain observed regularities' (Blaikie & Priest, 2019, p. 83). The retroductive strategy is based on 'cyclic or spiral processes, rather than linear logic' (Blaikie & Priest, 2019, p. 82) and provides an appropriate set of steps for creating the theory of change map in this study and conducting contribution analysis (Funnell & Rogers, 2011; Laing and Todd, 2015a): First, a theory of change map is initially developed from literature and policy documents as a hypothetical model; this map is then developed, with the mechanism broken into a step-by-step causal chain, to include the knowledge and experience of policy makers and sport experts who have their own perspectives regarding how the Shanghai F1 exerts a series of impacts on the city's and SMEs' socioeconomic development. Finally, the circle processes are used to collect survey and interview data collected from SME managers who described in detail various aspects of socioeconomic development and the extent to which their companies had been subject to leveraging by Shanghai's hosting of the F1—as evidence to evaluate the contribution analysis of each causal link. These steps help us to find the real

mechanism-robust causal links between Shanghai's hosting of the F1 and the socioeconomic development of local SMEs.

Table 5.3 Logic of the retroductive strategy

Aim	To discover underlying mechanisms to explain observed regularities
Start	Document and model a regularity
	Construct the hypothetical model of a mechanism
Finish	Identify the real mechanism through observation and/or experiment

Source: Blaikie (2007). Approaches to social enquiry.

5.2.2 Research design: case study

This study adopts case study methods, which have been used in areas such as political science (Eckstein, 2000), sociology (Luckett, 2009), and management and planning (Tuncel & Alpan, 2010). In evaluation research (Hull, 1996; Patton, 2002; Welte et al, 2004), Yin (2016) suggested that the case study approach is suitable for describing, illustrating, explaining, and enlightening. In particular, it supports researchers in retaining meaningful and holistic features of social events, such as behaviours of a group and the management of institutions or organisation (Yin, 2016). It serves to explain the assumed causality underpinning the intervention investigated, and it is useful for social research whereby traditional research strategies (e.g., experimental design) are not applicable.

In addition, the case study method is most suited to the categories of research questions such as 'how' and 'why' (Yin, 2016), which are the types of research questions that this study aims to explore. Such questions include, for example, 'in what ways and to what extent can the Formula One Chinese Grand Prix have impacts on the economic development of SMEs? Why are different types of SMEs influenced to varying degree?'. Because the types of research question and purposes of the research determine the methods used (Blaikie, 2012), case study methods are appropriate for this study.

Types of case study

According to Yin (2003), the design of case studies can be divided into two categories, the single-case studies and the multiple-case studies. This study is a single-case study which applies the case of Shanghai F1 to investigate the impact of a major sporting event on socioeconomic development of local SMEs and explore the causal relationships underlying the impact chains. In single-case studies, embedded case studies and holistic case studies are often applied to conduct social research (Yin, 2003). This study is in line with the characters of the embedded case studies which has several units (the unit of policy makers and independent sports advisers and the unit of SMEs managers) of analysis, whereby it is an embedded single-

case study.

In addition, according to the purpose of research, the types of case study (Table 5.4.1) can be mainly divided into collective case studies (Stake, 2005; Pryke & Pearson, 2006; Zainal, 2007), exploratory case studies (Jeppsson et al., 2007), descriptive case studies (Zainal, 2007; McDonough, 1997), instrumental case studies (Stake, 2005; Wasburn, 2007), explanatory case studies (Edwards, 1998; Yin, 2014) and intrinsic case studies (Finger & Houguet, 2009; Stake, 2005).

Table 5.4.1 Types of case studies

Types of ease studies	Description
Types of case studies	
Collective case studies	These involve studying a group of individuals. Researchers might study a group of
	people in a certain setting or look at an entire community of people.
Exploratory case studies	Exploratory cases act as the starting point of studies. This is usually conducted as a
•	precursor to large-scale investigations. The research is used to suggest why further
	investigations are needed.
	An exploratory study can also be used to suggest methods for further examination.
Descriptive case studies	This type of report starts with a description. The aim is to find connections between
•	the subject being studied and a theory.
	Once these connections are found, the study can conclude. The results of this type
	of study will usually suggest how to develop a theory further.
Instrumental case studies	These occur when the individual or group allows researchers to understand more
monantan case stadies	than what is initially obvious to observers.
Explanatory case studies	When an incident occurs in a field, an explanation is required. An explanatory
Explanatory case studies	report investigates the cause of the event. It will include explanations for that cause.
	The study will also share details about the impact of the event. In most cases, this
	report will use evidence to predict future occurrences. The results of explanatory
T	reports are definitive.
Intrinsic case studies	These types of studies focus on a unique subject, such as a patient. They can
	sometimes study groups close to the researcher.
	The aim of such studies is to understand the subject better. This requires learning
	their history. The researcher will also examine how they interact with their
	environment.
C C4-1 2005. T	

Source: Stake, 2005; Jeppsson et al., 2007; Yin, 2014

This study belongs to explanatory case studies, for the purpose of using cases are in line

with the description of this type: (1) When impacts occur (impacts of the Shanghai F1 and the obtained socioeconomic development of local SMEs results from the Shanghai F1) in an area or filed, explanations are required (McAdam et al., 2010); (2) The case study is used to explain causal relationships (McAdam et al., 2010)-The cases of the Shanghai F1 and the local SMEs are used to explain causal relationships between the impact of the Shanghai F1 and the socioeconomic development of local SMEs; (3) The researcher in this type of case study aims to seek for complex factors that may cause the certain outcomes (impacts on SMEs) occur (Wynn& Williams, 2008), albeit in one or a small number of instances (Easton, 2010) which include two groups of individuals in different settings-a group of policy makers and independent sports policy advisers (describing and assessing the impact of the Shanghai F1) as well as a group of SMEs managers (describing and assessing the obtained socioeconomic development from the Shanghai F1 for their companies).

Limitations of applying case studies

Criticisms associated with the applying case studies in social studies relate generally to two areas. The first major issue relates to the generalisability of case studies. For a long time, case studies methods have been criticised for providing little foundation for scientific

generalisability to populations. Generalising from a single case is impossible. However, if a series of cases are used for generalising, determining their comparability is difficult because each case is unique (Blaikie, 2007). However, Yin (2016) argued that case studies can be generalised to theoretical propositions rather than to a population or universe. Thus, case studies' purpose is not required to offer statistical generalisations, instead, to generalise theories (Yin, 2003).

The second concern regarding case studies is related not to methodological principles but to the practical use of the approach. Case studies are arguably time-consuming and may generate unmanageable amounts of data (Blaikie, 2010). Again, this complaint confuses the case study with other time-consuming data collection methods such as particular participant observations and general ethnography. Yin argues that case studies need not be time consuming but can be conducted in a manageable manner (2003).

5.3 Approaches for data collection

As suggested by Creswell (2007), the case study method not only a design of qualitative studies but also involve quantitative evidence. Hence, this research adopts a mixed-method (both quantitative and qualitative) approach for data collection by using the techniques subsequently

mentioned. Table 5.4 provides an overview of the strengths as well as limitations of the six data collection techniques recommended by Yin (2014) for case study approaches.

By comparing the six data collection techniques, Table 5.4 shows the strengths and weaknesses of each technique. Because all techniques have advantages and disadvantages, a mix of techniques is required. This study selects a mix of three techniques combining quantitative and qualitative approaches.

- document analysis
- semi-structured interviews
- self-administered questionnaires

The three techniques complement each other and facilitate data triangulation (Patton, 2015). Whilst documentation provides unobtrusive and broad political and socioeconomic evidence relating to the staging of the Shanghai F1 as well as enabling researchers to familiarise themselves with the context of the research (Yin, 2016), self-structured interviews offer insight into the change process along the causal links to tease out the causality of the F1's contribution to the development of local SMEs and to capture meaning, changes processes, and contextual

contents (Bryman et al, 1988), and self-administered questionnaires help with the collection of specific evidence on various aspects of local SMEs' development.

Table 5.4 Six sources of data collection techniques: strengths and weaknesses

Techniques	Strengths	Weaknesses		
Documentation	 Stable-can be reviewed repeatedly Unobtrusive-not created as a result of the case study Exact-contains exact names, references, and details of an event Broad coverage-long span of time, many events, and many settings 	 Retrievability-can be difficult to find Biased selectivity, if collection is incomplete Reporting bias-reflects (unknown) bias of author Access-may be deliberately withheld 		
Archival records	 Same as those for documentation Precise and usually quantitative 	 Same as those for documentation Accessibility duo to privacy reasons 		
Interviews	 Targeted-focuses directly on case study topics Insightful-provides perceived causal inferences and explanations 	 Bias due to poorly articulated questions Response bias Inaccuracies due to poor recall Reflexivity-interviewee gives what interviewer wants to hear 		
Direct observations	 Reality-covers events in real time Contextual –covers context of 'case' 	 Time-consuming Selectivity-broad overage difficult without team of observers Reflexivity-event may proceed differently because it is being observed Cost-hours needed by human observers 		
Participant-observation	 Same as above for direct observations Insightful into interpersonal behaviour and motives 	 Same as above for direct observations Bias due to participant-observer's manipulation of events 		
Physical artifacts	 Insightful into cultural features Insightful into technical operations 	SelectivityAvailability		

Source: adapted from Yin (2009)

Although document analysis can be applied in either qualitative or quantitative research design, in social research, the qualitative analysis to documents is widely used (Blaikie & Priest, 2019). According to Bryman (2008), numerous documents are available for research, including personal papers (e.g. letters and diaries), visual documents (photos and pictures), official policies or documents (e.g. statistical data deriving from national or provincial reports), and official mass media reports (e.g. newspapers and web news).

Scott (1990, p. 6) recommended four criteria, focusing on the quality of evidence, for document selection: authenticity, credibility, representativeness, and meaning. Authenticity is

a fundamental criterion in document analysis and depends on whether a document is genuine and from an official, authoritative, and reliable source. A useful list (Table 5.5) was provided by Platt (1981) for checking whether a document satisfies the criteria of authenticity.

Credibility means to who produces a document, the reason of a document required, the time period and context and places where the document was published, and whether the document contains a sincere expression of the views of the author. Representativeness depends on whether the document is typical of all relevant documents. To judge the representativeness of selected documents, researchers can firstly overview the types and number of relevant documents of their area of study (MacDonald & Tipton, 1993). Ultimately, meaning concerns whether the document is unambiguous and understandable.

Table 5.5 Checklist for ensuring the authenticity of a document

1	Does the document contain obvious errors and/or inconsistencies?
2	Do different versions of the same document exist?
3	Is there consistency of literary style, content, handwriting, or typeface?
4	Has the document been transcribed by more than one copywriter?
5	Has the document been circulated by someone with a vested interest in a particular reading of its content?
6	Does the version derive from a reliable source?

Source: Platt (1981) Evidence and proof in documentary research

Application for using document analysis for this study

A range of documents (related to major sporting events and to the F1 and Shanghainese SMEs) were reviewed. The documents were authentic and included policy and strategy documents, official annual reports, and annual working plans. The documents were also credible: They were published by the State Council, the Shanghai Municipal Government, and the Shanghai Sport Bureau between 1996 and 2018 to guide the development direction of major sporting events, exert multiplier effects from events, and leverage major sporting events to stimulate the development of the sport industry and local business. Table 5.6 summarises examples from each document source. A qualitative thematic analysis approach was used for analysing documents (Braun & Clarke, 2006) (see subsection 5.4.1, Thematic Analysis, for details). These documents were used to (1) identify rationales, strategies, and mechanisms for Shanghai's hosting of a series of major sporting events and of the F1, (2) establish an understanding of potential development areas that the hosting of Shanghai F1 might affect (multiplier and spillover effects), (3) confirm the development of small and medium-sized enterprises as active units in the urban economy, (4) identify the possible connections (in economic and social terms) between the hosting of the Shanghai F1 and the development of local SMEs, and (5) understand broader political and social contexts behind the staging of the events and the development of Shanghai's local SMEs.

Table 5.6 Key documents (major sporting events policy) reviewed in the data analysis.

Author(s) /	Year	Document Title	Publisher
Organisation(s)			
Shanghai Municipal Government	1996	The 9th Five-Year Plan for Shanghai Urban Development [Shanhaishi Chengshi Fazhan Jiuwu Guihua]	Shanghai: Shanghai Municipal Government
Shanghai Municipal Government	2001	The 10th Five-Year Plan for Shanghai Sports Development [Shanghaishi Tiyu Fazhan Shiwu Guihua]	Shanghai: Shanghai Municipal Government
Shanghai Municipal Government	2002	Shanghai Municipal Party Committee and Municipal Government's decision regarding speeding up Shanghai sports development [Zhonggong Shanghai Shiwei Shizhengfu Guanyu Jiakuai Shanghai Tiyu Shiye Fazhande Jueding]	Shanghai: Shanghai Municipal Government
Shanghai Municipal Government	2003	Shanghai Master Plan 1999- 2020 [Shanghaishi Chengshi Zongti Guihua]	Shanghai: Shanghai Municipal Government
Shanghai Municipal Government	2006	The 11th Five-Year Plan for Shanghai Sports Development [Shanghaishi Tiyu Fazhan Shiyiwu Guihua]	Shanghai: Shanghai Municipal Government
Shanghai Municipal Government	2011	Opinions on Accelerating the Construction of a Leading Sport City [Shanghaishi Renminzhengfu Bangongting Guanyu Jiakuai Tuijin Tiyu Qiangshi Jianshede Yijian]	Shanghai: Shanghai Municipal Government
Shanghai Municipal Government	2011	The 12th Five-Year Plan for Shanghai Sports Development [Shanghaishi Tiyu Fazhan Shierwu Guihua]	Shanghai: Shanghai Municipal Government
Shanghai Municipal Government	2016	The 13th Five-Year Plan for Shanghai Sports Development [Shanghaishi Tiyu Fazhan Shisanwu Guihua]	Shanghai: Shanghai Municipal Government

Shanghai Municipal Government	2018	Shanghai Master Plan 2017- 2035 [Shanghaishi Chengshi Tongzi Guihua]	Shanghai: Shanghai Municipal Government
Shanghai Municipal Government	2018	Opinions Shanghai Committee of the CPC and Shanghai Municipal Government on Launching the "Four Major Brands" in Shanghai to Promote High- quality Development [Shanghai Shiwei Shanghaishi Renmin Zhengfu Guanyu Quanli Daxiang Shanghai "Sida Pinpai" Shuaixian Tuidong Gaozhiliang Fazhande Ruogan Yijian]	Shanghai: Shanghai Municipal Government
Shanghai Committee of the CPC	2018	Opinions of Shanghai Committee of the CPC and Shanghai Municipal Government on Facing the World and Facing the Future to Improve the City Level and Core Competitiveness of Shanghai [Zhonggong Shanghai Shiwei Guanyu Mianxiang Quanqiu Mianxiang Weilai Tisheng Shanghai Chengshi Nengji He Hexin Jingzhenglide Yijian]	Shanghai: Shanghai Committee of the CPC
Shanghai Sport Bureau	2018	Three-year action plan for building an international sports event capital 2018-2020 [Jianshe Guoji Tiyu Saishizhidu Sannian Xingdong Jihua]	Shanghai: Shanghai Sport Bureau

The policy data were supplemented by influential media publications such as People's Daily and Eastday News to enhance the representativeness of the data sources (Bryman, 2016, p. 555). The media data were identified through a group of key words in Chinese: 'major sporting events in Shanghai', 'Shanghai F1', 'impact of the Shanghai F1', and 'development of Shanghai SMEs'. The meaning and significance of all documents reviewed for this study

were established through qualitative thematic document analysis subsequently informed by the researcher's perspective.

The key messages identified from the document review were then used to form the development of an interview guide, identify a list of relevant departments and organisations for the subsequent interviewee recruitment (Bowen, 2009), and build the initial theory of change map.

5.3.2 Semi-structured interviews

In interviews, researchers ask participants research-related questions to achieve an in-depth understanding of their research topic (Creswell, 2014). Interviews are seen as an exchange of opinions between two or more people on topics of common interest, allowing researchers to see the central role of human interaction in the process of knowledge production, and emphasizing the social context that the research data locates in. (Kvale, 1996). Interviews may be used to further investigate the knowledge and views of individual respondents after questionnaires have been collected (McNamara, 1999). As a method to collect qualitative data, interviews are useful to answer 'why' and 'how' questions rather than 'how many' and 'when' questions (Gratton & Jones, 2004).

The three main types of interviews are structured interviews, semi-structured interviews, and unstructured interviews. While structured interviews have a set of rigorous questions that may not be revised, and unstructured interviews more resemble informal and unreliable everyday conversations, semi-structured interviews are open, allowing new views held by the interviewee to be raised during the interview, and they also somewhat delineate the scope of interviewees' thoughts (Keller & Conradin, 2019). Therefore, the semi-structured interview is suitable to be applied in this study to contribute to implement the establishment of theory of changes.

Specifically, semi-structured interview contains two advantages which can contribute to the establishment of theoretical framework in this study. Firstly, semi-structured interview is applied to elucidate the participants' subjective responses to why certain social changes are investigated in certain ways (McAdam et al., 2010; Walsh, Edwards, & Fraser, 2007). The knowledge from documents and literature contributes limited elements to establish the causal links of the theory. Participants' perspectives as qualitative data provide new themes, interventions and factors which are useful to discover the underpin causal mechanism of the

impact chains (McIntosh & Morse, 2015) and elaborate on the assumptions of the theory of change (Smith, 1990).

Secondly, the conclusion of divergent attitudes and perspectives in semi-structured interviews generates in-depth insights and explanations regarding social reality and social changes in a special social context (Kornelson, 2005). More explicitly, semi-structured interview provides the privilege to contrast perspectives from participants in different subgroups and discern differences and similarities among their perspectives under the same interview guide (McIntosh & Morse, 2015). In this study, the perspectives from policy makers, independent sport policy and SMEs managers are converged to generate in-depth explanations of Shanghai F1 influencing the socioeconomic development of SMEs.

In addition to semi-structured interview, other qualitative data collection methods, such as focused group and observation, can also provide the in-depth description and information for the research objects and resolve conflicting information appeared in reviewing documents and literature (Blaikie, 2007; Bryman, 2001; Krueger, 1988). However, these methods are not selected in this study. The reasons include: (1) this study does not target at peer groups involving a small number of participants featured with demographical similarities or common

working and life experiences (Blaikie, 2007; Krueger, 1988), so that focused group method is not suitable to be applied. (2) researchers attempt to directly ask participants how strongly they perceive and prioritise questions to ask according to the weights of their significance. While focused groups are not suitable to confirm the emphasis, because the group members may be willing to share different emphasis and the dynamic group communications may cause a misleading emphasis deviating from the research aims. (3) the data from focus groups is not considered to be not generalised beyond the groups themselves, as story in each group keeps unique and cannot generate universal narrative knowledge of social changes (Groleau, Zelkowits & Cabral, 2009). (4) focus groups may not be appropriate to discuss sensitive social issues. Participants in the context of groups are reluctant to share their perspectives on sensitive issues, but more willing to share on their own in face-to-face semi-structured interviews. (5) The research is not necessary to involve behaviour observation (e.g., watching, listening, touching) of both SMEs and the Shanghai F1, therefore, the observation method is not suitable to be applied in this study.

The semi-structured interview approach was selected in this study. The researcher prepared key themes associated with general questions regarding research aims in advance

rather than preparing specific questions prior to the formal conversation (Arksey & Knight, 1999). Additional questions in a semi-structured interview are possible and often necessary (Patton, 2015; Rabionet, 2011). Thus, interviewees' viewpoints play a vital role in a semi-structured interview. The policy makers and sport experts interviewed for this study spent more time discussing questions related to major sporting event planning and promotional strategies. This helped with drawing the theory of change map and obtaining evidence for contribution analysis. The SME managers interviewed were likely to respond in more detail to and more deeply discuss with the researcher questions relating to how their companies had been subject to leveraging by the Shanghai F1. This helped with the collection of evidence for the part of contribution analysis relating to impacts.

When using semi-structured interviews, we were aware of several associated issues. First, interview topics and questions directly determine the quality of an interview. The researcher in this study designed the interview topics with guidance from research question and document analysis and with revisions from the main and second supervisors. Second, in many cases, challenges regarding respondents' suitability and accessibility were considered in the two rounds of this study's interviews. At the first round of interviews, interviewees familiar

with the hosting of major Shanghainese sporting events and the implementation of relevant policies were selected. These interviewees included Shanghainese sport officers, sport experts, and sport consultants. They were mainly introduced by the second supervisor, who is a professor and an authority in Shanghainese sports research. In the second round of interviews, SME managers were selected from various industries. Some of them were introduced by the interviewees from the first round of interviews, and others were directly recruited by the researcher during distribution of questionnaires on site. SME managers were more willing to accept interview invitations, because their job roles did not involve sensitive official information. The information provided by some interviewees on certain topics (particularly sensitive topics) may have been biased or erroneous. The researcher in this study carefully planned questions in advance to ensure that the required answers were obtained. Finally, the researchers' interviewing skills may have influenced the quality of the interview. Researchers who are inexperienced may lack the ability to ask questions promptly. The researcher in this study practiced interviews with the main and second supervisors before the formal interviews and adopted their feedback to ensure quality.

The construction and purpose of the semi-structured interview

The construction of the semi-structured interview include: (1) identifying the domain of the interview topic, identifying categories within the domain and identifying items of each category (McIntosh & Morse, 2015); (2) writing the question guide (McIntosh & Morse, 2015); and (3) testing the questions (Mann, 1985). For identifying the domain of the topic, interviewers need to grasp knowledge in advance to schedule topics that might be asked and included (McIntosh & Morse, 2015). Generally, researchers prepare an interview outline containing a wide range of categories related to their studies (Patton, 1990). The outline can be derived from literature review and researchers' experiences acquired from previous fieldwork experiences (Dyregrov, K & Dyregrov, A & Raundalen, 2000). After ascertaining the domain of topics, the categories, subcategories and items should be identified. A collection of items formulates the main structure of interview questions (Dyregrov, K & Dyregrov, A & Raundalen, 2000).

Writing the question guide mainly focuses on the principal of specification which concerns about the question construction from each category, the principal of division which ascertains that all the questions are appropriately organised, expressed and sequenced and the

principal of tacit assumptions which refers to marking the questions in implicit and explicit ways respectively (Berg, 1989). Implicit questions contain interviewers' own understanding of the studies and inspire participants to think of their personal responses (McIntosh & Morse, 2015). The content of explicit questions is highly in line with research questions by using academic or official formal words (McIntosh & Morse, 2015).

Testing the questions refers to rehearsing the interview performance at mock conditions and revising the questions before real interview (Mann, 1985). This process aims to allow interviewer to adopt amendments according to mock participants' response to different categories of questions, whether the questions can achieve the intended aims, and whether the implicit and explicit questions asked can motivate participants to narrate answers to research questions and causal links establishments (McIntosh & Morse, 2015).

Application for using semi-structured interviews in this study

Semi-structured interviews were adopted in this study. Specifically, we interviewed a group of policy makers and independent sports policy advisers as well as a group of SME managers.

The two groups of interviewees had different positions. Policy makers and independent sports policy advisers were selected on the basis that they had been involved with strategic planning,

decision making, and evaluating the development of the Shanghai F1. SME managers were selected according to their companies' sizes and industrial categories.

To select interview policy makers and sports experts, appropriate sample selection strategies should be applied. The sampling methods can be mainly divided into two categories: probability sampling method and non-probability sampling methods. Probability sampling methods include simple random sampling method, systematic sampling method, stratified sampling method and clustered sampling method. All these methods have common features that each member of the whole population has a chance to be selected. However, the probability sampling methods are not suitable to the interviewees sample selection of this research. Two reasons here. First, it is not available to achieve a list of the whole population of sports policy makers, independent sports policy advisers and SME managers from sporting events-related industries in Shanghai. Policy makers often undertake various roles in governments, which increase the difficulties to categorise them into different groups. The similar situation can be applied to SMEs population search. Partial SMEs cover various businesses instead of the sole one, whereby it is not feasible to divide them into specific categories when selecting interview

participants. Second, it is very costly to identify the whole population of the two types of population, whereas the research fund for this study is limited.

Non-probability sampling methods mainly include convenience sampling method, voluntary response sampling method, purposive sampling method and snowball sampling method. These methods use non-random criteria to select samples and are often applied to develop a brief understanding of a small group and representative population in exploratory qualitative research. Given that the limited research fund and intended interview population, a combination of purposive and snowballing strategies (Blaikie, 2010) was adopted in this study. Purposive sampling is applied in situations 'where it is impossible or very costly to identify a particular population; that is, where there is no available list of the population elements' (Blaikie & Priest, 2019, p. 173). In this study, the researcher could not seek out policy makers and sport experts from outside Shanghai. Thus, the second supervisor helped to contact potential interviewees. Snowballing sampling 'can be used to locate natural social networks, such as friendship networks' (Blaikie & Priest, 2019, p. 173). One or two interviewees are contacted, and those interviewees can be asked to identify other interviewees in their networks. Thus, the policy makers and sport experts interviewed with a snowballing

approach in this study were asked to identify other interviewees in their networks. Both of the two sampling approaches were used to ensure that at least one stakeholder from each category was recruited. The categories were political leaders from sport-specific fields (Shanghai Sport Bureau), academics, sport policy advisers, and policy entrepreneurs.

When relevant sport policymakers were identified and recruited to participate in this research, at least one representative was selected from each of the three relevant Shanghai Sport Bureau departments. The three departments were respectively in charge of Shanghainese sports development, major sporting events planning, and sports industry development. Seven interviewees with appropriate seniority and availability were subsequently identified. Specifically, four sports experts were identified to serve as independent consultants, among whom one was a government policy adviser who had contributed to the formulation of sportsrelated policies in Shanghai, one of whom had participated in a commissioned evaluation project for Shanghainese major sporting events (Shanghai Sport Bureau & Shanghai Sport University, 2019), and two of whom had presided over several Shanghai Sport Bureau research projects. These research projects were related to Shanghainese sports and sporting events planning. Therefore, all scholars interviewed directly or indirectly participated in the

implementation or evaluation of Shanghainese major sporting events. A further two interviews were conducted with policy stakeholders recommended by previous interviewees. They were senior managers from two companies that run major sporting events. The first company was a subsidiary of the Shanghai Sport Bureau and operated most of Shanghai's international major sporting events; the second company was a subsidiary of the first. These two senior managers all participated in and contributed to the planning process for major Shanghainese sporting events.

All nine interviews were completed between December 2018 and January 2019. This resulted in a total of nine interviews (see Table 5.7) for the project.

Table 5.7 Profiles of the interviewees (Policy makers and independent sports policy advisers)

	Interviewee	Organisation (s)	Position (s)
Policy	A	Shanghai Sport	Division chief A
makers		Bureau	
	В	Shanghai Sport	Division chief B
		Bureau	
	С	Shanghai Sport	Division chief C
		Bureau	
Independent	D	Shanghai Sport	Professor A and a consultant of
sports		University	Shanghai Sport Bureau
policy	Е	Shanghai Sport	Professor B in School of Sport
advisers		University	Leisure, Recreation and Arts
	F	Shanghai Sport	A lecturer in School of
		University	Economic and Management

G	Shanghai University	Professor C in School of
		Physical Education
Н	Shanghai Juss Sports	A deputy manager in sporting
	Development (Group)	events operations management
	Co., Ltd	
I	Shanghai International	A general manager in F1
	Circuit Co., Ltd	operations management

All interviews were conducted in Chinese by the researcher and were recorded digitally after interview participants read the information sheet of the research and signed the content form to show their wiliness to attend the interview. A semi-structured interview guide was constructed on the basis of the research questions and document analysis, and it was reviewed by the main and second supervisors to ensure clarity and connection to the research topic. The specific interview guide was designed to be aligned with the contents of semi-structured guide (Mann, 1985; McIntosh & Morse, 2015) which was formed from a list of high-level topics in four areas: (1) the rationales for and importance of Shanghai's hosting of major sporting events and the Shanghai F1, (2) the positioning in the policy agenda of Shanghai's hosting of major sporting events, (3) the socioeconomic contribution of the Shanghai F1 to the city and its SMEs, and (4) the support of governments for Shanghai's hosting of major sporting events and the Shanghai F1.

The specific questions in the interview were as follows (see appendix 1 for full version):

- (1) What was the initial goal of Shanghai's decision to host major sporting events? What events were staged? Were these events deliberately planned or not?
- (2) How have the Shanghai's major sporting events been positioned and developed? What is your opinion regarding the importance of major sporting events, particularly the Shanghai F1, for the development of Shanghai? How have major sporting events been reflected in the sports policy agenda?
- (3) To what extent do you believe that the Shanghainese government has supported the development of major Shanghainese sporting events and the Shanghai F1? What approaches have been taken to support the development of major Shanghainese sporting events and the Shanghai F1?
- (4) What types of impacts do you believe the Shanghai F1 has generated for socioeconomic development in Shanghai?
- (5) As far as you know, does the Shanghai F1 International Circuit have a cost recovery? What is the profit status? To what extent are current achievements related to government support?
- (6) Do you believe that SMEs in Shanghai have been influenced by the Shanghai F1? If so,

what have the respective effects been? Which types of SMEs have been influenced the most?

While most interviewees were willing to talk at length, others were a little guarded, perhaps constrained by a combination of sensitivity, personality factors, and unfamiliarity with the interviewer. Interview durations ranged from 30 to 90 minutes, with an average length of 50 minutes. The interview transcripts (see appendix 3 for a sample of interview transcript of a policy maker) were provided to every interviewee for accuracy verification and error correction.

For interviewing SME managers, when the interview sample was selected, a combination of purposive and snowballing strategies (Blaikie, 2010) was adopted again to ensure that managers from a variety of enterprise categories were recruited. Because the number of Shanghainese SMEs exceeds 0.3 million (Shanghai Municipal Government, 2020), the researcher had difficulties identifying the industries in which SME managers worked because there were so many. Thus, the purposive sampling strategy was used to select interviewees. The policy makers and independent sports policy adviser who were interviewed helped to introduce some of the SME managers who participated in the interviews, and these interviewees then introduced more managers from their networks.

Eight interviewees with appropriate seniority and availability were initially identified. A further two interviews were conducted with policy stakeholders recommended by previous interviewees. This resulted in a total of 10 interviews (see Table 5.8) for the project. All interviewed managers are from SMEs, for no one's turnover exceed \(\frac{1}{2}\)100,000,000 Yuan (about GBP \(\frac{1}{2}\)1,400,000) meanwhile it hires more than 300 employees.

All interviewed managers are in charge of corporate operations and familiar with corporate financial status. Two managers work in sport retail companies which have signed business contracts with operators and organisers of Shanghainess major sporting events in order to provide sports equipment to the events and event-related activities. Two managers work in sport service companies-one sport, cultural and catering company and one sport tourism companies which undertake business of sporting-event derivatives to satisfy the demand of sport tourists such as fans and audiences. Four managers are from automobile industry-related companies-one automobile service companies, one industrial trade companies, one automotive company (technology) and one automobile company (racing). Their companies are all directly or indirectly related to F1 racing, racing technology or racing parts. Particularly, the automotive company (technology) and the automobile company (racing) are located in the

Anting Automobile City and are geographically linked to the Shanghai F1. There is one manager from a design and exhibition company which partially undertakes business of sporting events exhibitions. A department head of Investment Department of Automobile City was also invited to the interview. He is familiar with the organisational and operational conditions of SMEs in Automobile City, since he had worked for conveying governmental supporting policies to SMEs in the Automobile City and helping a series of automobile SMEs settle in this place.

Table 5.8 Profiles of SME managers interviewed

Managers	Category of corporations	Corporate scales	Positions
A	Sport retail company	Turnover: ¥1 million	General manager
		Employees: 5	
В	Sport tourism company	Turnover: ¥2 million	General manager
		Employees: 20	
С	Sport retail company (tennis)	Turnover: ¥5 million	General manager
		Employees: 30	
D	Sport, cultural, and catering	Turnover: ¥8 million to	General manager
	company	¥10 million	
		Employees: 28	
Е	Design and exhibition company	Turnover: ¥2 million	General manager
		Employees: 12	
F	Automobile service company	Turnover: ¥3 million	General manager
		Employees: 8	
G	Industrial trade company	Turnover: ¥30 million	General manager
	(including auto parts trade)	Employees: 20	
Н	Automobile company (racing)	Turnover: ¥30 million	Department head

		Employees: 50	
I	Automotive company	Turnover: ¥50 million	Department head
	(technology)	Employees: 200	
J	Investment Department of	N/A	Department head
	Automobile city		

The process of preparing the interview questions for SME managers and then recording and transcribing interviews was similar to that used for policy makers. To develop contribution analysis evidence, questions were asked regarding the leveraging effects of the Shanghai F1 on companies' socioeconomic development. The specific questions in the interview were as follows (see appendix 2 for full version):

- (1) Has Shanghai's hosting of the F1 since 2004 affected or benefitted your company? If so, how and to what extent has this manifested in terms of your company's socioeconomic development?
- (2) Has your company benefitted from the relevant policies that have been implemented since Shanghai hosted the F1 in 2004? What types of policies? Are you satisfied with these policies?
- (3) Do you think that your company has gained competitive advantages since Shanghai hosted the F1 in 2004? What are the specific advantages?

- (4) Has the Shanghai F1 helped your company to establish any partnerships with other organisations?
- (5) How do you think the Shanghai F1 can contribute to the development of the city and other SMEs?

Most managers were less willing than policy makers were to talk at length, perhaps constrained by their limited knowledge of the relationship between corporate operations and major sporting event hosting. Although the researcher attempted to introduce and explain the developmental context of the Shanghai F1 and its expected contribution to the city's socioeconomic development in the policy agenda, the managers' answers nonetheless generally lacked detail. Interview durations ranged from 20 to 60 minutes, with an average length of 35 minutes. The interview transcripts (see appendix 4 for a sample of interview transcript of a SME manager) were provided to every interviewee for accuracy verification and error correction.

5.3.3 Questionnaires

Self-administered questionnaires are the mostly applied as quantitative data collection method (Blaikie & Priest, 2019). Unlike qualitative methods being used to capture context, meaning

and process (Bryman, 2008), quantitative methods are often related to mathematical measurement and representing social phenomena as numerical/statistical data (Blaikie & Priest, 2019). Self-administered questionnaires are adopted for this study to measure SME managers' perspectives on how the Shanghai F1 had affected their businesses.

The rationale for using questionnaires to measure impacts is that, first, this method can be used to examine the experience domain of critical realism such as the specific economic impact of a small growth in corporate profits in this study. Second, questionnaires can help with the collection of relevant sample data within a large target range of population. From a total of 0.3 million registered SMEs in Shanghai (Shanghai Municipal Government, 2020), 0.062% completed the survey for this study (n = 188, representing a 95% confidence level and a confidence interval of $\pm 7.15\%$ for a population size of 0.3 million). Third, questionnaires are considered to be more convenient for respondents compared with the interview method because questionnaires can be completed at any time and at respondents' preferred speed (Bryman, 2008). Finally, as the research strategy design for measuring the impacts of the Shanghai F1 on SMEs, the initial distribution of questionnaires was considered appropriate for discovering a wide range of information regarding programme participants' companies, for example,

measuring variables such as company age, size, and industrial category. Semi-structured interviews were then applied to further explore the identified causal links (in particular, to identify the extent to which the Shanghai F1 had influenced local enterprises).

As for the connection between self-administered questionnaire and theoretical framework in this study, self-administered questionnaire contributed to identify the existence of socioeconomic development (Funnell & Rogers, 2011; Mayne, 2015) on SMEs because of the hosting of the Shanghai F1 and investigate differences among the types of socioeconomic development demonstrated by different types of SMEs as a result of Shanghai hosting the F1.

The questionnaires were distributed and collected both onsite and online between July and September 2019. The onsite questionnaires collection was in line with the principal of purposive sampling method. In this research, it was impossible or very costly to identify all SMEs in Shanghai; that is, where there was no available list of the population elements (all SMEs registered in Shanghai) (Blaikie & Priest, 2019). Therefore, the onsite distribution locations were selected mainly in industrial parks and youth activity centres. The reason is that, as mentioned in the context chapter, Shanghainese SMEs (except for individual microenterprises) currently conduct business activities mainly in groupings at industrial parks

(Hu, 2007; Huang, 2013, Lei, 2017). The youth activity centre is usually open in the evening after working hours, attracting employees and managers who work in the area. Thus, the researchers had numerous opportunities to seek out target SME managers at these centres.

The on-site distribution locations specifically included the following: Shanghai National University of Sport Science and Technology Park (located in Yangpu district), Shanghai Science and Technology Pioneer Park (located in Xuhui district), Taihu Family Global Building (located in Jiading district), Shanghai International Automobile City (located in Jiading district), and youth activity centres (located in Hongkou and Huangpu district). Among these districts, the Jiading district is where the F1 is located. Other districts are city business and cultural centres.

The administrative geographic distributions of these locations are shown in Figure 5.1. The figure shows that most of the selected locations are in central urban areas, specifically in the Yangpu, Hongkou, Huangpu, and Xuhui Districts, which have more industrial parks and more tourism attractions than the other three districts do. Two of the locations selected were in Jiading, where the Shanghai F1 and automobile industries are located. In order to explicitly

show the locations of each district on the real administrative map, we circled them on the google map in red. Details are in Figure 5.2 and Figure 5.3

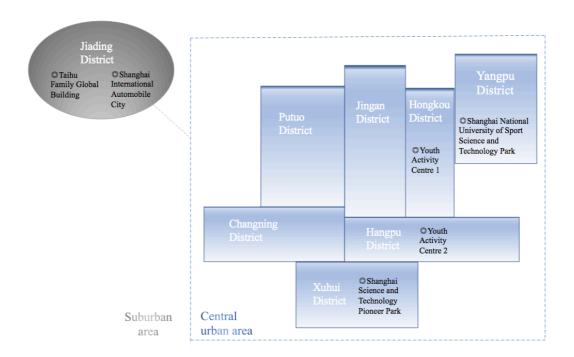


Figure 5.1 Geographic distribution of administrative districts/areas onsite

One group of managers opted to complete questionnaires onsite, and others opted to respond by email. The managers who provided their email addresses were contacted by email with a message to explain the purposes of research and a web link for the questionnaire. The managers and policy makers and sport advisers interviewed also helped to recruit more questionnaire respondents, and they did this by email who knew more SME managers than the researcher did. The online questionnaires collection also reflected the principal of snowballing

sampling method, for the managers and policy makers and sport advisers helped with their natural social networks (Blaikie & Priest, 2019).

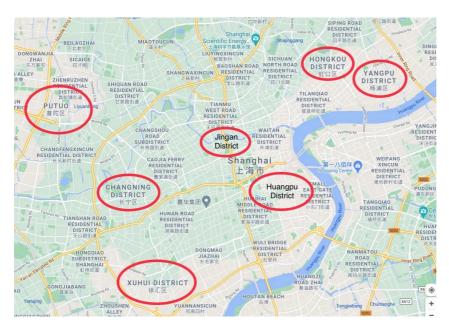


Figure 5.2 Geographic distribution of administrative districts/areas on google map—central urban area



Figure 5.3 Geographic distribution of administrative districts/areas on google map—suburban area

5.4 Data analysis approaches for Theory of Change and Contribution Analysis

This study employed thematic analysis for qualitative data (documents and interview data) and statistical analysis for quantitative data (questionnaires). NVivo 12 and SPSS were applied as analytic tools for thematic and statistical analysis, respectively. The results of thematic analysis for documents (reviewing literature, strategy reports, and policy documents) were used to build the basic theory of change map in which programme goals, inputs and underlying assumptions were relatively clearly identified. The results of thematic analysis for interview data and the results of SPSS statistical analysis for survey data helped build the advised theory of change map and contribution analysis narratives.

Specifically, SPSS statistical analysis for survey data including maximum/minimum mean values; maximum/minimum percentages and significant increases/decreases/advantages among different SMEs categories was used to identify effectiveness of relevant intended outcomes/impacts. Thematic analysis for interview data was used to categorise or confirm multi-level activities, outputs, outcomes, and external factors in advised theory of change map. Moreover, main themes with sub-themes helped provide evidence to build narrative about 'How has the Shanghai F1-related activities been implemented and subsequently contributed

triggered the impacts of local SMEs socioeconomic development and 'What should be the roles of other interventions and external factors?'. In other words, results of themes contributed to provide in-depth evidence to tease out causal relationships among chains of Inputs-Activities-Outputs-Impacts.

5.4.1 Thematic analysis

Thematic content analysis was applied for both document and interview data. Thematic content analysis is often used in qualitative analysis to identify, report, as well as analyse data for the meanings generated by people and institutes (Floersch et al., 2010; Patton, 2002).

In social research, a theme means a 'patterned response or meaning within the dataset' (Braun & Clarke, 2006: 82). As Braun & Clarke (2006) and Patton (2002) suggested, the importance of a themes is not decided by its frequency whereas by the substantive significance, which means the consistency of themes among the research participants and within the research object. The themes emerging in this study depend on the research aims (what socioeconomic impacts local SMEs create and how and why these impacts are produced) and consensus among participants.

Table 5.9 Phases of thematic analysis

Phase	Description of the Process
Familiarising yourself with your data	Transcribing data (if necessary), reading and re-reading the data, and noting down initial ideas.
Generating initial codes	Coding features of interest from the data in a systematic fashion across the entire dataset and collating data relevant to each code.
Searching for themes	Collating codes into potential themes and gathering all data relevant to each potential theme.
Reviewing themes	Checking that the themes work for the coded extracts (level 1) and the entire dataset (level 2) and generating a thematic map of the analysis.
Defining and naming themes	Conducting ongoing analysis to refine the specifics of each theme and the overall story that the analysis narrates; generating clear definitions and names for each theme.
Producing the report	Taking the final opportunity for analysis: Selecting vivid, compelling extracts, relating the analysis back to the research question and literature, and producing a scholarly report of the analysis

This method can also be flexibly used for scholars from different methodological standpoints to analyse their research data (Clarke & Braun, 2013). Nevertheless, as Guest, MacQueen and Name (2011) argued that this flexibility also creates concerns regarding reliability because of the rather wide variety of interpretations from various themes. The thematic analysis in this study is subject to critical realist methodology. Interpretations of various themes attempt to explore causal links subject to the impacts of the Shanghai F1 and the development of local SMEs.

The thematic analysis process generally has the six phases (Table 5.9). In the first phase, researchers themselves familiarise with the collected data. They must read then reread the data to appreciate the content of data deeply and broadly (Braun and Clarke, 2012). During this

phase, notes that can subsequently be conveniently referenced should be recorded for coding. Then the second phase is generating initial codes. The codes identify the data characteristics that researchers are concerned with and are related to the most fundamental part or element of the original data or information, and can evaluate related phenomena in a meaningful way (Boyatzis, 1998). At this phase, all actual data extraction must be coded and then sorted in each relevant code (Braun and Clarke, 2012). After initial coding and collation of all data, the researcher can obtain a list of the identified codes across datasets. The third phase is searching for themes. In this phase, code analysis is commenced and the combination of codes into an overarching theme is considered. To help researchers sort codes into themes, mind-maps and tables or other visual representations are useful.

At the end of this phase, a group of candidate themes with sub-themes is obtained. However, abandoning anything at this stage is unreasonable; Whether the themes can remain the all the way, or whether some certain themes will be combined, refined, divided, or even discarded, is uncertain. The fourth phase is theme review. This stage contains two levels of review and theme refinement. The first level includes review of coded data extraction. The researchers must review all extracts that have been collated for each theme and take into

account whether these extracts fit the existing themes or whether the candidate themes seem to show a coherent pattern. Once the researchers satisfy the candidate themes that can depict a candidate thematic map, the level two at this phase can commence. Level two includes a similar process but is carried out for the entire dataset. That means whether both the validity of individual themes relevant to the dataset and the accuracy with which the thematic map reflects can be evident in the dataset as a whole should be considered. The fifth phase is to define and name all the themes after obtaining a satisfactory thematic map. At this phase, themes require further definition and refinement. For each individual theme, a detailed analysis had to be conducted and the 'story' narrated by each theme identified.

Moreover, it is important to consider how themes fit into the broader overall 'story' that the researcher is telling about the data, in relation to the research questions, to avoid excessive overlap between themes.

Braun and Clarke's (2006) coding steps (Table 5.9) were employed for this study's thematic analysis. Specifically,

♦ (1) The first immersion stage involved numerous readings by the author to ensure familiarity with the collected interview data, continuing until an overall argument of the Shanghai

hosting the F1 and its impacts was established.

- ♦(2) Using NVivo 12, an initial list of important data extracts relevant to the values, development, process, and impacts of the Shanghai F1 were generated.
- ♦(3) Codes were sought and identified according to possible themes regarding the impacts of Shanghai hosting the F1 and the development of local SMEs.
- ♦(4) The candidate themes were reviewed by cross-checking with the coded extracts and the entire datasets, and were also discussed by the author and two supervisors for the purposes reflection and to promote trustworthiness (Clarke and Braun, 2013).
- ♦ (5) At the final naming stage, the essence core meaning of each theme was discussed and then labelled by the author and checked by supervisors.

The majority of documents were written in Chinese and were translated by the author to English. All interview transcripts were translated to English by the author of this study.

Back translation, conducted by two supervisors, was employed to eradicate any linguistic inconsistencies before the documents and the interview transcripts were formally coded and thematically analysed (Brislin, 1970, p. 186).

This process resulted in the construction of five main themes with their sub themes, in total, from interviews with policy makers and independent sports policy advisers:

- (1) The importance of major sporting events for the socioeconomic development of Shanghai
 - --a. Promote the infrastructure construction
 - --b. Offer significant public diplomacy opportunities
 - --c. Improve the image of Shanghai and its international reputation
 - --d. Increase citizens' pride
- (2) The impact of the Shanghai F1 on the economic development of Shanghai
 - --a. Promote the economic development of tourism and service industries
 - --b. Promote the development of Shanghai's transportation construction
 - --c. Promote the prosperity of automobile industry in Anting Automobile City
- (3) The impact of the Shanghai F1 on the social development of Shanghai
 - --a. Increase fans of the F1 and other car racing events
 - --b. Encourage youth participation of racing sport
 - --c. Improve the Shanghai's image and international reputation
 - --d. Improve the image of Anting Automobile City, Jiading

(4) The impact of the Shanghai F1 on the socioeconomic development of local SMEs
a. Increase the number of sports SMEs
b. Increase the turnover of catering, hospitality, tourism and entertainment SMEs
(5) The support of the Shanghai government for the hosting of the Shanghai F1.
a. Government promotes the Shanghai F1-related activities
b. Government support the Shanghai F1-related constructions
c. Support the metro lines construction
A total of four main themes with sub themes from interviewing SME managers:
(1) The impact of the Shanghai F1 on the socioeconomic development of Shanghai,
a. Promote the city's economic development
b. Increase the citizens' pride
c. Improve the city's image
(2) The impact of the Shanghai F1 on the social development of their companies
a. Increase the companies' turnover and profits
b. Improve the companies' products competitive edge
c. Increase the sponsorship opportunities of regional sporting events

- (3) the impact of the Shanghai F1 on the economic development of their companies
 - --a. Improve the companies' corporate image and brand value
 - --b. Build relationships with other sectors
- (4) The reason of why some SMEs managers perceive limited impacts that the Shanghai F1 generates on the socioeconomic development of their companies
 - --a. Hosting the Shanghai F1 is more like the political behaviours
 - --b. The Shanghai F1 is only one of the major sporting events in Shanghai

The final themes were checked against one another, and the original dataset was subsequently revisited to ensure that the themes were internally consistent, coherent, and distinctive (Braun, Clarke, & Weate, 2016).

5.4.2 SPSS analysis

A total of 188 managers from various industries completed the survey, with 93% finishing the survey. SPSS was used for processing survey data (Hejase, A & Hejase, H, 2013). A series of statistics tests were conducted to identify differences between SME categories; these included independent samples t-test, one-way between-groups ANOVA, and MANOVA (Pallant, 2016).

5.5 Reliability, validity and generalisability

5.5.1 Reliability

Reliability relates to consistency and is an essential criterion to measure the quality of a research. As Drost (2011, p. 106) said, reliability 'is the extent to which measurements are repeatable-when different persons perform the measurements, on different occasions, under different conditions, with supposedly alternative instruments that measure the same thing.'

Three main forms of reliability were identified by Gratton and Jones (2010): (1) interobserver reliability, (2) test-retest reliability, and (3) internal consistency reliability. With
respect to inter-observer reliability, it measures equivalence and pays attention to the question
of whether measures employed by different scholars produce similar results. It can test whether
the impacts of the Shanghai F1 generating to local SMEs are independent on observers.

Dependability audit method is used in assessing the research process to improve inter-observer
reliability (Lincoln & Guba, 1985; Nowell et al., 2017). In this study, the audit trial role is
undertaken by three supervisors. The main supervisor reviewed the all the activities [data
collection (raw data, notes of interviewing policy makers, independent sports policy advisers
and SMEs managers, interview transcripts) data analysis and assessing the accuracy of data]

of the PhD researcher. Other two supervisors helped in reviewing the process of data analysis and assessing the data accuracy. Specifically for thematic analysis, the audit trial aim is to check whether the main supervisor and co-second supervisor with the same interview data of PhD student could arrive at the similar or comparable findings instead of contradictory (Koch, 1994). The review of three supervisors ensure that the causal links built of the Shanghai F1 influencing the SMEs development is logical and traceable and the whole research is well documented (Tobin & Begley, 2004).

Test-retest reliability measures stability and relates to the question of whether the measures used by the same scholars across time produce similar results. While internal consistency reliability is concerned with whether same steps are carried out in the same way for each measurement.

In this study, the reliability specifically reflected in the following aspects. (1) The interview topics, key questions and sub-questiones centred on how the Shanghai F1 affected SMEs. Thus, the interview process was highly repeatable to different policy makers who would be interviewed, which ensure the internal consistency reliability. (2) If interviewees' answers were consistent, the information and findings concluded were unlikely to change greatly over

time, no matter they were concluded by the same researcher or by other different researchers.

(3) The documents identified, which were all related to the effects of the Shanghai F1 on SMEs were relatively focused and from official sources, which were formalised and could thus be referenced by different researchers to develop similar theory of change logic (4) Thematic analysis not only contributes to organise data but improves the standardisation of the process of data analysis, thereby framing the analytical activities of researchers. No matter the analysis process is undertaken by different researchers or the same researcher across different time, the themes concluded should be similar, which thereby greatly improve the stability and equivalence of the analysis. (5) SPSS analysis provides better reliability because this quantitative technique is computer-based and provides less variable results.

5.5.2 Validity

Validity, which is 'concerned with the integrity of conclusions generated from a piece of research' (Bryman, 2008, p. 32), is another essential criterion for evaluating the quality of research. It evaluates whether the methods applied really measure the theoretical concepts in question and to what extent the interpretation of a study accurately reflects the phenomena researched.

Two types of validity require consideration: internal validity and external validity. In social research, particularly for explanatory or causal studies, internal validity is used 'to establish causal relationship, whereby certain conditions are believed to lead other conditions' (Yin, 2009: 40). Therefore, considering the nature of this study (i.e. social study rather than scientific enquiry), to depict valid conclusions regarding the impacts of the Shanghai F1 on the socioeconomic development of local SMEs, the real causal links underlying these impacts must be identified with appropriate data collection methods for measurement and appropriate sampling methods for selecting research subjects.

Document analysis was applied to construct a hypothetical model: the theory of change map. Self-administered questionnaires were used to uncover the experience domain; namely, socioeconomic benefits to SMEs. Semi-structured interviews were used to explore the causal links of mechanism. The identification of real causal relationships facilitates in-depth study to explore principles of generative causation and clarify whether any intervention works in this specific context.

Member checking is used to return interview transcripts or specific themes descriptions to participants to provide them an opportunity to add alternative interpretation (Creswell, 2009;

Lincoln & Guba, 1985; Smith & McGannon, 2018). This study returned the theme descriptions about Shanghai Sporting event development and the socioeconomic impact of Shanghai major sporting event to the Shanghainese policy makers and independent sports policy advisers to check the accuracy of the themes concluded and offer them an opportunity to detail Shanghai sporting event context and alternative interpretation about interventions and external factors influencing the development of Shanghai F1 and impact exerted from the Shanghai F1. The similar member check process has also been applied in the interviewed SMEs managers. Themes confirmed by the participants are retained, the denied information is eliminated, and alternative descriptions mentioned in common by different participants are added to the study (Creswell, 2009; Smith & McGannon, 2018).

The researcher of this study applied the prolonged engagement to spend extend time with interviewees (Lincoln & Guba, 1985), specifically the Shanghainese policy makers and independent sports policy advisers. The researcher went to Shanghai three times to collect data. The interviews with them Shanghainese policy makers and independent sports policy advisers were completed when researcher first time went to Shanghai. Social relationships with some interviewees were established after the interview. The researcher visited several interviewees

while second and third time going to Shanghai to do field work. In the interviewees' native culture and everyday world environment (Given, 2008), they are willing to share more views of the development Shanghai sports and the impact of the Shanghai F1. This method helps researcher to obtain a better understanding of values and behaviours of the interviewees' perspectives and contributes to theme concluded (Given, 2008; Lincoln & Guba, 1985).

This study uses triangulation of data (sources-investigators) method to enhance the internal validity (Lincoln & Guba, 1985; Loh, 2013; Smith & McGannon, 2018). Particularly, different qualitative and quantitative data sources are used, including various genuine documents from official, authoritative, and reliable sources, such as visual documents, official policies and documents, and official mass media reports; different groups of interviewees (policy makers, independent sports policy advisers and SMEs managers); various SMEs surveyed featured with different industrial categories. The main investigator is the PhD student who designed the interview questions and questionnaire and conduct the thematic and statistical analysis. All the research design and analysis process were supervised by, discussed with and checked by three supervisors to form the investigators triangulation.

In addition, to improve validity in social science research, triangulation (methods) has

been suggested to provide a particularly suitable strategy (Patton, 1999; Smith & McGannon, 2018), which was adopted by this study, using both quantitative and qualitative methods. The statistical quantitative method has been used for investigating the socioeconomic impacts occur in various categories of SMEs in Shanghai. The qualitative methods including documents analysis and self-administered interviews have been used for exploring causal links underlying the impacts on SMEs and explaining the reasons that the hosting of the Shanghai F1 can influence the small economic unit-socioeconomic development of SMEs. Using two qualitative methods in this research is to improve the validity of data evidence. If the evidence derived from documents and interview data are consistent to answer the research questions, they can be used in concluding research findings otherwise they need to be eliminated (Loh, 2013).

External validity defines 'the domain to which a study's findings can be generalised' (Yin, 2009:40). In scientific experimental designs, strictly scientific random selection control can be used to generalise for a population from a representative sample. However, in the context of social science assessment, for example, the main focus of interviews is on theoretical generalisations instead of empirical generalisations.

Thick descriptive data approach is applied in this research to improve the external

validity. The context narrative developed for those researchers who may apply or criticise all or part of the research findings in the future (Lincoln & Guba, 1985; Loh, 2013). In this study, a comprehensive description of China's governance structure, Shanghai city's development, Shanghai sports development, Shanghai's hosting of major sporting events: Background, history, and policy context have been detailed in Chapter 2. Therefore, other researchers can utilise the similarities of the context to seek for useful information to conduct their research or criticise the degree of fit of the research methods and findings (Lincoln & Guba, 1985).

In addition, to improve validity in social science research, triangulation (methods) has been suggested to provide a particularly suitable strategy (Patton, 1999), which was adopted by this study, using both quantitative and qualitative methods.

5.5.3 Generalisability

Generalisability is applied by scholars to assess whether the research findings of one study can be extended to a wide range of studies or contribute to theory development (Carminati, 2018; Higginbottom, 2004; Kisely & Kendall, 2011; Smith, 2018; Sparks & Smith, 2014). This research is toward providing stratified explanations of why the Shanghai F1 can generate socioeconomic impacts to the development of local SMEs and generating the development of

theory of change and contribution analysis in sport management area as well as generalising research findings to other studies exploring the impact of major sporting events.

This study, featured with more qualitative inquiries than quantitative needs, is not based on the demographic characteristics (e.g., class, age, gender and ethnicity) of intervieweespolicy makers, independent sports policy advisers and SMEs managers as well as SMEs managers who filled out questionnaires. Instead, it targets at norms, values and standards that more or less similar among various participants (Carminati, 2018; Ryan-Nicholls & Will, 2009; Sparks & Smith, 2014). For example, when the study attempts to explain how and why the impact of SMEs can be resulted from the Shanghai F1, ten SMEs managers were interviewed with the similar questions in what kinds of socioeconomic benefits and to what extent their companies have been influenced by Shanghai staging the F1; nine policy makers and independent sports policy advisers were asked the similar questions about how the Shanghai F1 can be promoted to generate multiple impacts to the city's and SMEs' socioeconomic development and what interventions have been carried out. The results generated from interviewees are not categorised by interviewees' demographic characteristics but rely on their opinions and values of the hosting Shanghai F1 and how they divided the standards to measure

the impacts of the Shanghai F1 on local SMEs. Besides, the sample size of interviewees is not a determined factor to ensure generating generalisability (Sparks & Smith, 2014), while the interview topic and 'information-rich data' are desired (Higginbottom, 2004, p14). The interview procedures in this research can help other researchers who will conduct similar studies in exploring the impact of major sporting events on local businesses.

In order to enable the research more generalisable, the research of this study used various methods to collect data. Besides the interview, another qualitative data collection method-document analysis and quantitative data collection method-questionnaire method were applied to increase the sample varieties and capacities, which provided the foundation for conducting broad generalisability (Ryan-Nicholls & Will, 2009).

Context is another important element to influence the generalisability (Carminati, 2018; Guenther & Falk, 2019; Higginbottom, 2004). This research elaborated the background of Shanghai major sporting events, the Shanghai F1 and the SMEs in Shanghai, which can help other researchers in the similar field to understand to what extent that they can generalise results of this study to the other situations and whether replicating the research approaches and processes can be used to generalise the development of theories in another cultural context.

5.6 Conclusion

This chapter reviewed the research paradigms with ontology and epistemology assumptions. Considering this study's aim of explaining the mechanism underlying the socioeconomic impacts on local SMEs leveraged by the Shanghai F1, it adopted the critical realism research paradigm with depth realist ontology and neo-realism epistemology. The retroductive research strategy was applied to conduct the analysis in order to arrive at structures and mechanisms that were postulated to explain observed regularities.

Through applying theory of change and contribution analysis, the underlying mechanisms of the Shanghai F1 generating event-related outcomes and impacts on local SMEs' socioeconomic development were expected to be examined. The case study research design with mix-method data collection and analysis approaches was used in the analytical process of identifying impacts and examining the causal links underlying the impact chains.

Chapter 6: A theory of change for the socioeconomic impact of the Shanghai F1 on local small and medium-sized enterprises

This chapter outlines the theory of change logic underlying the socioeconomic impact of the Shanghai F1 on local SMEs. The theory of change map is presented in two steps. First, this study uses a deductive approach, drawing evidence from policy documents and research literature to portray the various aspects of Shanghai's development and of the Shanghai F1. The research uses this evidence to construct a preliminary logic model featuring five components: goals, inputs, throughputs, outputs, and impacts. Second, the mental approach is applied to refine and further develop the model by taking into account the knowledge and experience of policy makers and sport experts involved in bidding for and implementing the hosting of the Shanghai F1.

6.1 Basic theory of change logic for leveraging the Shanghai F1 to promote socioeconomic development for small and medium-sized enterprises

Figure 6.1 presents the preliminary theory of change map developed from policy documents and relevant literature. As indicated, goals and inputs were relatively clearly defined, but the throughputs, outputs and outcomes, and impacts of the F1 on SMEs were not. We present our

findings for goals and inputs in section 6.1, and we present our findings for the other theory of change model components in section 6.2.

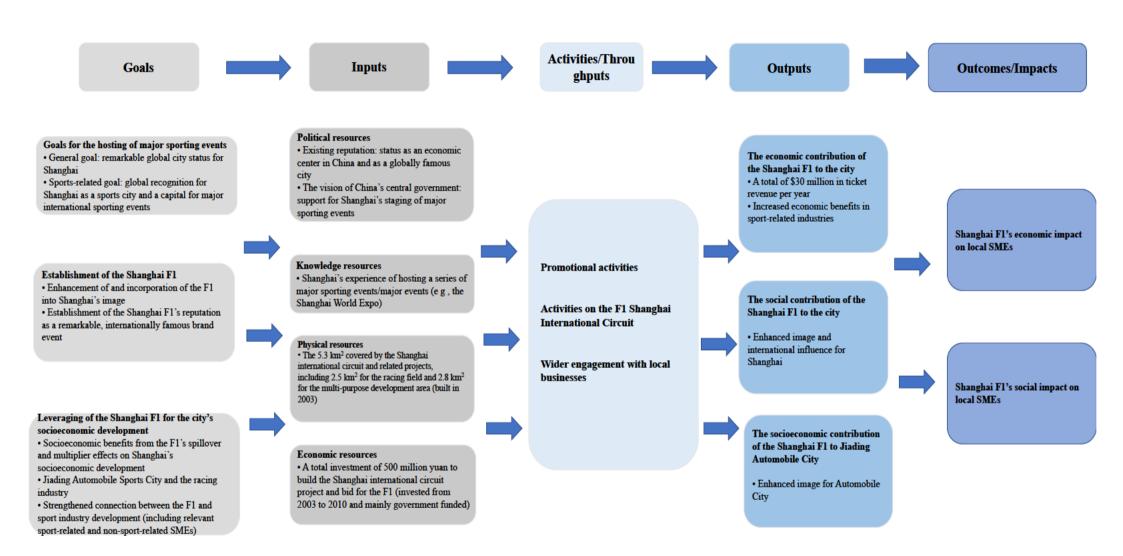


Figure 6.1 Basic theory of change logic behind the leveraging of the Shanghai F1 to promote socioeconomic development of local SMEs

6.1.1 Goals

Shanghai's hosting of major sporting events serves two agendas: The first is, in line with the broad developmental goals of the city, to achieve 'remarkable global city' status (Shanghai Municipal Government, 2002, 2020). The second is, through event hosting, to establish Shanghai's global reputation as 'a globally famous sports city' and 'the major international sporting event capital' (Shanghai Municipal Government, 2016). These two goals reflect Shanghai's ambition to enhance its international reputation and image through international sporting events.

The Shanghai F1, as one of 12 major Shanghai-branding sporting events, was deemed to represent 'the image of Shanghai' (Shanghai Municipal Government, 2011, 2016). However, Shanghai's expectations for the F1 extend far beyond the sector of sport. Because of the event's innate commercialisation and branding effects, it is expected to generate impacts on various aspects of the Shanghai's socioeconomic development outside the sport industry—from the economic and tourism sectors to other service and entertainment industries. 'The spillover and multiplier effects of the Shanghai F1' have been mentioned repeatedly in Shanghai's policies (Shanghai Municipal Government, 2006, 2011, 2016, 2018).

The Shanghai F1 is also expected to generate spillover and multiplier effects on the development of Jiading District. Jiading is a suburban district in the north-western part of Shanghai. Compared with other urban districts, Jiading used to be relatively less developed. For Jiading District, Automobile City is an important industrial park, and the automobile industry is the main industry. Therefore, the F1, as a major Shanghai-branding sporting event involving the use of sophisticated technology, drove development in Jiading District. During the implementation of a city-wide initiative called 'One Major Place-Branding Sporting Event for One District' (Shanghai Municipal Government, 2006, 2012), the Shanghai F1 unsurprisingly became a Jiading-branding event for the purpose of inspiring and advancing the development of Automobile City and the automobile industry in general (Shanghai Municipal Government, 2016, 2018).

6.1.2 Inputs

To pursue world-class city status, Shanghai, from 2000 to 2021, invested economic and physical resources and attempted to cultivate political and knowledge-based resources for the socioeconomic development of the city and of the Shanghai F1.

The economic and physical resources outlined in the theory of change map refer mainly to the economic investment in the development of the Shanghai F1 and to the construction of the Shanghai international circuit and related projects, respectively. Specifically, a total economic investment of ¥500 million Yuan was spent on the construction of the Shanghai international circuit and on the bid to host the F1 (Shanghai Statistical Yearbook, 2003). The circuit construction and other related projects covered an area of 5.3 km², including the 2.5 km² for the racing field and the 2.8 km² for the multi-purpose development area.

Regarding political resources, the most significant political resources allocated to the hosting of the Shanghai F1 were the event's approval by the State Council and the subsequent planning and investment by the Shanghai Municipal Government. The political status of Shanghai at the beginning of the 21st century was also a crucial political resource: As China's economic centre, Shanghai has favourable economic conditions. These conditions facilitated the staging of the F1 and the construction of F1-related infrastructure.

The most prominent knowledge-based resources that Shanghai invested in its hosting of the F1 were its experience of hosting other sport- and non-sport-related major events (e.g. the Shanghai World Expo).

6.2 Revised theory of change logic for leveraging the Shanghai F1 to promote socioeconomic development for local small and medium-sized enterprises

Interviews with policy makers and independent sports policy advisers provided more information to feed into the development of all logic model components (Figure 6.2), particularly Throughputs and Outputs and Impacts. In addition, causal links (the arrows in Figure 6.2) are mapped out in this version of the figure. The causal links indicate how each individual goal is supports by specific Input resources and translates to specific actions that subsequently generate outcomes and impacts. We identify a series of assumptions of the theory of change logic from three levels: (1) at macro level, a series policies about Shanghai major sporting events are being implemented in cooperation by various governmental sectors; the Shanghai F1 is successfully held and the Shanghai government actively promotes the Shanghai F1 and related racing events, (2) at meso level, the Shanghai government supports and advances transportation construction in Jiading District and there is a growing prosperity for the automobile industry in Jiading District; (3) at micro level, local SMEs desire to seek for new business opportunities, learn the advanced product knowledge and actively bid for F1-related business contracts.

Goals

Activities/Throughp uts

Outputs

\longrightarrow

SMEs related Outcomes/Impacts

Goals for the hosting of major sporting events

- General goal: remarkable global city status for Shanghai
- Sport-related goal: global recognition for Shanghai as a sports city and a capital for major international sporting events

Establishment of the Shanghai F1

- Enhancement of and incorporation of the F1 into Shanghai's image
- Establishment of the Shanghai F1's reputation as a remarkable, internationally famous brand event
- Improved operational capabilities for the F1

Leveraging of the Shanghai F1 for other types of socioeconomic development

- Economic benefits from the F1's spillover and multiplier effects on Shanghai's socioeconomic development
- Jiading Automobile Sports City and the racing industry
- Strengthened connection between the F1 and sport industry development (including relevant sport-related and non-sport-related SMEs)

Political resources

• Existing reputation status: an economic center in China and as a globally famous city

Inputs

 The vision of China's central government: support for Shanghai's staging of major sporting events

Knowledge resources

 Shanghai's experience of hosting a series of major sporting events/major events (e.g., the Shanghai World Expo)

Physical resources

- The 5.3 km² covered by the Shanghai international circuit and related projects, including 2.5 km² for the racing field and 2.8 km² for the multi-purpose development area (built in 2003)
- The Shanghai International Circuit Co., Ltd established to run the F1 event and the Shanghai F1 International Circuit (founded in 2002)
- Metro Line 11 constructed from the city center to the F1 circuit (built from 2009)

Economic resources

 A total investment of 500 million yuan to build the Shanghai international circuit project and bid for the F1 (invested from 2003 to 2010 and mainly government funded)

Promotional activities

- Portrayal of the Shanghai F1 in the Shanghai's promotional film
- Exhibition of F1 racing cars in the city center

Activities at the F1 Shanghai International Circuit on more than 300 days per year

- Shanghai F1 event three days per year (in April)
- Other automobile competitions such as the MotoGP China Grand Prix, the V8 Touring Car Series, and the A1 World Cup Grand Prix.
- Public welfare activities to acknowledge fans and benefit citizens

Wider engagement with local businesses

- Packaged promotional marketing strategy (F1tickets bundled with metro tickets and hotel accommodation)
- Host the F1 carnival per year before the F1 competitions in the city center (150 thousand people on site, 3 million spectators online)

The economic contribution of the Shanghai F1 to the city

- A total of \$30 million in ticket revenue per year
- Economic benefits for sport-related industries
- Economic benefits for tourism and service industries
- An average of 50,000 overseas visitors per year attending the Shanghai F1 event and spending approximately \$100 million on accommodation, catering, transportation, and other business.

The social contribution of the Shanghai F1 to the city

- Improved city image and international influence
- Increased corporate participation in the organisation of community sport activities
- Increased number of F1 fans
- Increased youth participation in motor sports

The socioeconomic contribution of the Shanghai F1 to Jiading Automobile City

- Economic benefit to automobile industries, automobile manufacturers, and racing industries.
- Increased R&D by the automobile industry, automobile manufacturers, and the racing industry
- Enhanced image for Automobile City
- · Enhanced infrastructure in Jiading district.
- Increased tourism in Jiading districts

The Shanghai F1's economic impacts on local SMEs

- The turnover of the automobile SMEs increased • The turnover of the tourism, service and sport-
- The turnover of the tourism, service and sport related SMEs increased
- The SMEs' product quality, production innovatio and productive skills increased
- The SMEs building the knowledge base for working with future sporting events

The Shanghai F1's social impacts on local S

- The related SMEs' branding enhanced
- The tourism, service, sport and automobile S willingness to engage with future sport activities/events increased
- The SMEs' willingness to work in partnershi with other enterprises and research constitutes increased
- The SMEs' management strategies in establic customer relationship increased

6.2.1 Goals and Inputs

To avoid repeating the discussion on the building of the preliminary logic model, we focus on presenting the revised logic model that was informed by the interview data.

In relation to Goals, the interviewees reiterated that hosting the F1 improved Shanghai's ability to host other major sporting events. Several interviewees indicated that the Shanghai F1 was 'more than a sport' and 'more like a business' (Policy maker, B; Independent sports policy advisers, D and H), signifying the importance of continuously 'reinforcing the market-oriented nature of the F1' (Policy maker, C; Independent sports policy advisers F, and H), as emphasised by several interviewees:

What Shanghai wants to emphasise is still the commercial success of hosting the event. Of course, some sporting events may need government funds as support at the early stage, but they will be fully independent in terms of generating profits and being commercialised in the future. In other words, from the very beginning, the tournaments were expected to be commercially operated and run by professional companies. (Independent sports policy adviser, F)

Market-oriented operation characterises Shanghai's major sporting events. The F1 encountered some controversy in the first few years, and the government invested a lot of money in it. However, it continues to improve its business operations, and it is providing more and more benefits. This can be seen by citizens. (Policy maker, C)

As Interviewees C and F explained, the independent commercial operation of the Shanghai F1 has been an objective since 2007 for the purpose of 'generating wider socioeconomic benefits for the city' (Policy maker, A; Independent sports policy adviser, H). The quote from Interviewee A explains the rationales for the hosting of the event, given its high cost.

From our point of view, hosting the F1 is very expensive, and the F1 itself may not make much money, but the entire city will benefit (from the hosting of the F1). Shanghai needs the F1. (Policy maker, A)

F1 is an expensive sport—from the event bidding process to the training of teams and cultivation of competitors. But all cities in the world want to bid to stage it. Why? It is interesting that, after the F1 settled in Shanghai, the leading effect of introducing commercial events in Shanghai, fuelling the market, and cooperating with sports media became very obvious. Shanghai is a world leader in its use of commercial events to promote urban development. (Independent sports policy adviser, H)

As the comments revealed, a strong sense of hope underpinned the hosting of the Shanghai F1. Interviewees expected that hosting the F1 would generate long-term economic benefits and other intangible social benefits.

In relation to the theory of change map component of Inputs, the interviewees revealed two important investments provided by the local government. One was the establishment of

the Shanghai International Circuit Co., Ltd to manage the F1 and operate the Shanghai F1 International Circuit, and the other was the construction of the Metro Line 11 from the city centre to the F1 circuit.

Two stakeholders of the Shanghai International Circuit Co., Ltd provided the following explanations:

F1 and its racing track require daily maintenance and postoperation. These tasks have been undertaken by the Shanghai International Circuit Co., Ltd. and I think that this company is doing well. (Policy maker, B)

Our company was established for the hosting of the F1 and is responsible for the F1's operation, planning, management, and promotion. After 2008, we began to seriously study how to exploit this event, create a pricing system, and promote derivative products. (Independent sports policy adviser, I)

Relevant infrastructure mentioned by stakeholders that we interviewed included Metro Line 11, which made the F1 accessible to local fans:

Now the metro service is very well developed, and the metro line directly reaches the racing track. I think the decision to stage the F1 was made ahead of time, and it had a lot of positive effects (Policy maker, A).

It may not have been very convenient to go to see the F1 before. But, after line 11 opened, it became more convenient... If I wanted to watch F1 before, I would have stayed in a hotel near the stadium, but now I can stay in the city centre. (Independent sports policy adviser, F)

The F1 provided prominent promotion and impetus for the development of Jiading District and Shanghai. This included the construction of transportation facilities, such as subways, local public transportation, and road transportation. Without the F1 stadium, the subway would not have been constructed (to Jiading) so quickly. (Independent sports policy adviser, E)

Thus, the infrastructure investment, specifically the construction of Metro Line 11, facilitated easy access to the F1 circuit by tourists and spectators as well as helping to promote the district.

6.2.2 Activities/Throughputs

The headline activities associated with the hosting of the Shanghai F1 are presented in Figure 6. We highlight the following three areas: promotional activities, activities staged on the F1 Shanghai International Circuit outside of F1 season, and activities facilitating wider engagement with local business.

Promotional activities

Promotional activities are managed by the Shanghai International Circuit Co., Ltd and supported by the aforementioned political and knowledge-based resources. Two main types of activities are involved in promotion: One is the depiction of the Shanghai F1 in Shanghai's

official promotional film (Interviewees A, B, D, and H); the other is F1 racing held in the streets of the city centre (Interviewees H and I). As one interviewee elaborated,

It should be said that the image card is definitely achieved. Shanghai's widely viewed city image promotion film features F1 shots. We are currently creating various promotions for the 40th anniversary of [China's] reform and opening up, and the F1 is a critical element. It is widely accepted that the F1 constitutes the brand image of Shanghai... The F1 has also succeeded in cultivating an entire sports culture [in the city]. (Interviewee A)

Interviewee A further explained the importance of and the motivations for featuring the F1 in the promotional film for Shanghai to represent the city's sporting image and expand the sociocultural impacts of the Shanghai F1. Specifically, this impact, as another interviewee indicated, represented the 'improvement of citizens' lives to the point of them being able to attend the modern sports. (Policy maker, B)

Activities on the F1 Shanghai International Circuit outside F1 season

The Shanghai F1 began to receive financial support from the municipal government in 2005, and it was operated according to market-oriented principles by the Shanghai Juss Sports Development (Group) Co., Ltd and the Shanghai International Circuit Co., Ltd from 2007. A series of activities were organised to leverage city-wide socioeconomic development from 2004. Several interviewees suggested that the circuit is utilised quite efficiently, with 'the

operation of more than 300 days per year of use' (Policy maker, D; Independent sports policy advisers, H and I). In addition to 3 days of Shanghai F1 racing, various other automobile competitions are staged in this circuit, such as the MotoGP China Grand Prix, the V8 Touring Car Series, and the A1 World Cup Grand Prix. Interviewees praised the efficient operation of the circuit and commented positively on the impact of the Shanghai F1. As one interviewee said,

I think the overall impact of the F1 events on Shanghai is impressive. The F1 and other car races held at the circuit have broken even with operation costs—except for the bidding fee—and even produced a surplus. (Independent sports policy advisers, D)

Outside of F1 season, other activities are held at the Shanghai International Circuit. As one policy maker said,

Many people have developed a passion for this F1 track. In the past two years, they have participated in our 'prosperous future' road run on New Year's Day. Most people have never been to the circuit before. On 1st January, the F1 track will be open for a mass road running event in which people run around it. (Policy maker, A)

These activities include commercial activities as well as public welfare activities, which not only generate extra economic income but also facilitate local citizens' engagement with automobile sport activities.

Wider engagement with local businesses

City-wide promotional marketing campaigns are organised by the Shanghai governments. These include a special offer package for the purchase of F1 tickets and hotel accommodation and an annual F1 carnival in the city centre. Local businesses are involved with the Shanghai F1 through their engagement with these promotional activities, as explained by two policy makers:

For the hotels featured in the package, high occupancy rates are guaranteed during three-day F1 events. The subway facilitates the travel of spectators, who can visit other attractions in the city centre before or after the F1. This is an opportunity for tourism companies and the tourism industry generally to increase their business volume. (Policy maker, A)

I know that some such projects have been undertaken before—that is, packages for the purchase of F1 tickets and hotel stays—but how well these sold, I am not sure (Policy maker, B).

The practice of bundling sales was praised by the interviewees for producing business opportunities benefitting hospitality and tourism companies.

With the assistance of the municipal government, we organise a prematch publicity event in the city centre every year, namely, the F1 Carnival. Some local companies participate in this event to provide services (Independent sports policy adviser, H).

The F1 Carnival is a large event that precedes F1 matches. Companies participating in the carnival have the opportunity to promote themselves to the public because the carnival attracts 150 thousand people on site and 3 million spectators online each year.

6.2.3 Outputs of the Shanghai F1

The Shanghai F1 and the associated promotional activities have gradually generated various socioeconomic benefits for the city and also for Jiading Automobile City. The following discussion outlines the intended and actual outputs/outcomes generated from the hosting of the Shanghai F1, with evidence drawn from both interviews and documents (literature and official websites).

Economic impacts for Shanghai and for Jiading Automobile City

The economic value generated by the Shanghai F1 comes primarily from \$30 million in annual ticket sales revenue. The event has also stimulated economic development for other related industries in the city (Independent sports policy advisers, D and B), including the sport industry, the tourism industry, the transportation industry, and the service industry. A report from the Shanghai F1 official website (Shsaichechang.com, 2012) indicated that the Shanghai F1 attracts about 40,000 foreign tourists per year. A total of 260,000 tourists pour into Shanghai

during the three-day period when the F1 races are held. These tourists book 80,000 rooms at double the usual price, which undoubtedly helps to generate significant income for other local businesses.

More notably, the Shanghai F1 has contributed to the economic development of Jiading Automobile City and the automobile industries (Policy makers, A and B; Independent sports policy advisers, H and I) by stimulating the development of the automobile industry, automobile manufacture, and the motor racing industry. It has also increased R&D (Research and Development) by the automobile industry, automobile manufacturers, and the racing industry, as well as enhancing infrastructure construction and increasing tourism.

Social impacts on the city of Shanghai and Jiading Automobile City

Unlike its economic impact, the social impact of the F1 is difficult to quantify. Our interview data provide some anecdotal evidence for three main areas of social impact: an enhanced image for Shanghai and for Jiading Automobile City, increased participation in motor sports, and corporate participation in community sport activity organisation.

6.3 Conclusion

This chapter provides a theory of change map for the socioeconomic impact of the Shanghai F1 on SMEs. It also introduces in detail four theory of change map components: goals, inputs, throughputs, and outputs. A fifth component, the socioeconomic impacts of the F1 on SMEs, is shown on the map. These impacts are introduced and described in further detail in Chapter 7 and Chapter 8.

Chapter 7: Economic impact of the Shanghai F1 on small and medium-sized enterprises

This chapter outlines the economic impact of the Shanghai F1 on SMEs. It described the analysis, which consisted of two steps: First, this study obtained quantitative data from a survey of local SME managers. Second, this study applied contribution analysis: For this, this study compiled together qualitative and quantitative evidence to assess the contribution impacts of the Shanghai F1—in terms of beneficial economic effects—on local SMEs, and this study evaluated robustness of evidence-strong, medium and weak level for supporting the causal linkages established among Activities—Outputs—Impacts outlined in the theory of change and concluded the contributory and impedimentary factors influencing the strong and weak causal links established from evidence.

7.1 Quantitative evidence

This study performed statistical analysis of the survey data by using SPSS software. We first conducted a descriptive analysis for the data. The information on the businesses surveyed is summarised in Table 7.1.

Table 7.1 Features of surveyed SMEs

Details	
Company ages	24% 1–3 years 20% 4–6 years

7.4% 7–9 years
9.7% 10–12 years
38.9 % 12+ years
19.4% retail industry
23.4% entertainment and service industries
17.7% sports and automobile industries
25.1% financial and educational industries
14.3% other
21.7% less than 10 people
32.6% 10–50 people
8.6% 51–100 people
20.6% 10–300 people
16.6% 300+ people
15.4% less than 100
10.9% 100–500
14.3% 501–1000
12% 1001–2000
16.6% 2001–10000
8.6% 10001–20000
22.3% 20000+
79.4% domestic capital companies
20.6% foreign capital companies
16.6% labour-intensive companies
52.6% technology-intensive companies
24.6% capital-intensive companies

7.1.1 Using economic development indicators to measure the leveraging effects of the

Shanghai F1 on local SMEs

Respondents were asked to indicate whether and to what extent they perceived that the hosting of the F1 had affected their businesses. Specifically, 7 items comprised indicators for measuring companies' general economic development (e.g., growth in turnover), 2 items comprised indicators for measuring employment changes (e.g., changes in numbers of casual workers), and 10 items comprised indicators for measuring whether companies obtained improvements

in competitive advantages (e.g., product design) in the business market as a result of the Shanghai F1.

This study modified the dimensions of general economic development indicators and competitive economic advantage indicators from another scale; this scale was drawn mainly from a questionnaire on the economic development of SMEs in *Research on the Status of China's Small and Medium-Sized Enterprises* (2011), a publication issued by the Policy Research Department of the China Association of Small and Medium Enterprises. We extracted indicators (indicator keywords are in Table 7.2) for economic development from the three major categories of *innovation and technology*, *business strategy*, and *operational development*.

Most of the indicators extracted from elsewhere were used in their original form or were modified for the survey in this research. Modifications were applied for several reasons:

(1) Most of the indicators were expressed in question sentences (e.g., 'In general, was your company inclined to emphasise the improvement of product services?') rather than phrases. (2) Within each indicator category, the scales used for measurement varied from a 2-point scale to a 6-point scale (e.g., in the category for innovation and technology, the scales for measuring each indicator varied). (3) Within each category of indicator, various types of scales were used.

For instance, in the category for business strategy, the scales that were featured included questions with *yes* versus *no* answers and *important* versus *unimportant* answers as well as a mixture of multiple-selection and fill-in-the-blank questions. (4) Several indicators, such as intellectual property rights, information management systems, and ISO certification were irrelevant to this study because they related to the area of management rather than economic development.

Table 7.2 Indicators of an SME' economic status from from *Research on the Status of China's SMEs*

For measuring the	Independent R&D	
development of	Joint scientific research institutions	
innovation and	Mergers and acquisitions	
technology	Intangible assets	
	Intellectual property rights	
	Information management systems	
	ISO certification	
For measuring the	Product service	
improvement of	New product concept	
business strategy	Product improvement	
	Product investment	
	Product positioning	
	Productive skills	
For measuring	Turnover growth	
operational	Market share	
development	Product cost	
	Profit growth	
	Import and export	

In addition, this study referred to the categories of measurement for the economic development of SMEs that featured in the *Small and Medium-Sized Business Survey* (1997) published by the Centre for Business Research of Cambridge University, which were also aligned with the three categories in *Research on the Status of China's SMEs* (2011). The extracted indicators are shown in Table 7.3.

There are three reasons for referring to the Cambridge survey. First, it was published by an authoritative research institute serving interdisciplinary research and was named one of the most comprehensive SME surveys constituting a valuable benchmark for future researchers by *The Guardian*, the *International Small Business Journal*, and the *International Journal of Industrial Organisation and Small Business Perspective* (cited from Cosh & Hughes, 1998). Second, all indicators in the three categories include more details on SMEs' development than in Research on China's SMEs and were easy for managers completing the survey to understand because the indicators were concisely phrased. Third, the scales applied in each category were internally consistent, which merited consideration when we designed the questionnaire for this research.

Table 7.3 Indicators of an SME' economic status from *Cambridge* the *Small and Medium-Sized Business Survey*

For measuring	Replacing products being phased out			
developments in	Extending product ranges			
innovation and	Reducing production lead times			
technology	Reducing consumption of materials			
	Reducing consumption of energy			
	Improving product quality			
	Fulfilling regulations and standards			
For measuring	Productive skills			
improvements in	Marketing and promotion			
business strategy	Speed of service			
	Product or service design			
	Product or service			
	Product quality			
	Specialisation of expertise/products/services			
	Range of expertise/products/services			
	Flair and creativity			
	Personal attention and responsiveness to client needs			
For measuring	Price			
operational	Product cost			
development	Turnover growth			
	Growth in exports			
	Domestic market share			
	Overseas market share			
	Growth in employment			
	(Self-employed workers, casual workers, and fixed-term			
	workers)			
	Profit margin on sales			

This study developed a new survey by using indicators from the aforementioned two surveys (indicators detailed in Table 7.4). Because the aim of this study was to examine and

evaluate the impact of the Shanghai F1 on the economic development of local SMEs, we also implemented one change in the survey: We integrated the indicators into three categories for describing impacts experienced by companies: general economic development, improvements in competitive edges, and employee numbers to measure the economic development of SMEs. The three categories we extracted from Research on the Status of China's Small and Medium-Sized enterprises (2011) and Cambridge's Small and Medium-Sized Business Survey (1997) reflected the development of SMEs in the context of the national macro economy. However, this research focused only on the extent to which the Shanghai F1, specifically, influenced the micro-level SMEs for various general economic development indicators (operation and innovation), whether or not the implementation of business strategy drove improvements in companies' competitive advantages, as described by the indicators (e.g. product price and product cost), and whether or not employee numbers changed (one of the main indicators for measuring a company's economic development, mentioned in the Literature Review chapter).

Table 7.4 Economic indicators used in the survey from this study

Aspects to be	Survey questions	Economic development
measured		indicators
Companies'	Please indicate, for each type	Growth in turnover
general	of growth, how your	Growth in profit

economic	company has been affected	Growth in domestic market	
development	since Shanghai hosted the F1	share	
•	in 2004.	Growth in overseas market	
	(5-point Likert scale: <i>strongly</i>	share	
	negatively affected,	Growth in exports	
	negatively affected, no effect,	Growth in financing	
	positively affected, positively	Growth in sponsorship	
	affected, and strongly	opportunities for regional	
	positively affected).	sporting events	
Improvements in	Please indicate, for each of	Product price	
companies'	the following areas, how your	Product cost	
competitive	company's competitive	Product quality	
advantages	advantages have improved	Product design	
	since Shanghai started	Product knowledge	
	hosting the F1 in 2004. (5-	Marketing data collection	
	point Likert scale:	capacity	
	insignificant improvement	Product innovation	
	slightly significant	Promotional strategy	
	improvement, moderately	Productive skills	
	significant improvement,	Attraction of liquidity	
	significant improvement and		
	very significant improvement.		
Changes in	Please indicate, for the	Casual workers	
companies'	following types of workers,	Fixed-term workers	
employee	how the number of		
numbers	employees working at your		
	company has changed since		
	Shanghai hosted the F1 in		
	2004.		
	(5-point Likert scale, greatly		
	decreased, decreased, no		
	change, increased, and		

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Dimension 1: Measuring companies' general economic development

The Cronbach's alpha (.933) value of the scale used in this study indicates acceptable internal consistency. Table 7.5 outlines the influence of the F1 (with a 5-point Likert scale) for each general economic development indicator. In the perception of the surveyed managers, the most significant of the various impacts that the F1 exerted on their companies' economic development was on 'growth in turnover', with survey responses corresponding to a mean score of 3.26. The surveyed managers perceived that the F1 exerted the least influence on 'growth in financing', with their responses corresponding to a mean score of 3.08. In general, the mean scores representing the F1's impacts on general economic development corresponded with *unaffected* and *positively affected*, tending towards *no effect*.

Table 7.5 Mean scores corresponding to the Shanghai F1's perceived influence on indicators of companies' general economic development since 2004

Items	Means	Standard deviations
Growth in turnover	3.26	.666
Growth in profit	3.24	.770
Growth in sponsorship	3.23	.732
opportunities for regional		
sporting events		
Growth in domestic	3.20	.686
market share		
Growth in overseas	3.14	.703
market share		
Growth in exports	3.10	.698
Growth in financing	3.08	.647

MANOVA was used to examine differences among the economic status scores of various corporate categories (including company ages, corporate industry types, number of corporate employees, corporate annual turnover, corporate capital types, and corporate primary resource type). The results indicated no statistically significant difference in between-subjects effects for each corporate category.

A series of independent-samples t tests was used to compare the impact of the F1 on each economic indicator (comparing means of managers' scores) for corporate categories containing two subgroups (domestic capital companies vs. foreign capital companies). One-way between-groups ANOVA with post-hoc tests was conducted between subgroups of different corporate categories (details of corporate categories are provided in Table 7.6). The results of this range of tests are presented and discussed below.

Table 7.6 Corporate categories of SMEs in the survey

Categories of companies	Subdivisions of categories
Industry category	(1) Retail
	(2) Entertainment and service
	(3) Sport and automobile
	(4) Financial and technology
	(5) Other
Annual turnover	(1) Less than 100 thousand
	(2) 100–500 thousand
	(3) 501–1000 thousand
	(4) 1,001–2,000 thousand
	(5) 2,001–10,000 thousand
	(6) 10,001–20,000 thousand
	(7) 20,000 thousand +

Number of employees	(1) less than 10 people	
	(2) 10–50 people	
	(3) 51–100 people	
	(4)101–300 people	
	(5) 300+ people	
Primary resource types	(1) Labour-intensive	
	(2) Technology-intensive	
	(3) Capital-intensive	
	(4) Other	

Source: China's Ministry of Industry and Information Technology (2011): Standards and Regulations for Small and Medium-sized Enterprises

Results for companies with different sizes

For companies with different sizes (including five categories, less than 10 people, 10-50 people, 51-100 people, 101-300 people and above 300 people), a series of between-group differences were found when testing different general economic indicators. The results are presented below, and displayed in the table 7.7

There was a statistically significant difference at the p < .05 level in 'growth in profit' scores for the five categories of company: F (4, 163) = 2.488, p = .045. The actual difference in mean scores between the groups was medium. The effect size, calculated using eta squared, was .06, indicating a medium effect size. Post-hoc comparisons using the Tukey HSD test indicated that the mean score for the category of company 'less than 10 people' (M = 2.97, SD = .763) was significantly different from the category of company 'above 300 people' (M = 3.58, SD = .902). Other categories did not differ significantly from either the two above

mentioned categories. Therefore, compared with companies with 'above 300 people', SME managers in companies with 'less than 10 people' (M = 2.97) perceived their companies were not affected by the Shanghai F1 on 'growth in profits', whereas SME managers in companies with 'above 300 people' (M = 3.58) perceived their companies were positively affected.

There was a statistically significant difference at the p < .05 level in 'growth in turnover' scores for the five categories of company: F(4, 163) = 2.969, p = .021. The actual difference in mean scores between the groups was medium. The effect size, calculated using eta squared, was .07. Post-hoc comparisons using the Tukey HSD test indicated that the mean score for the category of company 'less than 10 people' (M = 3.03, SD = .687) was significantly different from the category of company 'above 300 people' (M = 3.58, SD = .809). Other categories did not differ significantly from either the two above mentioned categories. Therefore, compared with companies with 'above 300 people', SME managers in companies with 'less than 10 people' (M = 3.03) perceived their companies were not affected by the Shanghai F1 on 'growth in turnover', whereas SME managers in companies with 'above 300 people' (M = 3.58) perceived their companies were positively affected.

There was a statistically significant difference at the p < .05 level in 'growth in sponsorship opportunities for regional sporting events' scores for the five categories of company: F(4, 163) = 3.000, p = .02. The actual difference in mean scores between the groups was medium. The effect size, calculated using eta squared, was .07. Post-hoc comparisons using the Tukey HSD test indicated that the mean score for the category of company 'less than 10 people' (M = 2.92, SD = .722) was significantly different from the category of company 'above 300 people' (M = 3.54, SD = .905). Other categories did not differ significantly from either the two above mentioned categories. Therefore, compared with companies with 'above 300 people', SME managers in companies with 'less than 10 people' (M = 2.92) perceived their companies were not affected by the Shanghai F1 on 'growth in sponsorship opportunities for regional sporting events', whereas SME managers in companies with 'above 300 people' (M = 3.54) perceived their companies were positively affected.

Table 7.7 Results of companies with different numbers of employees in the general economic indicators

General	Category 1 of	Category 2 of	Results
economic	company	company	
indicators			
Growth in profit	Less than 10 people	Above 300 people	F (4,163) =2.488, p=.045
	M=2.97 ; SD= .763	M=3.58;.SD=.902	The effect size, calculated using eta squared, was 0.06, which indicates a medium effect.

Growth in turnover	M=3.03; SD=.687	M=3.58; SD=.809	F (4,163) =2.969, p=.021 The effect size, calculated using eta squared, was 0.07, which indicates a medium
Growth in sponsorship opportunities for regional	M=2.92; SD=.722	M=3.54; SD= .905	F (4, 163) = 3.000, p=.02 The effect size, calculated using eta squared, was 0.07, which indicates a medium
sporting events			effect

Results for companies with different annual turnover

For companies with different annual turnover, there were 7 groups: (1) less than 100 thousand, (2) 100-500 thousand, (3) 501-1000 thousand, (4) 1,001-2,000 thousand, (5) 2,001-10,000 thousand, (6) 10,001-20,000 thousand, and (7) above 20,000 thousand. A series of between-group differences were found when testing different general economic indicators. The results are presented below, and displayed in the table 7.8

There was a statistically significant difference at the p < .05 level in 'growth in turnover' scores for the five categories of company: F (4, 163) = 2.294, p = .037. The actual difference in mean scores between the groups was medium. The effect size, calculated using eta squared, was .08. Post-hoc comparisons using the Tukey HSD test indicated that the mean score for the category of company 'less than 100 thousand' (M = 2.92, SD = .744) was significantly different from the category of company 'above 20,000 thousand' (M = 3.46, SD = .741). Other

categories did not differ significantly from either the two above mentioned categories. Therefore, compared with companies with annual turnover 'above 20,000 thousand', SME managers in companies with 'less than 100 thousand' (M = 2.92) perceived their companies were not affected by the Shanghai F1 on 'growth in turnover', whereas SME managers in companies with 'above 20,000 thousand' (M = 3.46) perceived their companies were positively affected.

These aforementioned statistical results were concluded in the table 7.8 below.

Table 7.8 Results of companies with different annual turnover in the general economic indicators

General	Category 1 of	Category 2 of	Results
economic indicators	company	company	
Growth in turnover	Less than 100 (unit: thousand)	Above 20,000 (unit: thousand)	F (4, 163) =2.294, p=.037
	M=2.92, SD=.744	M=3.46, SD=.741	The effect size, calculated using eta squared, was 0.08, which indicates a
			medium effect

Dimension 2: Measuring the improvement of business strategy

The Cronbach's alpha (.980) value of the scale used in this study indicates acceptable internal consistency. Table 7.9 outlines the influence of the F1 (with a 5-point Likert scale) for each business strategy indicator. In the perception of the surveyed managers, the most significant of

the various improvements that the F1 exerted on their companies' business strategy was on 'product quality', with survey responses corresponding to a mean score of 2.25. The surveyed managers perceived that the F1 exerted the least improvements on 'product price', with their responses corresponding to a mean score of 2.04. In general, the mean scores representing the F1's impacts on improvement of business strategy corresponded with slightly significant improvement and moderately significant improvement, tending towards slightly significant improvement.

Table 7.9 Mean scores corresponding to perceived improvements in indicators of business strategy

Items	Means	Standard deviations
Product quality	2.25	1.239
Product design	2.21	1.223
Product knowledge	2.18	1.225
Product innovation	2.17	1.224
Marketing data collection	2.17	1.237
capacity		
Product cost	2.13	1.260
Promotional strategy	2.12	1.234
Productive skills	2.12	1.252
Attracting the liquidity	2.11	1.238
Product price	2.04	1.137

A series of independent-samples t-tests and one-way between groups ANOVA with post-hoc tests were conducted within subgroups of different corporate categories (See Table 7.10 for details). The results of this range of tests are presented and discussed below.

Results for companies with domestic and foreign capital companies

There was significant difference in the promotional strategy scores for domestic capital companies (M = 2.03, SD = 1.189) and foreign capital companies (M = 2.5, SD = 1.354; t (166) = -2.002, p = .47, two-tailed). The magnitude of the differences in the means (mean difference = -.470, 95% CI: -.934 to -.006) was very small (eta squared = .011). Therefore, compared with companies with 'above 300 people', SME managers in 'domestic companies' (M = 2.03) perceived their companies were not affected by the Shanghai F1 on the improvement of 'promotional strategy', whereas SME managers in 'foreign companies' (M = 2.5) perceived their companies obtain slightly improvement in 'promotional strategy'.

Table 7.10 Results of companies with different capital nature in the promotional strategy

Item	Category 1 of	Category 2 of	Results
	company	company	
Promotional strategy	Domestic capital companies M = 2.03, SD= 1.189	Foreign capital companies $M = 2.50 \text{ SD} = 1.354$	t (166) = -2.002; p=.047, two-tailed. The effect size, calculated using eta squared, was 0.011, which indicates a small effect

Dimension 3: Measuring changes in employee numbers

As detailed in Table 7.11, the surveyed managers perceived that the F1 more significantly affected the numbers of fixed-term workers, for which the perceived effect corresponded to a mean score of 3.16, and less significantly affected the numbers of casual workers, for which the perceived effect corresponded to a mean score of 3.11. In general, the mean scores representing the perceived changes in employee numbers corresponded to answers between *no change* and *increased*, tending more towards *no change*. In addition, no statistically significant difference was present between the two groups for fixed term workers and casual workers.

Table 7.11 Mean scores corresponding to perceived changes in employee numbers

Items	Means	Standard deviations
Casual workers	3.11	.642
Workers on fixed term	3.16	.678

7.2 Contribution analysis of the evidence collected to assess the Shanghai F1's economic impact on SMEs

This research aims to establish a clear understanding of two things: (1) the extent to which economic changes reported by local SMEs were caused by the hosting of the F1 and (2) whether we can confidently conclude that the F1 was responsible for those changes.

Per the theory of change principle, evidence gathered from qualitative data (including interviews with both policy makers and SME managers) and quantitative data (in the section 7.1) is used for the theoretical logic development of any changes observed. This chapter develops a contribution narrative based on our analysis of causal links in the impacts chain, then provides an assessment of the data's robustness, and finally interrogates the logic underlying each theory of change component.

7.2.1 Contribution analysis of the causal linkages between Throughputs and Outputs

In Chapter 6, we developed the theory of change map and introduced the components of Goals, Inputs, Activities/Throughputs, and Outputs. We begin our contribution analysis by assessing the robustness of the contribution by Activities to Outputs. Robustness is reported for three main types of economic Outputs (see theory of change map): (1) increased economic benefits in the tourism and service industries; (2) increased economic benefits in sport-related industries and automobile industries. We then report the weak evidence for the following Outputs: (1) increased R&D ability of the automobile and the racing industries and (2) enhanced infrastructure construction in Jiading district. The contributory factors and impedimentary factors are concluded from evidence constituting the strong and weak links respectively.

Assessing the robustness of evidence supporting causal linkages established between Activities

and Outputs

In general, with regards to the four identified linkages between Activities and Outputs, the assessment of the robustness of evidence indicated that two out of four causal linkages are supported with empirical evidence collected by the study, whereas the other two have no strong data to confirm. The following sub-section provides a detailed elaboration of the evidence.

Achieved outputs

Achieved intended output 1: Increased economic benefits in the city's tourism and service industries

The logic underlying achieved the intended output 1 is that, the increased tourists, the activities-other automobile competitions (e.g. the A1 World Cup Grand Prix) held at the F1's circuit and the construction of Metro Line 11 as a result of hosting the Shanghai F1 helped to economically benefit the development of tourism and service industries in Shanghai.

For Outputs representing increased economic benefits, the majority of the interviewed policy makers and independent sports policy advisers confirmed that hosting the Shanghai F1 had indeed benefited the catering, hotel, transportation, tourism, shopping, and entertainment

industries (Policy makers A and B; Independent sports policy advisers D, E, F, G, and H). The hosting of the Shanghai F1 attracts domestic and international tourists on a yearly basis. It not only provides economic growth for the local tourism and service industries but also helps the 'generation of new tourism programmes' (Policy maker, B), including the Shanghai International Circuit Tour and indoor karting experience. Another stakeholder explained that

many other businesses closely related to the event also received a boost, such as in the catering, hospitality, and service industries. I believe that the F1, a major sporting event and one with international influence, provides a great source of benefits for local businesses. (Policy maker, B)

The tourism and service industries were considered to be the sectors most positively influenced by the Shanghai F1, according to the SME managers interviewed in the study. One manager indicated that the Shanghai F1 and other automobile competitions (e.g. the A1 World Cup Grand Prix) held in the Shanghai International Circuit helped to attract more tourists, which ultimately generated business on a daily basis, even outside F1 season. Another manager of a tourism company verified that business turnover had increased thanks to the development of the tourism industry in Anting, Jiading District:

In addition to the F1, we have many other automobile competitions. These competitions are held in Shanghai every year. Spectators from all over the world

come to watch those competitions and spend money on food and other things when they visit. (SME Manager J)

Because of the staging of the F1, and because it is an annual event in Anting town, more people come here now. It definitely helps economic growth, in terms of annual turnover, for industries such as catering, hospitality, transportation, shopping, and entertainment. (SME Manager B)

As indicated in our survey data, managers expressed a positive attitude regarding the impact of the F1 on the tourism and entertainment industries. The specific questions we used were as follows: To what extent do you think the following aspects of urban economic development have been affected by the Shanghai F1? A 5-point Likert scale (from strongly negatively affected to strongly positively affected) was used to measure the extent to which various aspects of urban development were influenced. The results (Table 7.12) showed that the tourism and entertainment industries were positively affected by the staging of the F1, with approximately 70% of the surveyed managers answering either agree or strongly agree when asked whether they perceived this influence. The mean scores for these two items were 3.90 and 3.89, tending towards positively affected, and the percentages corresponding with positively affected plus strongly positively affected responses were in total 70.5%, accounting for most managers' perspectives.

Table 7.12 Impact of the Shanghai F1 on various aspects of urban economic development as perceived by SME managers

Items	Mean score	Percentage of managers who agreed the item was <i>positively</i> and <i>strongly positively</i> leveraged in total (%)
Sport industry	3.98	75.3
Automobile industry	3.95	72.3
Tourism industry	3.90	70.5
Entertainment industry	3.89	70.5
Urban regeneration	3.89	72.3
Sport venue construction	3.89	71.1
Shanghai transportation	3.86	68.1
development		

Achieved intended output 2: Increased economic benefits in city's sport-related industries and automobile industries

The logic underlying achieved the intended output 2 is that, the activities-other automobile competitions (e.g. the A1 World Cup Grand Prix) held at the F1's circuit, the Shanghai F1 locating at the Anting Automobile city and the features of the F1 relevant to both the development of sports and automobile contributed to economically benefit the sport-related and automobile industries in Shanghai.

Because the F1 is relevant to the sport and automobile industries, the interviewed stakeholders often grouped these two industries together when discussing the F1's impact.

Predictably, all interviewed policy makers and sports experts confirmed that the F1 had affected the sport and automobile industries. Specifically, these individuals mentioned the F1's positive effect on the popularity of sports in Shanghai (Policy maker, A; Independent sports policy advisers, G and I), increased business activities in the leisure and fitness industries (Policy maker, A; Independent sports policy advisers, F and G), the growth in the sport competition performance industry (Policy makers, A and B), and the renewal and construction of stadiums (Policy makers A and C; Independent sports policy advisers, H and I).

Notably, one interviewee mentioned the role of the F1 in elevating the policy agenda of sport—shifting the focus of sport policies in Shanghai away from merely hosting sports events to developing a network of industrial groups that would support this process. As one deputy manager of a sporting event operations company explained,

Before 2014, if you looked at sport-related policy, there was very little mention of the sports industry. The most mentioned words were sports pursuits. After 2014, 'sport industry' became a frequently cited key word in published sports policy documents. This was because the hosting of the Shanghai F1 and the Tennis Masters Cup played an important transformative role. The focus has changed since the previous government, which invested mainly in sports events and elite sports performance, to sports industrialisation. (Independent sports policy adviser, H).

The economic contribution of the Shanghai F1 to the automobile industry was demonstrated mainly in the 'formation of an automobile industrial chain' in Anting International Automobile City (Independent sports policy advisers, D, E, F, H, and I). The development of the automobile industrial chain included the establishment of racing companies (Independent sports policy advisers, D and I) and the congregation of car manufacturing companies in Anting International Automobile City (Policy maker, C; Independent sports policy advisers, D and F).

One interviewee, a division chief of the Shanghai Sport Bureau, explicitly acknowledged that racing companies were the main beneficiaries of the Shanghai F1:

All the industries related to the F1 formed an F1 industrial chain. The Shanghai F1 brought prosperity for the entire motor sport. There is a motor sports company in Shanghai Songjiang called Lisheng Racing, which is a listed company. It is a beneficiary of the Shanghai F1. There are also many other racing companies in Shanghai. To summarise, the hosting of the F1 prompted development in the entire motor sports industry chain. (Policy maker, A)

Independent sports policy adviser H, a deputy sporting events operations manager, pointed out that Shanghai Volkswagen set a precedent as a famous manufacturer that stationed itself at Anting Automobile City:

The decision makers in government at that time felt that the F1 site should be Jiading District, which is the most important industrial base of Shanghai's automobile industry. The first joint automobile venture in the country, Shanghai Volkswagen, subsequently had a large-scale production plant located in this area, where there was not only car manufacturing but also related research and development. Later, an automobile city for comprehensive automobile development was established in Jiading New District. (Independent sports policy adviser, H)

Most SME managers confirmed the 'positive economic impact' of the F1 on local sportrelated industries and the automobile industry (SME Managers A, B, D, G, I, and J). In
particular, a manager (SME Manager, H) from an automobile racing company indicated that
many other racing companies emerged as a direct result of the Shanghai F1, providing vehicles
for racing competitions (e.g. the Audi Cup). These included businesses specialising in racing
car management, logistics, communication with the racing track, and so forth. However, the
impact of the F1 was limited on the R&D side of development (Independent sports policy
adviser, J).

The results from Table 7.11 also revealed that sport-related industries and the automobile industry were positively affected by the staging of the F1. The mean scores representing SME managers' perceived improvements in the sport-related industries and the automobile industry were 3.98 and 3.95, respectively, strongly tending towards positively

affected; 75.3% of SME managers reported that sport-related industries had been either positively affected or strongly positively affected, and 72.3% reported that the automobile industry had been either positively affected or strongly positively affected, accounting for most managers' perspectives.

Unachieved intended outputs

Unachieved intended output 1: Increased R&D ability of automobile and racing industries

In general, there is mixture findings of evidence base to confirm or reject the logic links that outputs contributed to the increased R&D ability of automobile and racing industries.

Although we reported that increased economic development was perceived in the automobile industry as a result of the Shanghai F1, policy makers and independent sports policy advisers noted that 'the F1 could have propelled R&D in the automobile industry' (Policy makers, A and B; Independent sports policy advisers, D, E, and H) but failed to do so. A common view shared amongst those policy makers was that, from a sustainable development point of view, the automobile industry should concentrate not only on manufacturing but also

on creating a strong R&D base. One Independent sports policy adviser revealed that this area of development remained stagnant:

The R&D for cutting-edge car technologies, including for racing cars, is not in China, the F1 team's base is not in China, and the testing site for cars is not in China. Although we are staging the F1, [Shanghai's] status on the international stage of automobile industry is not high. I believe that, if we enhance R&D, we can then have an F1 team based in China. (Independent sports policy adviser, H)

SME managers also confirmed that, although the Shanghai F1 boosted development in the automobile industry, which attracted their attention to R&D, no significant actions were adopted in terms of R&D because China's automobile industry remained in the basic stages of technological development and unqualified to support independent R&D. In addition, one racing company manager explained that, because core R&D was not present in Shanghai, car manufacturers based in Shanghai could, at best, exploit the F1 by swiftly adapting advanced and high-end foreign technologies and techniques for domestic civil use (SME Managers, H and I).

Unachieved intended output 2: Enhanced infrastructure construction in Jiading district

In the study, policy makers and sports experts all stated that Jiading's infrastructure was
regenerated as a result of the F1 racing track's construction. However, the only major

infrastructure-related development was transportation; namely, the construction of Metro Line

11 from the city centre to the racing track site. One policy maker highlighted that Jiading's
infrastructure remained inadequate and that this perhaps explained why spectators and tourists
selected accommodation in the city centre (Policy maker, A).

SME manager generally believed that the F1 had driven and stimulated the regeneration of infrastructure in Jiading District, but their comments were vague and generic, providing little specific evidence.

Overall, there are mixed findings for this causal link assessment, and hence we conclude that this link is not established.

Identifying factors that support or impede the established causal linkages between Activities and Outputs: based on qualitative evidence

The empirical evidence has verified that two out of four causal linkages established between Activities and Outputs are strong, whereas the other two have no strong data to confirm. The following sub-section assesses factors of evidence contributing or impeding causal links established.

Contributory factors

Contributory factors are catalysts for the construction of strong causal links. They can be explicit programme factors or implicit non-programme factors. From interview evidence, this study concludes that contributory factors mainly include government support and security support which contribute to the formation of achieved intended output - increased economic benefits in the city's tourism and service industries as well as the vigorous development of the sport industry and automobile industry which is interacted with the development of the F1 and other major sporting development in Shanghai.

The factors of government support are mainly derived from policy makers, referring to financial support (Policy makers, A, B and C) security support (Policy makers, A and B), policy support (Policy makers, A and B; Sports policy advisers, D, E, F and H) and accumulation of experience in hosting major sporting events (Policy makers, A, B and C; Sports policy advisers, D, E, H and I). With respect to the financial support, huge investment is the guarantee of hosting the Shanghai F1 (Policy makers, A and B), including pre-investment and post-maintenance (Policy maker, C). These costs may be invisible and unobservable by the public, because they are sometimes included in municipal construction rather than sporting events facility

construction (Policy maker, C). However, the financial support is the 'foundation' of the staging of the Shanghai F1 to ensure it can generate multiplier effects to the development tourism and industries development (Policy maker, A).

Regarding the security support, it is a non-programme factor but emphasised by two policy makers. Policy maker A demonstrated that 'although the F1 operation is entrusted to a state-owned enterprise, the order of the F1 circuit and its surrounding areas is inseparable from the support of government security departments'. Another policy maker added that 'not only for the F1, but for all major events in Shanghai, our security measures are the most qualified' (Policy maker, B). Therefore, security measures are an indispensable guarantee for the running of the Shanghai F1 and its related activities.

Policy support is another important contributory factor to constitute the strong links between Activities and Outputs. Policy support here refers to 'a two-way guarantee process' (Policy maker, A). On the one hand, the Shanghai government actively bids for the F1 and regards the F1 as a city brand, expecting it 'to exert a long-term multiplier effect' to the city's development (Policy makers, A and B; Sports policy advisers, H). On the other hand, the central government decides to support Shanghai to host commercial sporting events, while Beijing to

host political sporting events. In other words, this is 'the dislocation development principle' of the central government in staging major sporting events (Policy makers, A and B; Sports policy advisers, H), which allows the Shanghai F1 featured with commercialised characteristics to be periodically cultivated and continually contribute to the city's sustainable development (Policy makers, A and B; Sports policy advisers, D, E, F and H).

From interviewees' perspectives, this research explored that the accumulation of experience in hosting major sporting events contributes to the achieved output – increased economic benefits in the city's tourism and service industries. Shanghai has staged a series of major sporting events more than 20 years, famous major sporting events such as Shanghai International Marathon, Shanghai ATP Master Cup together with the Shanghai F1 have been considered to functionally synchronised to contribute to the development of city's tourism and service industries (Policy makers A, B and C; Sports policy advisers, D, E, H and I). Sports policy adviser H pointed that he can observe an increase in tourists during the major sporting events, as hot-selling products on supermarket shelves, such as beer, are sold out by tourists. The tourism service industry also has experience in serving the tourists brought by the event and preparing the best-selling products for them (Sports policy advisers, H and I).

The vigorous development of the sport industry and automobile industry are contributory factors to constitute the strong causal links between Activities and Outputs. As policy makers demonstrated that the development of major sporting events and the development of sport industry and automobile industry in Shanghai are complementary (Policy makers, A, B and C). Policy maker A vividly describe the complementary development mode as 'two wings of the sport development in Shanghai'. Sport industry and automobile industry are considered as the new economic growth points in Shanghai (Policy makers, A, B and C) which is supported by the interviewed SME managers A, B, D, F, H and I. The prosperity of the industries has created a supreme atmosphere for the development of sports and major sporting events (Policy maker, A). After the cultivation and development of the Shanghai F1 and other major sporting events, they can contribute to the development of Sport industry and automobile industry in turn (Policy makers, A, B and C).

Impedimentary factors

The impedimentary factors are mainly reflected in two aspects, one is the development of Shanghai's automobile and racing industry focus on the import and export of parts processing instead of R&D of them (Policy makers, A and B; Sports policy advisers, D, E, F and H). Sports

policy adviser H pointed that 'F1 itself has great features, it is an integration of cutting-edge technology...however, the R&D of this kind of technology is not in Shanghai'. Policy maker A and Sports policy adviser H expressed their expectation of future automobile R&D centre located in Shanghai to make up for the shortcomings of this part. Another impedimentary factor is that Jiading's economic and infrastructure development level is relatively backward compared with other central areas. This has led to the fact that although Shanghai Government has given huge subsidies for the construction of Jiading District as a result of the Shanghai F1. the witnessed progress is not significant (Policy maker, C; Sports policy adviser, I).

7.2.2 Contribution analysis of the causal linkages between Outputs and Impacts

Chapter 6 presents the theory of change map and introduces the components of Goals, Inputs, Activities/Throughputs, and Outputs. However, it does not introduce impacts. This section firstly draws evidence together to establish causal linkages between Outputs and Impacts.

In relation to economic development, SMEs—which comprise the majority of sport-related businesses, tourism businesses, service businesses, and automobile businesses—were considered by survey respondents to have obtained economic benefits from Shanghai's hosting of the F1. A contribution by the F1 to the economic development of local SMEs was commonly

reported for corporate turnover and profits (Policy makers, C; Independent sports policy advisers, D and F), as detailed by two more interviewees:

I think that the establishment of the F1 definitely increased turnover among local SMEs—from the banking industry to the hospitality and tourism industries. (Policy maker, C)

In terms of the impact of the F1 on SMEs in Shanghai, I think because hosting the F1 has brought a huge flow of people, who have boosted consumption in areas such as catering, lodging, travel, shopping, and entertainment, it has helped the service industry. Many of the respective organisations are small and medium-sized enterprises. (Independent sports policy advisers, D)

In addition, observations such as an influence on product quality and innovation (Policy maker, B), productive skills, and capacity development (Independent sports policy advisers, E and H) were mentioned by policy makers and sport experts. Notably, few hospitality, catering, and entertainment SMEs exist around the F1 circuit area, due to the distance of the Shanghai F1 from the city centre and the inadequate infrastructure in Jiading District. The main beneficiaries were therefore SMEs from the urban area of Shanghai rather than from Jiading (Policy maker, A; Independent sports policy advisers, E and H).

To assess the size of the Shanghai F1's impacts on various aspects of local SMEs' economic development, we used the indicators extracted from the survey as evaluation indexes.

These indicators provide a comprehensive picture of the economic development of SMEs. We reported strong evidence that the Shanghai F1 had affected local SMEs in terms of growth in turnover, growth in profit and growth in sponsorship opportunities for regional sporting events profit, and we reported moderate and weak evidence for other indicators. The details are presented in Table 7.13.

Table 7.13 Degree of the Shanghai F1's impact on various indicators of local SMEs' economic development

Indicators	Strong	Moderate	Weak
Growth in turnover	√		
Growth in profit	√		
Growth in sponsorship opportunities for regional sporting events	1		
Growth in domestic market share		√	
Growth in overseas market share			√
Growth in exports			V
Growth in financing			√
Improvement of competitive advantages in product quality		V	
Improvement of competitive advantages in product design	√		
Improvement of competitive advantages in product knowledge	√		
Improvement of competitive advantages in product innovation			√
Improvement of competitive advantages in marketing data collection capacity		√	
Improvement of competitive advantages in product cost			√
Improvement of competitive advantages in promotional strategy	V		
Improvement of competitive advantages in productive skills			V

Improvement of competitive advantages in attracting the liquidity		V
Improvement of competitive advantages in product price		\checkmark

Assessing the robustness of evidence supporting causal linkages between Outputs and the Impacts

The evidence collected in this section was extracted mainly from interviews with and surveys of SMEs managers rather than policy makers. Policy makers are concerned more with macrolevel affairs and decision making, particularly regarding how sport policy and governance structure in relation to the F1 can ensure positive economic benefits for the city and local businesses. In comparison, SME managers provided direct evidence regarding their perspectives on the extent to which the F1 helped their businesses to develop.

In general, with regards to the four identified linkages between Outputs and Impacts, the assessment of the robustness of evidence indicated that three out of four causal linkages are supported with empirical evidence collected by the study, whereas the other one has no strong data to confirm. The following sub-section provides a detailed elaboration of the evidence.

Achieved impacts

Achieved intended impact 1: Growth in turnover and growth in profit

Most SME managers agreed that their companies had financially benefited from the F1, acknowledging a specific positive impact on turnover and profit (SME Managers, B, D, F, G, H, and J). The reason for this positive economic impact was the direct influx of tourists and supplies caused by the F1 and related racing competitions (SME Managers, B, H, F, and J). As one manager explained,

Because of the F1, more people come to Shanghai. This definitely generates business in sectors such as catering, accommodation, transportation, travel, shopping, and entertainment. It also definitely increases turnover at our company. This is because, when people come here, they definitely have a hotel reservation or other accommodation. In addition to the F1 itself, there are some tourist attractions that are actually closely related to our business. (SME Manager, B).

After the F1 [arrived in Shanghai], everything expanded, and then the racing fans also appeared. Manufacturers have noticed the Chinese market, and they will definitely invest in more races and events. For we customers, they are Audi and Porsche. They began to manufacture in Shanghai. The funding behind this and the funding for previous playing between several small junior teams are actually quite different. (SME Manager, H)

However, although positive impacts were observed, several SME managers noted that the effects of the F1 were weak. One example was the following manager:

Because we are in the automobile culture customer business-a business related to motor-racing culture, we are influenced [by the F1]. Every year, we have one or two business contracts directly related to the F1 But, because it is just a three-day event in the year, I can't say that there is a strong influence. In fact, ... the volume of my business transactions with the F1 each year is not very large. There are only small and moderate impacts. (SME Manager, F)

Our abovementioned quantitative data (Table 7.5) suggest that the highest mean scores for items associated with general economic status were yielded for growth in turnover and growth in profit, which received mean scores of 3.26 and 3.24, respectively. These exceeded the mean scores for other factors indicating general economic status (including growth in sponsorship opportunities for regional sporting events, growth in domestic market share, growth in overseas market share, growth in exports, and growth in financing). However, for the items representing growth in turnover and profit, a significant difference was present for differently sized of enterprises, specifically for companies with less than 10 people versus companies with more than 300 people. For companies with less than 10 people, the means scores for items describing growth in turnover and growth in profits were approximately 3; whereas, for companies with more than 300 people, the mean scores obtained for these two items were both 3.58. Therefore, larger companies gained more significant advantages in terms of profitability.

Hence, this logic – the hosting of the Shanghai F1 and other automobile competitions promoting prosperities in tourism and service industries as well as the increased business contracts as a result of the F1 hosting helped the local SMEs achieve growth in turnover and benefits– is confirmed.

Achieved intended impact 2: Growth in sponsorship opportunities for regional sporting events

In terms of growth in sponsorship opportunities for regional sporting events, the F1 appeared to exert different effects for companies who recognised opportunities and were actively engaging with the event as compared with companies that were less engaged. One SME manager elaborated:

We are inspired by these big events and are willing to organise or sponsor events. We have actually invested some of our own cash. The event itself would have little bearing on our profits if we did not actively seek relevant opportunities and exploit possibilities (SME Manager, C).

Policy makers also acknowledged that particular SMEs participated in and sponsored F1-related activities and events such as the qualifying practice matches before the F1 and the New Year's Day Welcome Run. This was also acknowledged by the policy makers. Two managers provided details:

We usually have some ticketing resources-free tickets for watching car matches before and after F1 events. It is possible that there are some ticketing resources for the qualifying practice matches, including for some other competitions at the venue. In fact, we invite some communities and people within our area to participate in these events. This is not just for racing enthusiasts; we also hope to promote motor racing to more people and get more people to participate in it. (SME Manager, B)

The F1 venue organises a New Year's Day Welcome Run every year, and this is now in its fifth edition. Because of the F1, people know the track and can go to participate in the New Year's Day Welcome Run. In the last five years, we have been involved in the event. We have sponsored and promoted the event. The number of applicants is increasing year by year. There are now more than 10,000. (SME Manager, C)

Hence, this logic – the organised promotional activities as a result of the hosting Shanghai F1 attracted fans and citizens' to participate and enhanced the SMEs' sponsorship opportunities for local events – is confirmed.

Achieved intended impact 3: Improved competitive edge in product design, product knowledge, and promotional strategy

Robustness was identified for the two indicators representing improvements in competitive advantages for product design and product knowledge and competitive advantages for promotional strategy. Although the statistical data showed that the respective mean scores were

not prominent, several managers who were interviewed offered remarks on the two types of improvements in competitive advantages.

Amongst the interviewed managers, two confirmed a significant effect by the F1 on their companies' competitive advantages in product design and product knowledge. The two managers' companies were related to the motor racing business and motor racing pursuits. One racing company manager noted that the F1, upon its arrival in Shanghai 'lectured their companies' (SME Manager, H) and informed them of the product standards associated with the F1 and other high-level international racing competitions, necessitating that SMEs improve their product design and update their product knowledge. Another manager stated that

our company has one or two business contracts related to the F1 each year. In addition to serving the F1, we serve World Endurance Championship events. This kind of high-level event-related business activity improves our service knowledge and experience. When we compete with other companies, because we have been involved in the F1 business and our product design is constantly updated (to adhere to international standards), we are able to secure other contracts. (SME Manager, D).

The manager of a tourism company also described how product knowledge and product design were being constantly updated to 'keep up with international standards' (SME

Manager, B) because their company undertook government-related business serving F1 officials.

Specifically relevant to the expectation that was described to 'keep up with international standards' was the comment of another manager from an industrial spare parts and accessories company (SME Manager, G) who stated that, because of the F1, his company was willing to acquire more automobile-related knowledge to better position itself within the international automobile business. He also described his company's confidence in its ability to undertake downstream F1-related business activities. Notably, he thought that his company's product design and product knowledge may have been indiscernibly leveraged by the F1 because his company's products were supplied to world-class automobile companies, such as Mercedes-Benz and BMW, which had car teams participating in the F1 events.

Although these positive comments emerged in only one or two cases, they nevertheless revealed important causal logic underlying the theory of change principle: To help SMEs obtain economic benefits from the staging of the Shanghai F1 requires gradual and circular development processes. One necessary cyclical step is upgrading the comprehensive skills

within companies through continuous bidding on F1-related projects, thereby gaining market competitiveness.

The evidence indicating improvements in competitive advantages for promotional strategies was also robust. The SME managers always mentioned promotional strategy when they mentioned product design and product knowledge. Several managers considered that, while improved product design would be likely to improve promotional strategies (SME Managers, C, D, G, H, and I). They hoped for their companies to gain competitive advantages from promotional marketing strategies, using popular sports personalities and products meeting the needs of citizens and residents, in line with the characteristics of the F1.

From the aforementioned statistical data (Table 7.9), we found that the mean scores representing improvements in product design and product knowledge ranked second and third highest among those for all items indicating improvements in companies' economic competitive advantages leveraged by the Shanghai F1. Although, promotional strategy received a score indicating only a moderate effect, it differed significantly for domestic capital companies versus foreign capital companies. Obviously, foreign companies, for which the

promotional strategy benefits resulting from the F1 received a mean score of 2.50, were more greatly affected by F1-leveraged effects than domestic capital companies were.

Hence, this logic – the hosting of the Shanghai F1 and other automobile competitions attracting the foreign prominent companies set subsidiary companies in Anting, Jiading increased the opportunities for automobile SMEs to benchmark the advanced production criteria in order to cooperate with prominent foreign companies— is confirmed.

Unachieved intended impacts

Unachieved intended impact 1: Growth in domestic market share, competitive advantages in product quality, and competitive advantages in marketing data collection capacity

We attributed moderate effects to these economic indicators because (1) the indicator for growth in domestic market share was mentioned by four SME managers but without further explanation or supporting statistical data; (2) the indicator for improved competitive advantages in product quality was not mentioned in the interviews, but we found that the corresponding mean score ranked first among the scores for all items measuring companies' improvements in various types of competitive advantages; and (3) the indicator for improvements in competitive advantages involving strategies for collecting marketing data was

mentioned by sport and racing SME managers but not by other companies managers and not with any supporting statistical data to accompany it.

For other indicators (with ticks in the 'weak' column in Table 7.12), we found no evidence supporting any effects in either interviews or surveys, so we reported a weak effect for these indicators.

Overall, there are mixed findings for this causal link assessment, and hence we conclude that this link is not established.

Identifying factors that support or impede the established causal linkages between Outputs and

Impacts: based on qualitative evidence

The empirical evidence has verified that three out of six causal linkages established between Outputs and Impacts are strong, whereas the other three have no strong data to confirm. The following sub-section assesses factors of evidence contributing or impeding causal links established.

Contributory factors

Contributory factors are catalysts for the construction of strong causal links. They can be explicit programme factors or implicit non-programme factors. From interview evidence, this

study concludes that contributory factors mainly include three aspects: (1) The Shanghai government encourages SMEs to participate in the F1-related business activities and contracts (2) Local SMEs desire to seek for new business opportunities and learn the advanced product knowledge (3) Internationally renowned large companies' branches locate in Jiading District. The first and second aspects contribute to the achieved intended impacts - growth in turnover and growth in profit as well as growth in sponsorship opportunities for regional sporting events. The third one contributes to the achieved intended impact - improved competitive edge in product design, product knowledge, and promotional strategy.

Regarding the first factor – Shanghai government encouraging SMEs to participate in the F1 related business activities, although there are no specific policy documents to verify it, the F1-related promotional activities hosted by the government welcomed and attracted SMEs to provide business services to audiences and tourists (Policy maker, B; Sports policy advisers, H and I; SME managers, B, C, E, F, G and H). The drinks and gifts at the promotional activities sites were provided by SMEs (Sports policy advisers, H and I; SME managers, B, G and H). SME manager H who worked at a racing company pointed that 'we guide fans at the relevant events and introduce our businesses on site'. SME manager B in a sport tourism company

indicated that taking tourists to the F1-related activities had become one of their businesses and helped their companies to obtain the profits.

With respect to SMEs seeking for new business opportunities and learning the advanced product knowledge, SME managers in different industry categories recognised that they desired to take advantage of the Shanghai F1 as a platform to carry out event-related business. Specifically, several companies demonstrated their business plans related to the F1: The tourism company expected to develop the F1 circuit touring business (SME manager, B), the automobile company scheduled to do the F1 accessories import and export business (SME manager, G), and the sports retail company planned to sponsor the F1-related or major sporting events-related regional sporting events (SME manager, C).

Internationally renowned large automobile companies' branches locating in Jiading District is a key factor contributing to the achieved impact-improved competitive edge in product design, product knowledge, and promotional strategy. This impact mainly reflects in the development of automobile SMEs. As SME manager H demonstrated that the arrival of large automobile companies' branches 'lectured their companies' and informed them of the product standards associated with the F1 and other high-level international racing competitions,

necessitating that SMEs improve their product design and update their product knowledge.

Other automobile SME managers similarly indicated that they were eager to cooperate with large companies located in Anting Automobile City and producing products that can meet the F1 standard was the driving force for their company's industrial update (SME manager, F, G, H and I).

Impedimentary factors

There are two main factors impeding the formation of causal links between Outputs and Impacts. One is SME managers consider that, from among the impacts exerted overall by Shanghai's major sporting events, few could be attributed to a single event such as the Shanghai F1. This factor directly hinders the achievement of the impact- growth in domestic market share. Another one is that the main technology used in automobile and racing industries is not advanced in Shanghai. This factor impedes the achievement of the impact - competitive advantages in product quality, and competitive advantages in marketing data collection capacity.

For the first factor, SME managers considered that the Shanghai produced week impact contributing to their companies' growth in domestic market share, even if it helps their

companies obtain the growth in turnover and profits (SME managers, A, C, D, E, and G). As SME manager C indicated that 'the F1 is only one of the major sporting events in Shanghai, it is not special'. If the F1 can help companies to occupy the market share, it needs to possess the dominant position of all the major sporting events instead of generating economic impacts with other major sporting events together (SME managers, D and E). Moreover, several SME managers were lack of knowledge of major sporting events, which made them implicitly pointed that regarding the growth in domestic market share, they cannot 'intuitively felt the growth' but there may be some 'hidden impacts' (SME managers, A, E and G).

Another impedimentary factor is similar to what hinders the Outputs achievements — the main technology applied in SMEs is not advanced in Shanghai. The difference is that the evidence here is derived from the interviewed SME managers instead of policy makers. SME managers demonstrated that their product quality improvement was less affected by the Shanghai hosting the F1, because they had limited production scope and capacity, and most products were not featured with advanced technology (SME managers, A, B, C, E, F, G, H and I). Although two companies pointed that they are affected by the F1 to update the product knowledge, the improvement in quality cannot be achieved in the short term (SME manager,

G and H). Similarly, competitive advantages in marketing data collection capacity was less affected by the F 1 and was difficult to be improved in the short term, for they had no plan to recruit employees with advanced data analysis capabilities and conduct R&D businesses as a result of a sole event (SME manager, C, D, E, and F).

Impact chain for the economic impact of the Shanghai F1 on local SMEs

We completed contribution analysis of the causal links between Activities and Inputs and of the causal links between Inputs and Outputs. To clearly tease out each impact chain and the assumptions underpinning the programme, we applied a matrix developed by Funnell and Rogers (2011) to assist with the process of identifying the impact chains and recording them in columns. The columns (Table 7.14 presented at the last two pages of this chapter) include impact chains, success criteria, programme factors, non-programme factors, outputs, activities, mapping the theory of change in reverse.

Among these columns, (1) success criteria identified the desired features of each impact in the impact chain and was about the basis for judging the worth of an impact. For example, the growing prosperity for the automobile industry in Jiading District is one success criteria to judge the rationality of the impact of growth in turnover and profit on SMEs; (2) whereas

programme factor and non-programme factors were about what influenced the achievement of an impact. Programme factors largely within the control of the programme. For instance, one of the programme factors in this research is that the Shanghai government actively promotes the Shanghai F1 and related racing events.

Non-programme factors largely outside of control. In this study, one important non-programme factor in this study is that Shanghai's rapid macro-socio-economic and cultural development has enhanced its status domestically and internationally from 2000 to 2020; (3) outputs and activities are introduced in the theory of change logic, but here we tease out outputs and activities relevant to each impact chain.

As suggested by Funnell, tracing the connections horizontally across and vertically up the matrix can help us to clearly demonstrate the logical or expected links amongst the impact chains.

7.3 Conclusion

This chapter reports quantitative evidence from the survey data on the economic impacts of the Shanghai F1 on SMEs. It also details the contribution analysis of evidence collected to assess the economic impacts of the Shanghai F1 on SMEs. To obtain quantitative evidence, this study

surveyed SME managers and discovered that they perceived the following: (1) Among the variously sized companies, companies with more than 300 people benefitted most significantly from the F1's leveraging on most of the indicators measuring economic development. (2) Foreign capital companies obtained more significant competitive advantages than domestic capital companies did, as a result of the F1, for the indicator of promotional strategy. However, the impacts were generally rated as moderate in degree.

Contribution analysis of the causal linkages between Throughputs and Outputs indicated robustness for two types of economic Outputs: increased economic benefits in the tourism and service industries and increased economic benefits in sport-related and automobile industries. The analysis revealed medium and weak evidence for increased economic benefits in the tourism and service industries and enhanced infrastructure construction in Jiading district. Analysis of the causal linkages between Outputs and Impacts revealed strong evidence of growth in turnover and profit; sponsorship opportunities for regional sporting events; and improved competitive advantages in product design, knowledge, and promotional strategy. Medium or weak evidence was found for other indicators.

After completing the contribution analysis, the research used an impact chain matrix to tease out impact chains, success criteria, programme factors, non-programme factors, outputs, activities, and inputs, mapping the theory of change in reverse.

In the next chapter, this study conduct contribution analysis of the Shanghai F1's impacts on SMEs' social development.

Table 7.14 Impact chain for the Shanghai F1's economic impacts on local SMEs

Impact chains	Success criteria	Programme	Non-programm	ne factors	Outputs	Activities
		factors				
Achieved	•Growing prosperity	The Shanghai	Macro level:	Internationally renowned	Increased	Shanghai F1 event three days
intended	for the automobile	government		large companies' branches	economic benefits	per year (in April)
impact: Growth	industry in Jiading	actively promotes	• Shanghai's	locate in Jiading District.	in the city's	Other automobile
in turnover and	District.	the Shanghai F1	rapid macro-		tourism and	competitions such as the
profit		and related racing	socio-		service industries	MotoGP China Grand Prix, the
	•SMEs bid for and	events.	economic and			V8 Touring Car Series, and the
	sign F1-related		cultural		Increased	A1 World Cup Grand Prix.
	business contracts.	The Shanghai	development		economic benefits	
		government	has enhanced		in city's sport-	
	•SME development	supports and	its status		related industries	
	of new racing	advances	domestically		and automobile	
	tourism	transportation	and		industries	
. 1: 1	programmes.	construction in	internationally	1 1010	T 1	77 (1 7)
Achieved	•Active participation	Jiading District.	from 2000 to	• Local SMEs desire to	• Increased	• Host the F1 carnival per year
intended	by SMEs in the	TI OI I :	2021.	seek for new business	number of fans of	before the F1 competitions in
impact: Growth	organisation and	The Shanghai		opportunities.	the Shanghai F1	the city centre (150 thousand
in sponsorship	sponsorship of other	government				people on site, 3 million
opportunities	racing events.	encourages SMEs to participate in				spectators online)
for regional		F1-related				Public welfare activities to
sporting events		business activities				acknowledge fans and benefit
		and contracts.				citizens
		and contracts.				CHIZCHS
Achieved	•SMEs'			Positive factors:	• Increased	Shanghai F1 event three days
intended	improvement of				economic benefits	per year (in April)
impact:	product quality and			• Internationally renowned	in city's sport-	
Improved	service in line with			large companies' branches	related industries	Other automobile

competitive	international		locate in Jiading District.	and automobile	competitions such as the
advantages in	standards to match		C	industries	MotoGP China Grand Prix, the
product design,	F1-related business		 Local SMEs desire to 		V8 Touring Car Series, and the
knowledge, and	contract criteria.		seek for new business	The city's image	A1 World Cup Grand Prix.
promotional			opportunities and learn the	and international	_
strategy	•SMEs have the		advanced product	influence are	
	opportunity to learn		knowledge.	improved.	
	advanced production				
	technology from		Barriers:	The image of	
	large enterprises.			Anting	
			•The main technology	Automobile City	
			used in automobile and	is improved.	
Unachieved			racing industries is not		
intended			produced in Shanghai.		
impact: Growth					
in domestic					
market share,			•The Shanghai		
competitive			(automobile)		
advantages in			manufacturing industry is		
product quality,			not very advanced.		
and competitive					
advantages in			•SME managers consider		
marketing data			that, from among the		
collection			impacts exerted overall by		
capacity			Shanghai's major sporting		
			events, few could be		
			attributed to a single event		
			such as the Shanghai F1.		

Chapter 8: Social impact of the Shanghai F1 on small and medium-sized enterprises

This chapter details the analysis of the social impact exerted by the Shanghai F1 on local SMEs. As in Chapter 7, this analysis specifically comprised two main steps. The first step was quantitative data collection from a survey of local SME managers. The second step was contribution analysis: For this analysis, this study compiled qualitative and quantitative evidence to assess the contribution impacts of the Shanghai F1 on local SMEs in terms of beneficial social effects. The research also evaluated the robustness of the evidence—strong, medium, or weak—supporting the existence of causal linkages among Activities, Outcomes, and Impacts as outlined in the theory of change.

8.1 Quantitative evidence

8.1.1 Using social development indicators to measure the leveraging effects of the

Shanghai F1 on local SMEs

SME managers were asked their perspectives on the changes represented by various social-impact indicators (identified from relevant literature) as a result of the F1. Specifically, eight items were for assessing companies' general social status (e.g. community responsibility), and nine items were for assessing wider community impacts (e.g. collaboration with businesses

from other sectors).

The list of social development indicators was adapted from two standard social evaluation surveys: One was Research on the Status of China's Small and Medium-Sized Enterprises, issued by the Policy Research Department of China's Association of SMEs (2011); the other was the Small and Medium-Sized Business Survey published by the University of Cambridge Centre for Business Research (1997). Chapter 7 describes the rationales for selecting these two surveys to be modified and integrated into a new survey for this study. In addition, per the literature review in Chapter 4, we found that CSR was an important area of sport management and sport industry study (Walker & Kent, 2009; Walker, Kent, & Rudd, 2007). Thus, we added three more CSR-related indicators to the survey: community responsibility, community participation, environmental responsibility, and *market* responsibility. The Cambridge survey proposed the index for 'whether relationships are established with other sectors or organisations' to measure SMEs' social development. Eight specific sectors and organisations were mentioned in the Cambridge survey, and all were incorporated into our survey design. Moreover, an indicator for relationship-building with sport associations/organisations/corporations was added to our survey because this study was on sporting events and sporting event-related businesses. The indicators from the survey in this study are presented in Table 8.1.

Table 8.1 Social indicators used in the survey from this study

Aspects to be	Questions used in	Relevant social	Meanings of indicators
measured	the survey	development	
		indicators	
Companies'	Please indicate the	Community	These are key pillars of corporate social responsibility
general	extent to which your	responsibility	(CSR) in forms such as sponsorship or organisation of
social	company has been	Community participation	local events and volunteering in local schools or
development	influenced, in the		community projects (Lee et al., 2013).
	following respects,		Most businesses derive commercial benefit from
	since Shanghai hosted		community-based CSR relevant to their products or
	the F1 in 2004.		services, which enables companies to use their
	(with a 5-point Likert		expertise and simultaneously enhance their corporate
	scale: strongly		image (William & Aguilera, 2009).
	negatively affected,	Environmental	This is an important element of CSR. Many companies
	negatively affected,	responsibility	have taken steps to improve the environmental
	unaffected, positively		sustainability of their operations through measures
	affected, and strongly		such as renewable energy use or carbon offsetting
	positively affected)		(Kolk, 2016)
		Market responsibility	This describes how CSR functions in markets.
			Examples include the use of recyclable packaging,
			promotions that raise awareness of societal issues and
			problems, and donations to charitable groups (William
			& Aguilera, 2009).
		Brand value	This is used to estimate how much a brand is worth
			(Lee et al., 2013).
		Corporate image	This is a firm's reputation and the audiences that it
			attracts (William & Aguilera, 2009).
		Media exposure	This is the extent to which audience members

			encounter a company's specific messages or classes of messages/media content (Hou & Reber, 2011)
		Employee rights	These are the rights of workers to ensure that they are
			treated fairly by their employers (e.g. fair pay and
			freedom from discrimination) (Lee et al., 2013).
Companies'	Has the Shanghai F1	Higher educational	These represent various sectors in which partnership
establishmen	provided your	institutes	building occurred.
t of	company with	Other SMEs	
relationships	opportunities to	Large/ transnational	
with other	establish partnerships	corporations	
sectors	with the following	Sport	
	types of organisations?	associations/organisation	
	(Yes or No)	s/corporations	
		Voluntary institutes	
		Organisational	
		communities	
		Local businesses	
		Equipment suppliers	
		Trade associations	

Dimension 1: Measuring companies' general social development

The internal consistency of the scale was tested to be acceptable after examining the Cronbach's alpha (.924). Table 8.2 outlines the ranking of the changing degree for each item of general social status. Amongst the surveyed managers, they perceived that, the most important item, with a mean of 3.23 on a 5-point Minnesota satisfaction scale were "community responsibility" and "environmental responsibility; the least important item, with a mean of 3.13

was "employees right". In general, the means of all items were between 'no influence' and 'positively influenced', inclining towards 'no influence' (see Table 8.2).

Differences between various corporate categories (including years of corporate operation, category of corporation, number of corporate employees, corporate annual turnover, corporate nature and corporate industrial type) in social status scores were examined using MANOVA. The results show that there was no statistically significant difference between-subjects effects of each corporate category.

Table 8.2 The agreement on how each of the items associated with general social status receive impacts on their businesses

Items	Means	Standard deviation
Community responsibility	3.23	.641
Environmental responsibility	3.23	.612
Brand value	3.21	.712
Market responsibility	3.21	.650
Corporate image	3.19	.719
Community participation	3.17	.642
Media exposure	3.17	.710
Employees right	3.13	.534

A series of independent-samples t-tests was used to compare the impact of the F1 on each social indicator (comparing means of managers' scores) between two different corporate categories (domestic capital companies vs foreign capital companies). And the one-way between groups ANOVA with post-hoc tests were performed within subgroups of different

corporate categories (corporate categories' details were elaborated in chapter 7). The results of this range of tests are presented and discussed below.

Results from companies with different types

For companies from different types of industrial (including five categories, 1) sport and automobile companies, 2) entertainment and service companies, 3) retail companies, 4). financial, scientifical and educational companies, and 5). other companies), there was a series of between group differences found and the results were displayed in the table 8.3:

Specifically, there was a statistically significant difference at the p < .05 level in 'corporate image' scores for the five categories of company: F(4, 161) = 4.867, p = .001. The actual difference in mean scores between the groups was medium. The effect size, calculated using eta squared, was .11. Post-hoc comparisons using the Tukey HSD test indicated that the mean score for the category of 'sport and automobile companies' (M = 3.55, SD = .961) was significantly different from the categories of 'financial, scientifical and educational companies' (M = 2.98, SD = .480) and 'other companies' (M = 2.80. SD = .696). Other categories did not differ significantly from either the two above mentioned categories. Therefore, compared with 'other companies' and 'financial, scientifical and educational

companies', 'sport and automobile companies' (M=3.55) perceived they were 'positively affected' by the Shanghai F1 on their corporate image; whereas compared with 'sport and automobile companies', 'financial, scientifical and educational companies' (M=2.98) and 'other companies' (M=2.80) perceived 'no effect'.

There was a statistically significant difference at the p < .05 level in 'brand values' scores for the five categories of company: F(4, 161) = 7.277, p = .000. The actual difference in mean scores between the groups was large. The effect size, calculated using eta squared, was .15. Post-hoc comparisons using the Tukey HSD test indicated that the mean score for the category of company 'sport and automobile companies' (M = 3.65, SD = .915) was significantly different from the categories of company 'financial, scientifical and educational companies' (M = 2.98, SD = .423) and 'other companies' (M = 2.75, SD = .716). Other categories did not differ significantly from either the two above mentioned categories. Therefore, compared with 'other companies' and 'financial, scientifical and educational companies', 'sport and automobile companies' (M=3.65) perceived they were 'positively affected' by the Shanghai F1 on their 'brand values'; whereas compared with 'sport and automobile companies', 'financial, scientifical and educational companies' (M = 2.98) and 'other companies' (M = 2.75) perceived 'no effect'.

There was a statistically significant difference at the p < .05 level in 'media exposure' scores for the five categories of company: F(4, 161) = 3.352, p = .011. The actual difference in mean scores between the groups was medium. The effect size, calculated using eta squared, was .08. Post-hoc comparisons using the Tukey HSD test indicated that the mean score for the category of company 'sport and automobile companies' (M = 3.45, SD = 1.060) was significantly different from the category of company 'other companies' (M = 2.8, SD = .696). Other categories did not differ significantly from either the two above mentioned categories. Therefore, compared with 'other companies', 'sport and automobile companies' (M=3.45) perceived they were 'positively affected' by the Shanghai F1 on their 'media exposure'; whereas compared with 'sport and automobile companies', 'other companies' (M = 2.8)perceived 'no effect'.

There was a statistically significant difference at the p < .05 level in 'employees right' scores for the five categories of company: F(4, 161) = 4.219, p = .003. The actual difference in mean scores between the groups was medium. The effect size, calculated using eta squared, was .08. Post-hoc comparisons using the Tukey HSD test indicated that the mean score for the

category of company 'sport and automobile companies' (M = 3.39, SD = .667) was significantly different from the category of company 'other companies' (M = 3.00, SD = .649). Other categories did not differ significantly from either the two above mentioned categories. Therefore, compared with 'other companies', 'sport and automobile companies' (M=3.39) perceived they were 'positively affected' by the Shanghai F1 on their 'brand values', but the extent to the influence was moderate; whereas compared with 'sport and automobile companies', 'other companies' (M = 3) perceived 'no effect'.

Table 8.3 Results of companies with different industrial types in the general social development indicators

Items	Category 1 of company	Category 2 of company	Results
Corporate		Financial, Scientifical	F(4, 161) = 4.867
image		and Educational	P = .001
	Sports and automobile	companies	
	companies	M = 2.98, $SD = .480$	The effect size,
	M = 3.55, $SD = .961$		calculated using eta
		Other companies	squared, was 0.11,
		M = 2.80, $SD = .696$	which indicates a
		, and the second	medium effect
Brand values		Financial, Scientifical	F (4, 161) = 7.277
		and Educational	P = .000
	Sports and automobile	companies	
	companies	M = 2.98, $SD = .423$	The effect size,
	M = 3.65, $SD = .915$		calculated using eta
		Other companies	squared, was 0.15,
		M=2.75, $SD=.716$	which indicates a
			large effect
Media	Sports and automobile	Other companies	F(4, 161) = 3.352
exposure	companies		P = .011
	M = 3.45, $SD = 1.060$	M = 2.8, $SD = .696$	
			The effect size,
			calculated using eta
			squared, was 0.08,
			which indicates a

			medium effect
Employees	Sports and automobile	Other companies	F(4, 161) = 4.219
right	companies		P = .003
	M = 3.39, $SD = .667$	M = 3.00, $SD = .649$	
			The effect size,
			calculated using eta
			squared, was 0.08,
			which indicates a
			medium effect

Results from companies with different sizes

For companies with different sizes (including five categories, less than 10 people, 10-50 people, 51-100 people, 101-300 people and above 300 people), there was a series of between group differences found in different general social indicators. The results were presented below and displayed in Table 8.4.

Specifically, there was a statistically significant difference at the p < .05 level in 'media exposure' scores for the five categories of company: F (4, 161) = 2.945, p = .022. The actual difference in mean scores between the groups was medium. The effect size, calculated using eta squared, was .07. Post-hoc comparisons using the Tukey HSD test indicated that the mean score for the category of 'less than 10 people' companies (M = 2.86, SD = .822) was significantly different from the category of '10-50 people' companies (M = 3.27, SD = .651) and the category of 'above 300 people' company (M = 3.42, SD = .776). Other categories did not differ significantly from either the two above mentioned categories. Therefore, compared

with '10-50 people' companies and 'above 300 people' companies, SMEs managers in 'less than 10 people companies' (M=2.86) perceived their companies were not affected by the Shanghai F1 on their 'media exposure'; whereas '10-50 people' companies (M = 3.27) and 'above 300 people' companies (M = 3.42) were perceived the slightly positive influence.

There was a statistically significant difference at the p < .05 level in 'employees right' scores for the five categories of company: F (4, 161) = 3.028, p = .019. The actual difference in mean scores between the groups was medium. The effect size, calculated using eta squared, was .07. Post-hoc comparisons using the Tukey HSD test indicated that the mean score for the category of 'less than 10 people' company (M = 2.97, SD = .645) was significantly different from the category of '10-50 people' company (M = 3.29, SD = .567). Other categories did not differ significantly from either the two above mentioned categories. Therefore, compared with '10-50 people' companies, SMEs managers in 'less than 10 people companies' (M = 2.97) perceived their companies were not affected by the Shanghai F1 on their 'employees right'; whereas '10-50 people' companies (M = 3.29) were perceived the slightly positive influence.

Table 8.4 Results of companies with different sizes in the general social development indicators

Items	Category 1 of company	Category 2 of company	Results
Media	Less than 10 people	10-50 people	F (4, 161) = 2.945, p
exposure	M= 2.86, SD = .822	M = 3.27, SD = .651	= .022

		Above 300 people M = 3.42, SD = .776	The effect size, calculated using eta squared, was 0.07 which indicates a medium effect
Employees right	Less than 10 people M = 2.97, SD = .645	$\frac{10-50 \text{ people}}{M = 3.29, SD = .567}$	F (4, 161) = 3.028, p= .019
			The effect size, calculated using eta squared, was 0.07 which indicates a medium effect

Results for companies with different annual turnovers

For companies with different annual turnovers (including seven categories, less than 100 thousand, 100-500 thousand, 501-1000 thousand, 1,001-2,000 thousand, 2,001-10,000 thousand, 10,001-20,000 thousand, above 20,000 thousand), there was a series of between group differences found in different general social indicators. The results were presented below, and displayed in the table 8.5:

There was a statistically significant difference at the p < .05 level in 'media exposure' scores for the five categories of company: F (6, 159) = 2.579, p = .021. The actual difference in mean scores between the groups was medium. The effect size, calculated using eta squared, was .07. Post-hoc comparisons using the Tukey HSD test indicated that the mean score for the category of 'less than 100 thousand' company (M = 2.85, SD = .881) was significantly different from the category of '100-500 thousand' company (M = 3.47, SD = .697). Other categories did

not differ significantly from either the two above mentioned categories. Therefore, compared with companies with 'less than 100 thousand 'annual turnover, companies with '100-500 thousand' annual turnover (M = 3.47) perceived they were 'positively affected' by the Shanghai F1 on their 'media exposure'; whereas companies with 'less than 100 thousand 'annual turnover (M = 2.85) perceived 'no effect'.

Table 8.5 Results of companies with different annual turnovers in the general social development indicators

Items	Category 1 of company	Category 2 of company	Results
Brand values	Less than 100 thousand M = 2.85, SD = .881	100-500 thousand M = 3.47, SD = .697	F (6, 159) = 2.579. p = .021 The effect size, calculated using eta squared, was 0.09 which indicates a
			medium effect

Dimension 2: Companies establishing relationships with other sectors

The internal consistency of the scale was tested to be acceptable after examining the Cronbach's alpha (.945). Table 8.6 outlines whether relationships between the sport and automobile companies and various sectors were established due to the development of the Shanghai F1. The most joint relationship reported, with a frequency of 64.3% appeared in "Sport associations/organisations/corporations"; the least joint relationship, with a frequency of 24.7% appeared in "trade association".

Table 8.6 Frequencies of sport and automobile companies building relationships with other sectors

Items	Frequencies of building
	relationships
Sport	64.3%
associations/organisations/corporations	
Voluntary institutes	50.0%
Higher educational institutes	39.3%
Other SMEs	39.3%
Organisational communities	39.3%
Local business	36.7%
Equipment suppliers	32.1%
Large/ transnational corporations	28.6%
Trade association	26.7%

8.2 Contribution analysis of evidence regarding the social impact of the Shanghai F1 on

SMEs

We aimed to assess two things: First, the extent of social changes reported by local SMEs [since the beginning of the F1] and, second, whether the F1 can be confidently concluded to have caused those changes.

According to the theory of change principle, evidence gathered from qualitative data (including interviews with both policy makers and SME managers) and the aforementioned quantitative data (in section 8.1) were used for the theoretical logic development of any changes

observed. In this chapter, our analysis of causal links in the impact chain is used to provide a contribution narrative. Causal links' robustness is then assessed, and, finally, the logic underlying each theory of change component is interrogated.

8.2.1 Contribution analysis of the causal linkages between Throughputs and Outputs

In Chapter 6, the theory of change map is developed, and the components of Goals, Inputs, Activities/Throughputs, and Outputs are introduced. To commence contribution analysis, we first assessed the robustness of the contribution by Outputs to Activities (see theory of change map).

Assessing the robustness of evidence—strong, medium or weak—supporting the existence of causal linkages between Activities and Outputs

Of the four causal linkages identified between Activities and Outputs, three were found to be robustly supported with empirical evidence collected in the study. For one of the linkages, no data were available to provide strong confirmation. The following sub-section details relevant evidence.

Achieved outputs

Achieved intended output 1: Enhanced city image and international influence

An enhanced city image was cited highly rated by all interviewed policy makers and independent sport policy advisers. Enhanced city image was also regarded as the most important impact of hosting the Shanghai F1. Policy makers A, B, and C, who were three division chiefs from the Shanghai Sport Bureau, indicated that the Shanghai F1 was the 'the symbol of Shanghai'. Policy maker A provided the example that the Shanghai F1 appeared in various promotional films for the 40th anniversary of Shanghai's reform and opening-up policy.

Before Shanghai hosted the F1, the Shanghai government adopted various strategies to enhance the city's international influence, such as hosting international political conferences and the Asia-Pacific Economic Cooperation (APEC) Conference (Policy Maker B and Independent Sports Policy Adviser D) and promoting Shanghai through regular tourism advertisements in New York Times Square (Independent Sports Policy Adviser D). However, the effects of this publicity were perceived to be much less useful than the construction of an F1 metro station in Shanghai (Policy Maker, B; Independent Sports Policy Advisers D and H).

Independent Sports Policy Adviser D, particularly, stated that web searches for the F1 far exceeded those for the APEC conferences. Independent Sports Policy Adviser H said, 'The cost of publicity in New York Times Square was extremely high, but it did not inform more people about Shanghai', so this marketing campaign was later suspended by the Shanghai government.

The contribution of the Shanghai F1 to the enhancement of the city's image came mainly from widespread attention that international audiences directed to the event. One interviewee, an independent sports policy adviser, said the following:

Because the F1 has a relatively large global audience, these audiences can watch the event and get to know Shanghai and China. They will learn that an international metropolis like Shanghai exists in China. (Independent Sports Policy Adviser F)

Another independent sports policy adviser provided a vivid example to illustrate the contribution of the Shanghai F1 to the city's image and international influence:

The former deputy mayor of Shanghai went to Germany for a meeting. He rode a carriage in a German city and strolled around the streets. With the help of an interpreter, he had a brief conversation with the old local man who drove the carriage. He said he was from Shanghai, and the old man said "I don't know much about Shanghai, so please describe it to me". The deputy mayor talked about some features for which he thought Shanghai was famous, but the old man didn't know of them. However, when the deputy mayor talked about the fact that Shanghai had been hosting the F1, the old man was able to understand and relate immediately,

and he recognised that Shanghai was an international city. Clearly, the old man used the F1 as an indicator to assess the city's status and reputation (Independent Sports Policy Adviser H).

The SME managers interviewed mostly confirmed that the Shanghai F1 had exerted an impact on Shanghai's image; they believed that this impact contributed, to various extents, to their businesses' social and economic development. The specific questions designed were as follows: To what extent do you think the following aspects of urban social development have been affected by the staging of the Shanghai F1? A 5-point Likert scale (to rank effects from strongly negatively affected to strongly positively affected) was used to evaluate the extent to which these effects were perceived by managers. As indicated in our survey data, managers expressed a positive attitude regarding the impact of the F1 on Shanghai's image. The results (Table 8.7) show that more than 70% of managers considered Shanghai's image to have been positively affected by the F1. The corresponding mean score was 3.90 out of 5.

Table 8.7 Impact of the Shanghai F1 on various aspects of urban economic development as perceived by SME managers

Items	Means	Percentage of managers who agreed the item was positively or strongly positively leveraged (%)
Image of Jiading	4.01	74.7
Automobile City		
City image	3.90	73.5
City positioning	3.90	71.1

Civic pride	3.88	70.5
Soft national power	3.84	72.9

Hence, this logic—the promotional activities organised as a result of the F1 improved Shanghai's image and international influence—is confirmed.

Achieved intended output 2: Enhanced image for Anting Automobile City

The logic underlying Achieved Intended Output 2 is that the Shanghai F1 and the enhancement of Shanghai's image and international influence, as a result of leveraging by the Shanghai F1, might have benefitted Anting Automobile City.

In general, as discussed, the F1 contributed to an enhanced image and international influence for Shanghai. Digging one layer deeper, the F1 also helped to improve the image of Anting Automobile City in Jiading District (where the F1 is staged). Jiading became famous in the Yangtze River Delta (one of the industrial heartlands of China, including Shanghai, Jiangsu, Zhejiang, and Anhui Provinces) and nationwide (Policy Makers B and C; Independent Sports Policy Adviser D). Because of the F1, Jiading became associated with the automobile industry. Many major international car companies (e.g. Shanghai Volkswagen) relocated to or established branches in Jiading Auto City (Independent Sports Policy Adviser H).

One interviewee who was the manager of a tourism company indicated that Jiading's

image as a tourist destination was also improving yearly as the F1 developed:

The influence of the F1 has increased, and more tourists wish to come and visit the racing circuit, so they book tours and visits with us. In this way, more people get to know Anting and our tourism projects. (SME Manager B)

The aforementioned statistical results (Table 8.7) also clearly show that more than 70% of managers considered the image of Jiading Automobile City to have been positively affected by the F1. Among all indicators, this received the highest mean score of 4.01 out of 5.

Achieved intended output 3: Increased numbers of F1 fans

Evidence from the qualitative data confirms an increase in the number of F1 fans. The hosting of the F1 promoted motor racing and attracted numerous racing fans. This impact is considered profound (Policy Makers A and B; Independent Sports Policy Advisers D, E, F, and H). Specifically, the increase in the number of F1 fans can be seen in three respects: First, the increased fan base contributes to F1 event attendance. As interviewees said, 'Tickets used to be unsellable but have been sold out in recent years' (Policy Makers A and B; Independent Sports Policy Adviser H). Second, more people participate in the 'prosperous future' road run held at the Shanghai F1 track on New Year's Day every year. As policy maker A said,

On 1st January, the F1 track will be open for a mass road running event in which everyone runs around it. Many people are already avid motor racing fans, and others just want to walk on this track to experience it. Because of this activity, more people get to know about the F1 and car racing. The number of people who participate in the event gradually increases every year. Some people who were real F1 fans even took photos kissing the track. (Policy Maker, A)

The third manifestation of the increased numbers of F1 fans is the increased number of potential attendees at other entertainment events (e.g., rallying races) on the circuit (Independent Sports Policy Adviser E). For those fans, F1 events and F1 circuits had strong appeal and high status in the same manner that the Beijing Olympics and its main stadium, the Wukesong Stadium, did to Beijing's citizens.

Hence, this logic is confirmed; namely, that the number of F1 fans was increased by promotional activities and public welfare activities to acknowledge fans and enable citizens to benefit from the F1.

Unachieved intended outputs

Unachieved Intended Output1: Increased youth participation in motor sports

Three of the policy makers interviewed mentioned that the development of the Shanghai F1

could potentially have contributed to increased youth participation in motor sports (Policy Maker B; Independent Sports Policy Adviser H). However, no empirical evidence supports this claim. The policy makers believed that, as the number of racing companies gradually increased,

more young people might engage in racing sports. However, this was mere speculation. Interview data from the manager of a racing company revealed that some teenagers had indeed joined a karting club, but the cost associated with participation in this particular sport was high and not affordable for all families (SME Manager, H).

Overall, the findings for this causal link assessment were mixed, and we cannot confirm any link.

Identifying factors that support or impede the established causal linkages between Activities and Outputs: based on qualitative evidence

Contributory factors

Contributory factors are catalysts for the construction of strong causal links. They can be explicit programme factors or implicit non-programme factors. From interview evidence, this study concludes that contributory factors mainly include four aspects to help form the causal links between Activities and Outputs. They are two programme factors: (1) the Shanghai government actively promoting the Shanghai F1 and related racing events and (2) Shanghai actively promoting the Shanghai F1 brand image as well as two non-programme factors: (3) Shanghai's rapid macro-socioeconomic and cultural development enhancing its status

domestically and internationally from 2000 to 2021 and (4) large, internationally renowned companies' branches located in Jiading District. Among them, (2), (3) and (4) contribute to the formation of achieved impacts - enhanced city image and international influence and enhanced image for Anting Automobile City; (1) (2) contribute to the formation of achieved impact - increased numbers of F1 fans.

Regarding elaborating the contributory factors of the achieved outputs - enhanced city image and international influence and enhanced image for Anting Automobile City, active measures taken by the government are direct contributions. Audiences, tourists and fans around the world can have an in-depth understanding of Shanghai's image through government continuously promoting the F1 in its image, circuit, related business and services (Policy makers, A, B and C; Sports policy advisers, D, H and I). Overtime, they would pass on the deep impression of the commercialised and modernised F1 to the city image or at least consider that Shanghai is a socioeconomical prosperous city having abilities on hosting the F1 (Policy makers, B; Sports policy advisers, H and I). Therefore, Shanghai's image and Anting Automobile City's image can be improved through Shanghai government continuous active promotions.

The Shanghai's rapid macro-socioeconomic and cultural development enhancing its status domestically and internationally from 2000 to 2021 is a non-programme but fundamental factor contributing to the achieved output - Shanghai's city image and Anting Automobile City's development. Several interviewees demonstrated that Shanghai's supreme economic position in China resulted in FIA selecting Shanghai as a host city to stage the Chinese F1 (Policy makers, A, B; Sports policy advisers, E and H), and provided premium condition for the Shanghai F1 exerting its spillover effects on the city's image improvement. Policy maker B pointed that 'not all the cities in China has the (economic) ability to host the major sporting events, such us the F1, and some cities' images are not improved after hosting the major sporting events, but Shanghai can do it'.

Large, internationally renowned companies' branches located in Jiading District is a non-programme factor, whereas several interviewees indicated these companies together with the Shanghai F1 had been interrelated to help improve the image of Anting, Jiading District (Policy makers, A and B; Sport policy advisers, H).

As for the received output - increased numbers of F1 fans, it is contributed by two programme factors that Shanghai government actively promote the image and related events

of the Shanghai F1. Interviewees demonstrated that government actively promoting the F1 rendered more people know about the motorsport and cultivating the amount of the F1 fans (Policy maker, A; Sport policy advisers, H and I). The increased number of fans reflects a phenomenon that motorsports, including Formula 1, are more and more popular in China (Sport policy advisers, H and I).

Impedimentary factors

There is one non-programme factor impeding the formation of causal links between Activities and Output - increased youth participation in motor sports. The factor is the huge cost of learning and training of racing a car, which is not affordable to the normal families (Sport policy adviser, H). Generally, teenagers learn to drive a car from a karting, and then gradually upgrade the level of the car, whereas each upgrade costs more than the previous one (Sport policy advisers, H and I; SME manager, H). Although 'the F1 is a visual feast for its fans who consider it as the extension of human beings' physiological speed' (SME manager, H), they prefer to watch rather than participate and afford the huge practicing fees.

8.2.2 Contribution analysis of the causal linkages between Outputs and Impacts

Chapter 6 presents the theory of change map and introduces the components of Goals, Inputs,

Activities/Throughputs, and Outputs. However, it does not introduce impacts. This section draws together evidence to establish causal linkages between Outputs and Impacts. The details from the evidence collection in this section were extracted mainly from interviews and surveys of SME managers rather than from policy makers and independent sport policy advisers. Because policy makers and independent sport policy advisers had little evidence-based understanding of the F1's social impacts on SMEs, they were generally more concerned with the overall picture of sport-related affairs and devoted most of their attention to high-level policies and strategies, particularly around how F1-related sport policy and governance structure ensure positive social development for Shanghai and for local businesses. In comparison, SME managers provided direct evidence on their perspectives regarding the extent to which the F1 helped their businesses' social development.

We used indicators extracted from the survey as evaluation indexes because these indicators comprehensively represented the social development of SMEs. We reported strong evidence that the Shanghai F1 had affected local SMEs in terms of brand value, corporate image, and the building of relationships with other institutes, and we reported moderate and weak evidence for other indicators. The details are presented in Table 8.8.

Table 8.8 Degree of the Shanghai F1's impact on various indicators of local SMEs' social development

Indicators	Strong	Moderate	Weak
Community responsibility		√	
Environmental responsibility			V
Brand value	√		
Market responsibility			V
Corporate image	\checkmark		
Community participation		\checkmark	
Media exposure			V
Employee rights			V
Relationship building with other sectors	√		

Assessing the robustness of evidence—strong, medium, or weak—supporting causal linkages between Outputs and Impacts

Of the four identified linkages between Outputs and Impacts, two were found to be robustly supported with empirical evidence collected in the study. No data were available to provide strong confirmation for the other two. The following sub-section details the evidence.

Achieved impacts

Achieved Intended Impact: Increased brand value and corporate image

The logic underlying the achieved intended impact is that local SMEs might have benefitted from F1-leveraged improvements to Shanghai's image and international influence as well as F1-leveraged improvements to the image of Anting Automobile City. For example, the

improvements of Anting Automobile City would attract advanced foreign technological companies and help to enhance local SMEs' product quality and design, gradually improving the brand value and corporate image of SMEs.

Most of the managers interviewed believed that their companies' brand value and corporate image had improved because of the Shanghai F1 (SME Managers B, C, D, F, H, I, and J). Three reasons were identified from the survey and interview data.

First, brand value and corporate image were improved by the improved business capabilities resulting from F1 involvement. Managers of companies that had obtained business-related benefits from the F1 and other racing events said that their commercial involvement with well-known events had demonstrated their business capabilities, building trust among subsequent customers. As described by one manager from an automobile service company,

We provided services for the F1 as well as other F1-related events, such as the WEC (FIA World Endurance Championship). More businesses were created during the F1 and the WEC every year. The services provided for these events might have promoted the company's brand. Because we had served F1 and WEC customers, we had a relatively good understanding of some service-related concepts and some service experience, which were potentially valuable to other customers. Some customers also felt that my company was more credible than others (SME Manager F).

The second reason why, according to several SME managers, the Shanghai F1 had

improved companies' brand value and corporate image was a knock-on effect from the city image enhancement caused by the hosting of the Shanghai F1. Two managers, one from a sport retail company and one from an industrial trade company, explained:

Of course, some of the current sporting events in Shanghai, including the F1, have indirect effects on local companies like ours. When we contact nonlocal cooperative customers, they feel that Shanghai's popularity has increased. Your company's credibility increases when it comes from this kind of city (SME Manager C).

The F1 had a big impact. Sometimes we chatted with customers about our Shanghainese company. When we mentioned Shanghai, it felt like a formal company, and it felt notably different from mentioning second-tier and third-tier cities. (SME manager G).

The third reason why the Shanghai F1 supposedly improved corporate brand value was the association that the event created between SMEs and advanced foreign technologies. As a department head of Anting Automobile City indicated,

We thought that, in the future, the auto industry would enter a new development phase through the influence and guidance of the F1. It would then be possible for domestic independent auto brands to cooperate with advanced foreign technology brands in this area of automobile manufacture. So the independent brand would participate in the event in the future, then this will be actually very meaningful to enhance their corporate brand value. (SME Manager J).

In the aforementioned survey results (section 8.1.1), sports companies benefitted more

significantly from enhanced brand value and corporate image than did other types of companies. When we interviewed managers, we verified these results: Managers of companies with sport-related businesses perceived that they were subject to direct (SME Manager F) or indirect leveraging by the F1 (SME Managers C and H). Other companies' managers, such as one manager from a design and exhibition company, said that their companies' image and brand value might not be leveraged by the Shanghai F1.

Achieved intended impact: Relationship building with other sectors

As mentioned in statistical report (section 8.1.1), sports and automobile SME managers reported that the Shanghai F1 strongly inspired them to form collaborative relationships with sport associations/organisations/corporations (with a frequency of 64.3%), volunteer institutes (with a frequency of 50%), and higher educational institutes (with a frequency 39.3%). In addition, these results were confirmed by most of the managers interviewed. The managers interviewed stated that the Shanghai F1 particularly inspired them to cooperate with higher educational institutes because the automobile business is associated with professional and high-tech knowledge; they therefore consulted with and obtained advanced knowledge from relevant higher educational institutes (SME Managers B, C, D, F, G, H, and I).

The linkage logic here is that the Shanghai F1 as a branding event indeed exerted spillover effects by increasing the number of sports and automobile business activities in the city. Local sport and automobile SMEs might may from such improvements to business activities through the creation of business connections or even the acquisition of business contracts from other sectors.

Unachieved intended impacts

Unachieved Intended Impact 1: Increased community responsibility and community participation by companies

As detailed in section 8.1.1, the local SME managers surveyed reported that community responsibility was the most positively leveraged impact area. However, qualitative data gathered from the SME managers interviewed suggested otherwise: Only two companies commented on this item and provided details regarding implementation. For example, one manager from a racing company explained that their company had offered free guest lectures to local auto repair schools.

Another manager (SME Manager C) from a sport retail company said that his company participated in a few community sport activities and offered its products to activity participants

free of charge. Notably, this engagement was not necessarily influenced merely by the F1; this manager further explained, 'There were a lot of international sporting events in Shanghai, and the F1 was only one of them, so I would say that it generated only limited impacts for us.'

We therefore report that, although a moderate amount of quantitative evidence suggested an increase in community responsibility and community participation by companies, the qualitative data were weak. We therefore consider this linkage to be non-existent.

Unachieved Intended Impact 2: Increased environmental responsibility, market responsibility, media exposure, and employee rights

In general, findings were mixed in relation to the evidence for confirming or rejecting logic links indicating that the F1 and various relevant activities contributed to increased environmental responsibility, market responsibility, media exposure, and employee rights.

Similarly to the aforementioned community responsibility logic, the SME managers surveyed considered environmental responsibility to be the most positively leveraged indicator. However, this was not supported by the qualitative data from the SME manager interviews. The other indicators for market responsibility, media exposure, and employee rights received relatively low mean scores and were not mentioned by the SME managers interviewed.

Identifying factors that support or impede the established causal linkages between Outputs and

Impacts: based on qualitative evidence

Contributory factors

Contributory factors are catalysts for the construction of strong causal links. They can be

explicit programme factors or implicit non-programme factors. From interview evidence, this

study concludes that there are mainly two contributory factors helping form the causal links

between Outputs and Impacts. One is large internationally renowned companies' branches

located in Jiading District, which contributes to the formation of the intended impact -

increased brand value and corporate image. Large companies, such as Mercedes Benz and

Audi, are attracted by the hosting of the Shanghai F1, and then contribute to the image

enhancement of the Shanghai F1 and Anting Automobile City in turn (SME managers, B, H

and I and H). Managers of SMEs, especially the automobile SMEs in Anting demonstrated that

they were the beneficiary of the large renowned companies located in Anting as a result of the

hosting of the Shanghai F1, as they considered that their companies' images can be positively

influenced by those large companies if they have opportunities to sign commercial contracts

with large companies (SME managers, B, H and I).

Another one is local SMEs actively seeking new business opportunities, which contributes to the formation of the achieved intended impact - relationship building with other sectors. Several SME managers pointed that their companies had built relationships with higher education institutes, large companies and other SMEs, as they attempted to take advantage of the Shanghai F1 to carry out new businesses (SME managers, B, C, D, F, G and H). SME manager G demonstrated that 'I hope in the future, my company can have opportunities to do more business related to the Shanghai F1 and cooperate with high-technology companies whatever the domestic or oversea companies'.

Impedimentary factors

There are two non-programme factors impeding the formation of causal links between Outputs and Impacts - increased community responsibility and community participation by companies; and increased environmental responsibility, market responsibility, media exposure, and employee rights. The two factors are (1) SME managers considering that the hosting of the Shanghai F1 is only the governmental behaviours with political goals and (2) SMEs lacking awareness of social responsibility. These two factors jointly render the formation of the intended impacts.

For the first factor, SME managers consider that the Shanghai produces week impact contributing to improve their CSR, even if it helps improve their companies' brand value and corporate image (SME managers, A, B, D, E, and G). Similar to the situation in economic impacts, as SME manager C indicated that 'the F1 is only one of the major sporting events in Shanghai, it is not special'. Two SME managers demonstrated that the hosting of the Shanghai F1 was irrelevant to their companies CSR (SME managers, A and B). Moreover, most of SME managers were lack of awareness of undertaking social responsibility (SME managers, A, E and G). SME manager A said 'we cannot consider too much about the community or environmental responsibility, our business sale is small and we only target at our economic benefits'. Thus, the two intended impacts were not achieved.

8.3 Impact chain: effects of the Shanghai F1 on the social development of local SMEs

As per the theory of change framework (Funnell & Rogers, 2011), the final step is to establish coherent impact chains (presented in a matrix format in Table 8.9), bringing together the components of success criteria, programme factors, non-programme factors, outputs, and activities. The matrix offers a one-page view tool to clarify the establishment of each causal claim in this study.

Among these columns, (1) success criteria identifie the desired features of each impact in the impact chain and the basis for judging the value of an impact. For example, the improving image of Shanghai and Automobile City in Jiading District is one of the success criteria for judging the rationality of the impact that increased brand value and corporate image exert on SMEs. (2) Programme factors and non-programme factors describe influences on the achievement of an impact. Programme factors are largely within the control of the programme. For instance, in this research, one of the programme factors was the Shanghai government's encouragement of SMEs to participate in F1-related promotional activities and other local sporting events. Non-programme factors were largely outside of the programme's control. One important non-programme factor in this study is the enhancement of Shanghai's domestic and international status resulting from its rapid macro-socioeconomic and cultural development from 2000 to 2020. (3) Outputs and activities are introduced in the theory of change logic, but here we tease out the outputs and activities relevant to each impact chain.

Table 8.9 Impact chain for social impacts of the Shanghai F1 on local SMEs

Impact chains	Success criteria	Programme factors	Non-programme factors		Outputs	Activities
Achieved intended impact: increased brand value and corporate image	 The image of Shanghai and Automobile City in Jiading District improves. Local SMEs bid for and sign F1-related business contracts. Cooperation with advanced foreign technology companies results from the Shanghai F1. 	 •The Shanghai government actively promotes the Shanghai F1 and related racing events. • Shanghai actively promotes the Shanghai F1 brand image. • The Shanghai government encourages SMEs to participate in F1- 	Macro level: • Shanghai's rapid macrosocioeconomic and cultural development enhanced its status domestically and internationally from 2000 to 2021.	• Large, internationally renowned companies' branches are located in Jiading District.	The city's image and international influence are improved The image of Anting Automobile City is improved	 The Shanghai F1 three days per year (in April) Other automobile competitions such as the MotoGP China Grand Prix, V8 Touring Car, A1 World Cup Grand Prix etc. Portrayal of the Shanghai F1 in the Shanghai's promotional film Exhibition of F1 racing cars in the city centre
Achieved intended impact: Relationship building with other sectors	 Local SMEs actively seek and successfully build cooperation with other sectors, such as sport organisations and higher education institutes. Other sectors engage in cooperation or provide support in the form of knowledge and information. 	related promotional activities and other local sporting events. •The Shanghai government supports and advances transportation construction in		• Local SMEs seek new business opportunities and obtain advanced product knowledge.		

Unachieved	SME managers improve	Jiading District.	Potential barriers	•The number of	Public welfare activities
intended impact:	their awareness of social		from contextual	Shanghai F1	to acknowledge fans and
Increased	responsibility.		factors:	fans increases	benefit citizens
corporate					
community	Employees' rights are		SME managers		Host the F1 carnival per
responsibility and	protected, and they identify		consider that, from		year before the F1
community	more strongly with their		among the impacts		competitions in the city
participation	companies, and employees		exerted overall by		centre (150 thousand
Unachieved	are willing to contribute in		Shanghai's major		people on site, 3 million
intended impact:	community activities.		sporting events,		spectators online)
increased			few could be		
environmental			attributed to a		
responsibility,			single event such		
market			as the Shanghai F1.		
responsibility,					
media exposure,			•SME managers		
and employee			consider that the		
rights			hosting of the		
			Shanghai F1 is		
			only the		
			governmental		
			behaviours with		
			political goals.		
			•SMEs lack		
			awareness of social		
			responsibility.		

As suggested by Funnell, tracing the connections horizontally across and vertically up the matrix clearly demonstrates the logical or expected links amongst impact chains.

8.4 Conclusion

In this chapter, quantitative evidence is reported from survey data regarding the social impact exerted by the Shanghai F1 on SMEs. Contribution analysis is also conducted using the evidence collected to assess the Shanghai F1's social impact on SMEs. In summary, the following key findings can be reported: (1) The social development of sports and automobile companies was more significantly leveraged by the F1 than was the social development of other companies. (2) Sport and automobile SMEs were inspired by the Shanghai F1 to form collaborative relationships with sport associations/organisations/corporations, volunteer institutes, and higher educational institutes.

The contribution analysis of the causal linkages between Activities and Outputs revealed robustness for three types of social Outputs: (1) An enhanced city image and international influence for Shanghai, (2) an enhanced image for Anting Automobile City, and (3) increased numbers of F1 fans. We also reported weak robustness in the linkage aspect for increased youth participation in motor sports.

The analysis of the causal linkages between Outputs and Impacts revealed strong

evidence that brand value, corporate image, and the building of relationships with other sectors were leveraged by the Shanghai F1. Medium or weak evidence was revealed for other indicators.

After completing the contribution analysis, this study used an impact chain matrix to assist with the recording of core components subjected to contribution analysis, and we map the theory of change in reverse.

Chapter 9: Discussion

This thesis investigates the impacts of the Shanghai F1 on the socioeconomic development of local SMEs. It provides a thorough assessment of two-dimensional impacts and the moderately effects that the F1 were found to exert on SMEs' socioeconomic development. This chapter provides interpretation and description of the findings' value, informed by relevant literature, to identify any new understanding emerging from the study. The theory of change and contribution analysis are also discussed to offer some new insights provided.

9.1 What do we learn from the Shanghai F1? Macro level impact analysis of changes experienced by Shanghai's SMEs as a result of the F1

9.1.1 Economic impacts

In this study, economic improvements were reported in the tourism and service industries in the form of increased domestic and international tourism (Duran, 2005; Getz, 2005; Giesecke & Madden, 2007; Li & Blake, 2008), during the Shanghai F1 hosting period. Because numerous tourists visit Shanghai on a yearly basis, local SMEs, such as catering SMEs, entertainment SMEs, and small and medium-sized hostels, undertook the tourism businesses as their specialised productions to serve these tourists to achieve efficient turnover and profit

growth (Zikmund, 1999; Kachba et al., 2012). This finding is notable because other literature has rarely mentioned direct leveraging effects exerted by the hosting of major sporting events on local SMEs. However, one study from relevant grey literature indicated that a total of 55,000 non-hotel star-grated rooms (provided by SMEs) could benefited as a result of visitors attending the 2010 FIFA World Cup in South Africa.

Although Shanghainese SMEs benefit financially from the tourism that the Shanghai F1 generates, our findings indicated that SME managers perceived only moderate benefits. This reportedly moderate effect resembled the case of London 2012. When the Guardian investigated the perspectives of small business managers in London on how the 2012 London Olympic Games had benefited their companies, only 16% of respondents answered 'yes' to the question 'Has the Olympics affected your small business?' (The Guardian, 2012). The Guardian's report verified that, although the 2012 Olympics leveraged increased business revenue for local SMEs (Small business.co.uk, 2008), this increase was moderate.

In relation to the ability of the Shanghai F1 to attract domestic and international tourism that benefits turnover and profit growth among local SMEs, two points are noteworthy: (1) The periodically staged Shanghai F1 provides more sustainable economic and tourism impacts in

terms of improved domestic and international tourism than do one-off major sporting events. For one-off major sporting events, local SMEs might face long-term difficulties selling eventspecific products if customer demand wanes after the event (Solberg & Preuss, 2007). This study confirmed that periodic major sporting events generate lasting impacts on SMEs' socioeconomic development. (2) This study indicated that, in contrast with observations from other research, Jiading was subject to no crowding out effect by the Shanghai F1. An example of this crowding out effect was described by restaurant owners and retailers located near the Singapore racing track, who complained that turnover decreased during the Singapore F1 hosting period due to price inflation, room shortages, and traffic problems (Henderson et al., 2010). However, the Shanghai International Circuit was established in 2003 on vacant land, and Jiading is not a tourism destination but is surrounded by car companies or manufacturing companies. Moreover, most Shanghai F1 spectators opt for accommodation in the city centre and spend their money there after F1 races. The Shanghai F1 therefore causes no crowding out effects in Shanghai but, rather, creates more business opportunities for Jiading's SMEs.

The hosting of the F1, particularly the array of new tourism programmes and services established (comprising a mixture of government-led and non-government-led), offered more

opportunities for SMEs to directly engage in business activities, with some non-governmentled programmes and services (e.g., indoor karting offered near the F1 circuit) organised by SMEs. Such engagement was possible and feasible only because of the F1. In addition, new programmes require new product design and new promotion strategies to adapt to market demand (Noci and Verganti, 1999). Hence, this study suggests that local SMEs who engaged with were involved in the new tourism opportunities created by the F1 increased their business competitiveness in terms of product design, product knowledge, and promotion strategies by constantly exploiting new tourism programmes relevant to the Shanghai F1. Research mentioned new tourism programmes produced by major sporting events, such as the one at Bacelona's Nou Camp Stadium, which is used as a sports theme park complex (Thornley, 2002). However, no studies have specified whether SMEs participate in the operation or management of these new programmes.

The hosting of various scale racing competitions (such as the MotoGP China Grand Prix, the V8 Touring Car Series, and the A1 World Cup Grand Prix) on the F1 circuit constitutes an effort by the Shanghai government to maintain regular tourism projects; SMEs benefit from tourists' expenditure on racing competition tickets, sightseeing, travel,

accommodation, catering, and entertainment. Such strategies—optimising use of a hosting site through a series of recurring events and derivative functions—have been observed in other cities and termed event portfolio phenomena (Ziakas, 2013, 2019). However, the portfolio of recurring racing competitions at the Shanghai International Circuit represents a specialisation strategy (Ziakas, 2019). The type of SME that has particularly benefited from recurring event hosting is automobile and racing companies, and this adds new insight to the relevant literature, in which tourism companies or industries were previously the sole focus (Duran, 2005; Getz, 2005; Giesecke & Madden, 2007; Li & Blake, 2008). The hosting of the Shanghai F1 and other car racing competitions on the Shanghai International Circuit contributed directly to the 'formation of the automobile industrial chain' in Anting Automobile City (Shanghai Municipal Government, 2006, 2011, 2016). The development of the automobile industrial chain subsequently benefited racing SMEs and car manufacturing SMEs by enhancing their business profit and turnover.

The construction of Metro Line 11 and the Shanghai International Circuit infrastructure that resulted from the Shanghai F1, similar to the infrastructure construction, traffic engineering, and landscaping improvement leveraged by other major sporting events (Lin &

Lu, 2018; Owen, 2005; Scott, 2014), was a basic condition for local SMEs to achieve economic development. Metro Line 11, which operated on a daily basis and connected Jiading to the city centre, helped urban SMEs in catering, accommodation, entertainment, tourism, and retail to increase profits, by facilitating easy transportation for spectators during events. The Shanghai F1 received huge investments-GBP £0.615 billion from Shanghai Government for eventrelated constructions, similarly to the other major sporting events hosted in China, such as Nanjing investing GBP £0.11 billion to host the 2014 Youth Olympic (Zhang et al., 2019) and Guangzhou investing incredible GBP £28.6 billion to host the 2010 Asian Games (Bao, Liu & Li, 2019), thereby it caused controversies in society in short term. However, the SME managers generally demonstrated positive perspective to the hosting of the Shanghai F1. Although the Shanghai F1 suffered a maximum reduction of 46% in 2008 and 2009 in the macro level (Sohu.com, 2009), event-related SMEs were not influenced from that crisis.

A threat to London's SMEs struggling to survive due to displacement and replacement by event-related construction was reported in one study (Duignan, 2016) but was not evidenced in this study. Those SMEs were not compensated by governments after the events, unlike in other cases, such when the Olympic Park was constructed before the 2012 Olympic Games,

and more than 200 local SMEs were displaced (Raco & Tunney, 2010). In our case, Jiading is a subdistrict of Shanghai, and it encompasses a large area of vacant land dedicated solely to the automobile industry, such as car companies and manufacturing companies, gradually developed in Jiading as a result of the Shanghai F1 instead of being replaced by event-related construction. In the long term, these SMEs benefit from the brand image of the Shanghai F1 and Anting Automobile City. They are therefore likely to achieve profit increases and improve product design by collaborating with or supplying products to buyers in Jiading and throughout China or even by exporting their products to the world.

9.1.2 Social impacts

Studies have indicated that the hosting of major sporting events in general enhances the image of the host city (Hall, 1989, 2001; Kim & Morrison, 2005). This study revealed a similar effect. In fact, in this study, the impact on Shanghai's image was cited as one of the most important social impacts of the Shanghai F1 on local SMEs, and it helped businesses to improve their corporate image and brand value. In addition, the positive image of Shanghai, as well as of Jiading District, that was leveraged by the Shanghai F1 and other major sporting events (Liang et al., 2021) attracted prominent car manufacture companies to invest in and relocate to

Shanghai. These findings resemble results reported in other studies finding that, subject to the leveraging of cities' image by major sporting events, national exports are expand and foreign investment is attracted (Rose & Spiegel, 2011; Solberg & Preuss, 2007; Tien, Lo & Lin). Shanghainese SMEs, particularly automobile companies, can collaborate with advanced foreign technological companies to boost profit growth, product design, and brand value. The acquisition of brand value and profit through collaboration with other sectors, termed cobranding, was noted in the other research (Krake, 2005). In the long term, automobile SMEs in Jiading are anticipated to increase automobile manufacturing trade with overseas companies as a result of the enhanced corporate image and brand value bestowed by the F1.

In addition, the hosting of the F1 benefited Shanghai's image; this is consistent with other findings indicating that, through such benefits for host cities' image, major events help to transform these host cities into famous global tourism destinations in the long term (Gibson et al., 2008; Gilmore, 2002; Qi & Zhang, 2008; Kim et al., 2015). The effects of major events on cities' tourism image—reported in studies on Barcelona (Duran, 2005), Sydney (Giesecke & Madden, 2007), Singapore (Henderson et al., 2010), Guangzhou (Luo & Yang, 2010), and Abu Dhabi (Valek & Buainain, 2016), for example—suggest a strong causal logic underlying

the hosting of major sporting events and its impacts on putting the city 'on the world tourism map' (Hazime, 2010, p. 1). Shanghai became an attractive city for tourists (Shanghai Municipal Government, 2016) as a result of various major sporting events (including the Shanghai F1; Liang et al., 2021) from 2004 to 2020 and yearly promotional activities (such as the official promotional film of the Shanghai F1 and the Shanghai F1 carnival); these events and activities generated multiple effects on local SMEs (including catering, accommodation, entertainment, tourism, and retail SMEs), which benefited from increased demand for products and services by tourists throughout the year.

Although this study concluded no evidence to demonstrate that negative impact also existed in hosting the Shanghai F1 exerted a negative impact on the city's image, such as the downside of the awareness of the host destination after major sporting events (Chalip, 2004; Chalip & Costa, 2005; Parent, 2020), the Shanghai F1 was considered by several SME managers as not distinctive enough to increase host cities' image and familiarity (Andersson, Bengtsson & Svensson, 2021; Lai, 2010; Liu, 2013; Smith, 2005). Therefore, SMEs, except to the sport and automobile SMEs, pointed that their companies' image and brand value might not be solely leveraged by the Shanghai F1.

Our this revealed that local SME managers, who were also Shanghainese citizens, demonstrated positive perceptions of and support for Shanghai's hosting of the F1. They were therefore likely to willingly participate in F1-related activities and even engineer their companies' engagement in F1-related business activities. Similar patterns have been noted in other studies, whereby residents with positive perceptions regarding the hosting of an event might attend the event and willingly engage in consumption at event-related activities (e.g. the Singapore F1; Cheng & Jarvis, 2010). Interestingly, major sporting events hosted in China often receive positive perceptions from residents (Fredline & Faulkner, 2000), because residents thought that hosting major sporting events can help younger generations to know more about sport culture and promote the sport industry's development in the city (Yao & Schwarz, 2018).

Therefore, Shanghainese citizens may consider it worthwhile to participate in and even spend money at the Shanghai F1 and F1-related promotional activities, such as the F1 carnival and the exhibition of Shanghai F1 racing cars in the city centre. The SMEs engaged in these activities can benefit from citizens' consumption. The underlying logic—the positive

perceptions among residents regarding Shanghai's hosting of the F1 stimulate business in the city—is hence proved to be the case.

Some empirical studies have concluded that major sporting events promote increased mass sport participation (Toohey & Frawley, 2012; Frawley & Cush, 2011; Ramchandani, Coleman, & Christy, 2019). Others have reported no change in sport participation leveraged by major sporting events (Bowles et al., 2006; Heuvel, 2001; Reis, Frawley, Hodgetts, Thomson, & Hughes, 2017). However, no evidence from our research verified that sport participation was leveraged by the hosting of the Shanghai F1. However, qualitative data collected from SME managers showed that poor attendance of automobile-related programmes and initiatives due to a lack of mass participation interest provided indirect evidence that the Shanghai F1 failed to generate mass participation. This is relevant to the causal logic behind the lack of engagement by local SMEs in community activities as part of their CSR remits.

Although the contribution of the Shanghai F1 to mass motor sport participation is unclear, the F1 fan base [in Shanghai/China] increased as a result of the Shanghai F1 event: Annual tickets for the Shanghai F1 quickly sold out, and an increased number of people participated in the annual government-endorsed Shanghai F1 promotional activities. These fans and spectators were consumers who contributed to the development of the Shanghainese tourism and service industry. In addition, these fans may regard getting involved in the

Shanghai F1 as a show-off of their middle-class status, because the Shanghai F1, similarly to the Shanghai International Marathon symbolised modern and fashion in China (Ronkainen et al., 2018).

Therefore, through engagement with these promotional activities and serving of car racing fans, SMEs achieved the growth in turnover and profits.

9.2 What do we learn from the Shanghai F1? Micro level impact analysis of the changes experienced by SMEs as a result of the F1

9.2.1 Changes in economic development indicators

Our findings indicate that the main economic benefits obtained by the majority of Shanghai SMEs as a result of the F1 were growth in turnover and profit; growth in sponsorship opportunities for regional sporting events; and a competitive edge in product design, product knowledge, and promotion strategies.

Improvements in turnover and profit can directly raise a company's status because these criteria are used to classify the sizes of enterprises (Ministry of Industry and Information Technology, 2011). External factors such as the hosting of the Shanghai F1 exert impacts on local SMEs' turnover and profits. However, this happened on the basis that, intrinsically, the operational flexibility feature that possessed by general SMEs render them to quickly adjust to

the profitable business opportunities offered by the F1. Shanghai's hosting of the F1 and other major sporting events changed the local goods and services markets and resulted in various relevant business activities and contracts. Studies have reported that, in comparison with larger organisations, SMEs can more flexibly and effectively recognise and respond to information regarding market changes and adjust their operational strategies (Aspelund & Moen, 2004; Gunasekaran et al. 2001; Vinas et al., 2001), which proved to also be the case for Shanghai. We reported evidence of Shanghai SMEs exploiting specialised production to achieve turnover and profit growth (Zikmund, 1999; Kachba et al., 2012), actively seeking Shanghai F1-related business opportunities, and bidding for contracts. In the long term, local SMEs, particularly sport and automobile SMEs, can therefore reasonably be anticipated to use F1 engagement experiences to f to develop continuously and obtain financial benefits to help them survive amid fierce market competition (McDonald & Dunbar, 2004; Weinstein, 2004).

The characteristics of SMEs, which are well placed to offer new or significantly improved products and services, provide them with a competitive edge in product design, product knowledge, and promotion strategies (Bos-Brouwers, 2010; Hansen et al., 2009; Klewitz & Hansen, 2013). The induced effects of Shanghai's hosting of the F1 prompted local

SMEs to apply innovative ideas faster than non-SMEs (Bos-Brouwers, 2010; Klewitz & Hansen, 2013). SMEs reacted by increasing their competitiveness through improvements to goods and services (Bos-Brouwers, 2010), product design (Lefebvre et al., 2003), and product knowledge including through constant evolution of product concepts, architecture, individual components, production, and logistics (e.g. Noci and Verganti, 1999).

According to the literature review, changes in employee numbers represent an important indicator for measuring the development of SMEs. However, the surveyed managers perceived that the hosting of the Shanghai F1 caused no change in employee numbers. No statistically significant difference was found between fixed-term workers and casual workers. The observation of no change in employee numbers may be related to the moderate/limited degree to which SMEs' economic development was leveraged by the hosting of the Shanghai F1. It may also have been related to developmental barriers preventing SMEs from retaining proficient and experienced workers in the long term (Delerue & Lejeune, 2010; Paul, Parthasarathy, & Gupta, 2016). SMEs may attract new employees during F1-related business activities. However, these employees may eventually leave because of the limited development prospects in small companies (Delerue & Lejeune, 2010).

Moreover, the observation in this study of no change in SMEs' employee numbers is inconsistent with the positive correlation that some sport-related studies have found between the hosting of major sporting events and local employment (Green, 2003; Hotchkiss et al., 2003; Huang et al., 2014). For example, a trend of increasing employment was seen during the Shanghai F1 (Huang et al., 2014), and a 17% increase in employment was seen during the 1996 Atlanta Olympic Games (Hotchkiss et al., 2003). The reason for this discrepancy may relate to the use of mathematical economic models to estimate increases in employee numbers in other research. The actual growth index is difficult to count and measure. Our survey and interview respondents were more inclined to assess impact on the basis of their companies' actual growth indexes.

In our findings, various types of SMEs were influenced by the Games to varying degrees. In companies employing more than 300 people, compared with in companies employing less than 10 people, the impact of the Shanghai F1 more significantly leveraged growth in profits, growth in turnover, and an improved competitive edge in sponsorship opportunities for regional sporting events; in companies with annual turnover exceeding \(\frac{4}{2}\)0 million, compared with in companies whose annual turnover was less than \(\frac{4}{1}00\) thousand,

turnover growth was more significantly leveraged by the impact of the Shanghai F1. According to SME classification criteria (Ministry of Industry and Information Technology, 2011), companies with annual turnover of less than 10 people and companies with annual turnover of less than ¥100 thousand are mostly small and micro-sized enterprises; companies with more than 300 people and companies with annual turnover of more than \(\frac{1}{2}\)20 million are mostly medium-sized companies. The following explanation is proposed for the differences in the degrees of leveraging reported for small and micro-sized enterprises versus for medium enterprises: (1) Small and micro-sized enterprises may have operated in a single business area with limited business scope and capacity (Baykal & Gunes, 2004). They are not easily able to expand their business activities even though the Shanghai F1 is an external factor that provides numerous business opportunities. (2) Medium-sized enterprises have better economic status and broader business scope. They are more willing to expand their businesses activities in response to business opportunities from the F1 (Garg & Deshmukh, 2008).

We found that, in foreign capital companies, compared with in domestic capital companies, growth in turnover and promotional strategies were more significantly leveraged by the impact of the Shanghai F1. The reason for this may have been certain policies favouring

foreign capital companies in Shanghai (Huang et al., 2014). Therefore, when foreign capital companies encountered F1-related business opportunities, they were more likely to make strategic changes and adjustments to gain competitive advantages.

9.2.2 Changes in social development indicators

We reported that the Shanghai F1 leveraged improved brand value and corporate image for SMEs. SME managers cited two reasons for this impact: (1) Companies specialising in F1related goods and services attracted customers and received validation from customers regarding their companies' business proficiency which also served as recognition of their brands. (2) Corporate brand value increased due to cooperation with foreign advanced technologies as a result of the Shanghai F1. The first of the aforementioned reasons is valid as a strategy of differentiation for SMEs building a strong brand image to identify their distinctive production was often implemented, in comparison with other competitors in the market (Keller, 1998; Krake, 2005). The underlying logic for the second of the aforementioned reasons is that SMEs were encouraged by the government to develop secondary associations between their brands and other famous entities (Keller, 2013). Hence, by cooperating with advanced foreign

technology companies, Shanghai SMEs boosted their own value through co-branding (Krake, 2005).

For sport and automobile companies, compared with for finance, science, and education companies, corporate image and brand value were more significantly leveraged by the impact of the Shanghai F1. This was largely because sports and automobile companies are most closely connected to the development of the F1 (Huang et al., 2014). Sports and automobile companies may be more sensitive to F1 development information, which allows them to better use the spillover effects of the F1 and develop branding strategies (Solberg & Preuss, 2007). Many automotive companies are located in Jiading Auto City, which is the site of the F1. They are thus more attuned to F1-related information and more able to use it for corporate publicity. Companies other than financial, technology, and education companies exhibit less business overlap with the F1, rendering them less affected.

Various scholars have noted the importance of SMEs developing corporate social responsibility (CSR) awareness (Saulquin & Schier, 2007; Berger-Douce, 2008; Jenkins, 2009). Although long-term CSR engagement by SMEs can boost companies' reputations and enhance the eco-efficiency of their production chains (Kechiche & Soparnot, 2012; Santos,

2011), the SMEs we investigated had largely overlooked these potential benefits. The findings in this research verify the existence of this issue of a lack of CSR engagement among SMEs. We reported weak evidence that the Shanghai F1 leveraged changes in companies' engagement in relation to the main aspects of CSR—community responsibility and community participation, environmental responsibility, and employee rights. Several managers explained that their companies lacked sufficient resources for CSR, and this was consistent with findings reported elsewhere (Kechiche & Soparnot, 2012). Notably, managers from sport-related companies explained that they participated in external CSR practices involving the funding and sponsoring of community sporting and cultural events and activities. However, they had two motivations for doing this: (1) A conducive atmosphere was created by all of the major sporting events that Shanghai hosts and not only from the Shanghai F1. This finding was relevant for assessing the real contribution impacts of F1 hosting on SMEs. (2) SMEs expected to participate in government-organised events that would provide a platform to promote their companies' image and brand value whereby to seek potential business opportunities rather than boosting local reputation.

9.3 Are theory of change and contribution analysis useful for assessing the socioeconomic impacts of events on local SMEs?

The theory of change was applied in this study. Since 2010, this theoretical approach has been increasingly used in sport policy research to evaluate the effectiveness of projects (Chen, 2019, 2021; Weed, 2014). Nonetheless, only a handful of studies have embraced this theoretical framework for evaluating sporting events impact/legacies. We applied the theory of change to identify change pathways associated with the socioeconomic development of the Shanghai F1 and its socioeconomic impacts on local small and medium-sized enterprises. We developed theory of change logic to evaluate how and to what extent the final impacts of the Shanghai F1 were caused by the event's leveraging effects on the city's socioeconomic development.

In the process of building the theory of change from causal chains of change paths, we had to consider the plausibility of causal links. Each integrated causal link passed through the city's socioeconomic developmental outputs, which played an intermediate role between the programme and the outcomes/impacts. Generally, multiple outputs plus accurate assumptions can collectively yield one outcome/impact (Funnell & Rogers, 2011; Hawe, Shiell & Riley, 2004). To develop the theory of change, the challenge was to carefully select and exclude

influential factors and evaluate whether they plausibly influenced the causal logic. For example, one outcome of this study, increased turnover and profit for SMEs, was collectively influenced by multiple factors: contribution of the Shanghai F1 to economic benefits for the city's tourism and service industries, improved city image and international influence, and enhanced infrastructure in Jiading district as well as the assumption that the Metro Line 11 operated efficiently on a daily basis and that SMEs were actively bidding for F1-related business contracts.

In the selection of activities/interventions, the researcher has discussed with other experienced researchers (Roger, 2008) - main and co-second supervisors to pick up those Shanghai F1-related activities/interventions which can effectively work on the causal links of the theory of change map and conduct the desired outputs (to the city's socioeconomic development) and outcomes (to the local SMEs' socioeconomic development) to enhance the plausibility of the theory of change.

Other studies that have applied the theory of change to evaluate political programmes (Hall & O'Day, 1971; Suchman, 1967) and sport programmes (Armour, Sandford, & Duncombe, 2013; Getz, 2009, 2019; Griffths & Armour, 2012; European Commission, 2007)

have been affected by similar challenges in the exploration and identification of causal links. These sport programme evaluations, generally involved the use of theory of change logic to evaluate sport-based interventions addressing social issues of racism, marginalisation among young people, and antisocial behaviour. In this study, the Shanghai F1 is concluded to have positively influenced the socioeconomic development of local SMEs, but the extent of the impacts was moderate.

In order to avoid the issue of exaggerating the causal contribution of activities in building theory of change (Mulgan, 2016), this study built the theory of change at two stages to enhance the systematic thinking. The basic theory of change map was built at the first stage. The basic map can be considered as a simple model (Hawe, 2015) in which goals and inputs were relatively clearly defined, but the throughputs (multi-level interventions and activities), outputs, outcomes, and impacts of the F1 on SMEs were not (fully compressing and representing all possibilities). At the second stage, the advised theory of change was built. Multi-level interventions and activities were categorised, confirmed, or deleted based on the evidence of interview and survey data at this stage. The interventions and activities need to feed into the development of all logic model components in various socioeconomic locations

or settings (Roger, 2008). The advised theory of change map thus can be considered as schematics instead of just a formula (Roger, 2008).

To develop a theory of change, the evidence that is relevant to the impact chains must be considered. In other words, the evidence collected is used to identify whether F1-related activities generate the outcomes/impacts that were intended for the programme (Connell & Kubisch, 1998). Some event-related activities, such as the Shanghai International Automobile Industry Exhibition held in the same month as the Shanghai F1, were linked directly with the impacts of the Shanghai F1. However, the exhibitors and visitors were large global companies (e.g. Volkswagen, Mercedes-Benz, Cadillac, Buick), and local SMEs were uninvolved. These activities were thus excluded in our theory of change map. We carefully evaluated the activities in detail to avoid falling into the trap of deeming the theoretical logic developed to be unconvincing (Mackenzie & Blamey, 2005).

In addition to plausibility, we took into account the issue of reality of the degree that impact happened based on the assumption development; namely, whether the assumptions applied and influenced the outcomes/impacts achieved (European Commission, 2007; Griffths & Armour, 2012). One assumption in our basic theory of change map (created after the

document analysis) was that catering and accommodation SMEs around the International Circuit in Jiading District actively bid for F1-related business contracts. However, this assumption was rejected after visited site and was further confirmed by policy makers and SME managers. Because few restaurants or hotels are located around the circuit, tourists prefer to go to the city centre to engage in consumption after the F1 racing.

Although we undertook to develop a plausible and reliable theory of change, testability was a limitation that was difficult to resolve. For the causal links we created between Shanghai's hosting of the F1 and the outcomes/impacts on local SMEs, we lacked measures to use for verification or similar accessible causal logic from other studies to treat as a benchmark (Coalter, 2012; Connell & Kubisch, 1998). Moreover, the questions of whether existing factors we identified were influential and whether other factors would have affected outcomes/impacts could have been answered confidently if more relevant literature were available. This issue is more prominent for assessing long-term event outcomes. Some factors or interventions, such as government-organised promotional activities during the Shanghai F1 competition period, might have been effective in the short term; in the long term, more factors or interventions were required for applicable causal links to be created (Coalter, 2012; Morgan et al., 2020).

Our theory of change map highlighted contextual factors. For example, Shanghai's rapid macro socioeconomic and cultural development from the beginning of the 21st century meant that it gained leading status among China's cities and international renown. The Shanghainese government has also provided a strong political push to use major sporting events for elevating the city's socioeconomic development and comprehensive competitiveness, which provided general impetus for the socioeconomic development of SMEs. This general socioeconomic development occurring in the background was regarded as an important political resource in our programme and was taken into consideration in outcome/impact measurement. The importance of contextual factors was also reinforced in the evaluation of various sport programmes (Griffths & Armour, 2013; Getz, 2019). Therefore, evaluating the programme's real outcomes/impacts in the context was essential because context is a key factor influencing ultimate impacts (Griffths & Armour, 2013; Stufflebeam, 1967).

This research adopted a bottom-up approach to evaluate the impact of the F1 on local SMEs by the Shanghai F1. A plausible theory of change model was required to link Shanghai's policy programme for major sporting event hosting to the micro-level socioeconomic development of SMEs. To achieve this, evidence of socioeconomic spillover effects exerted

on the city by Shanghai's major sporting events and subsequently prompting SMEs' socioeconomic development was collected from both policy makers and SME managers. The collection of various perspectives from different stakeholders prevented 'evaluation fatigue' (Department for Culture, Media & Sport, 2017, p. 23) and provided plausible causal chains underlying the theory of change logic (Getz, 2019).

We used contribution analysis to assemble data evidence to identify assumptions and factors verifying the robustness of each causal link in the theory of change. Contribution analysis performed by the Scottish Government (2012) suggested that 'drilling down' into each causal link in the theory of change provides more nuanced information regarding policy programmes' expected outcomes/impacts. Per this suggestion, we collected evidence from both policy makers and the potentially influenced objects, namely, SME managers. The most robust link in this study—the impact chain of improved corporate image and brand value could therefore be established because the data assembled were accurate and sufficient (Thecommonwealth.org, 2018; Riley et al., 2018). We found qualitative evidence was provided by most of the policy makers, independent sport policy advisers, and SME managers that we interviewed. These interviewees endorsed the assumptions that the Shanghai F1 and other

racing events had improved the city's image and Jiading's image, thereby contributing to SMEs' corporate image and brand value. We also found quantitative evidence demonstrating that surveyed SME managers perceived their corporate image to have been mostly positively influenced by the Shanghai F1.

The collected evidence from interview and questionnaire in this study took account into the principle of detailed information and consistency (Hawe, Shiell & Riley, 2004). The adopted interview evidence often included such as the scale and number of participants or spectators of the Shanghai F1 and the Shanghai F1-related activities as well as socioeconomic impact of the Shanghai F1. The statistical evidence derived from questionnaires included such as maximum/minimum mean values; maximum/minimum percentages and significant increases/decreases to support effectiveness of relevant indicators. When interview results and the questionnaire results were obviously contradictory, both of them were removed (Mackenzie & Blamey, 2005).

Another aim of using contribution analysis in this study was to identify plausible alternative factors or assumptions not included in the theory of change but accounting for or impeding causal links among impact chains (Bolton et al., 2018; Riley, 2018). Interviews with

SME managers revealed one extra positive factor contributing to the achieved outcomes: The relocation of large, internationally renowned companies' branches to Jiading District as a result of the Shanghai F1 improved the image of Jiading. This validates the logic that SMEs' image was enhanced as a result of these companies' relocation to the area. In addition to positive factors, we identified several potential barriers, providing valuable knowledge for future hosts: For example, several SME managers considered that, from among the impacts exerted overall by Shanghai's major sporting events, few could be attributed to a single event such as the Shanghai F1; therefore, in the absence of the initial intervention (Funnell & Rogers, 2011), the outcomes/impacts for their companies remained unchanged.

The contribution analysis narratives in this study were gradually developed from two stages of evidence gathering: First, data were obtained from interviews with policy makers and independent sport policy advisers. Second, alternative evidence of SME managers' perspectives was collected from interview data and survey data. Collecting and recollecting evidence to create the contribution analysis narrative is often time consuming. The author of this research visited Shanghai twice to collect and recollect evidence during a period of more than 1.5 years, after the data from the first trip proved insufficient, and more evidence was

required for assessing impacts; other government-led evaluation or evaluation encompassing multiple programmes can take five years (Delahais & Toulemonde, 2012) or longer (Thecommonwealth.org, 2018). The evidence from policy makers' perspectives helped us to complete the narrative of causal links between activities and outputs. The SMEs managers' perspectives were more evident in the outcomes/impacts. Moreover, the contribution narratives were iteratively discussed with two supervisors to enhance their validity and rigor. Because the researcher's rich academic skills were essential for narrative-building, the author was a PhD student lack of relevant experience and need the guidance and feedback from experienced supervisors (Befani & Mayne, 2014; Mayne, 2011).

The contribution analysis in this study reported 4 achieved impacts from a total of 12 impacts depicted in the theory of change map. Therefore, the impact of the Shanghai F1 on the development of local SMEs was moderately strong. Generally, contribution analysis can be used to identify weak parts of causal links established in the theory of change (Monnier, 2009; Toulemonde, 2010; Delahais & Toulemonde, 2012; Wimbush, Montague & Mulherin, 2012). This may reflect problems with how effectively most policy programmes' impacts generate their target objects.

9.4 Conclusion

This chapter featured a discussion of research findings and how theories were applied as compared with in other studies. One macroeconomic impact of the Shanghai F1 on local SMEs, which was similarly seen for major sporting events in other studies, was the attraction of numerous tourists to the city. Local SMEs began specialising in tourism in order to achieve efficient turnover and profit growth and improve their competitive edge—as represented by their product design and promotional strategies, for example—through an array of new tourism programmes and services resulting from the F1.

At the macro level, this study revealed similar social impacts on local SMEs to those observed in other studies that found major sporting events enhanced host cities' image. In fact, the impact on image was regarded as one of the most important social impacts of the F1 on local SMEs. Shanghainese citizens, as found parts of previous research, perceived Shanghai's hosting of the F1 positively and considered it worthwhile to participate in and even spend money at the Shanghai F1 and at F1-related promotional activities. The SMEs involved in these activities benefitted from citizens' consumption. Although the Shanghai F1 did not greatly contribute to mass participation in motor sport, it helped an increased number of fans of the

F1. These fans and spectators were potential consumers who contributed to the development of Shanghainese tourism and service SMEs.

To understand micro-level impacts, this study used research from the field of business development to identify the reasons for changes in SMEs' socioeconomic development indicators.

This study concluded that Shanghainese SMEs that were economically influenced by the Shanghai F1 may have benefited from innate operational flexibility and from a strategy of differentiation that they adopted to distinguish themselves from large companies that were their market competitors. Sport and automotive companies may be more sensitive to the development information of the Shanghai F1, which allows them to better use the F1's spillover effects and develop branding strategies. The inefficient CSR practices that were observed among SMEs were consistent with findings in other research: SMEs with insufficient resources are often less likely to consider CSR.

This chapter features a discussion of this study's combined application of theory of change and contribution analysis. To develop theory of change logic, as suggested by other studies, we took into account the evaluation context—specifically Shanghai's rapid macro

socioeconomic and cultural development. We collected various perspectives from policy makers, individual policy advisers, and SME managers to create plausible causal chains underlying the theory of change logic. Contribution analysis was used to trace back and test the robustness of causal links. The process of contribution analysis was important, because it can be used to identify weak parts of causal links established in the theory of change after the collection of additional evidence.

Chapter 10: Conclusion

In this research, theory of change and contribution analysis were applied to explore the impact of the Shanghai F1 on the socioeconomic development of local SMEs. In particular, the mechanisms underlying impact pathways were identified, traced from the initial policy goals to the subsequent spillover and multiplier effects on local SMEs' social economic development. A mixed-method research design revealed robust impact chains for the influence of the Shanghai F1 on local SMEs' economic development, specifically including the growth in turnover and profits; the growth in sponsorship opportunities for regional sporting events; and an improved competitive edge in product design, product knowledge, and promotional strategy. Robust impact chains were also revealed for local SMEs' social development. This development included improved brand value, corporate image, and business relationships with other sectors.

For some economic impact chains [that were identified in this study], chain effects were successfully/effectively exerted by the Shanghai F1 on local SMEs. SMEs' turnover, profit, and opportunities to sponsor regional sporting events benefited, particularly for tourism and service SMEs, as a result of the Shanghai F1, F1-related activities, and other racing events that

helped to improve the city's tourism and service industries. The increased number of fans visiting Shanghai F1 logically provided an extensive consumer base for F1 products and services that are offered largely by local SMEs. SMEs, particularly sport and automobile SMEs, improved their competitive advantages in product design, product knowledge, and promotional strategy. This was because they actively used advanced production criteria as a benchmark to enable cooperation with prominent foreign companies that were attracted by the Shanghai F1 and established subsidiary companies in Anting, Jiading.

For some social impact chains [that were identified in this study], chain effects were successfully/effectively exerted by the Shanghai F1 on local SMEs. The improvement of Shanghai's city image and the international influence resulting from the Shanghai F1 helped SMEs to improve their brand value, corporate image, and relationships with other social sectors; a chain effect was also found to be exerted by the upgraded image of Anting Automobile City on the corporate image of automobile and sport SMEs as a result of the Shanghai F1. More relationships with other sectors also resulted from local SMEs' active pursuit of new business opportunities during government-led promotional activities relevant to the Shanghai F1.

In general, Shanghai's reputational status as a Chinese economic centre and a globally famous city, as well as its rapid macro-socioeconomic and cultural development from 2000 to 2021, constituted the vital context and political resource influencing impact chains. Two main programme factors were fundamental conditions for rendering impact chains effective: One was the Shanghainese government's support of transportation construction in the form of Metro Line 11, which linked the event site with other areas of the city. Another factor was the Shanghainese government's active promotion of the Shanghai F1 and related racing events. In addition, three main success criteria were used to establish whether impact chains were effective: (1) F1-related business contracts signed by local SMEs, (2) successful cooperation by SMEs with other sectors, such as with sport organisations and higher education institutes, and (3) growing prosperity for the automobile industry in Jiading District.

However, some obstacles invalidated impact chains. Some SME managers perceived that the observed effects that were attributable to the Shanghai F1, rather than to other major sporting events in the city, were limited. These managers considered that the hosting of the Shanghai F1 was a government-led event with political goals and that their companies would have no opportunities to be involved in or benefit from the event hosting. They were therefore

disconnected from F1-related opportunities or were not proactive in bidding for F1-related contracts. This perception negatively influenced the completion of all causal chains. Another obstacle preventing impact chains from successfully producing outcomes was the fact that the main technology necessary for the automobile and racing industries' product development was produced outside Shanghai. This directly rendered the intended output—increased R & D in the automobile and racing industry—unachieved and impeded product quality improvements and product technology updates by automobile and racing SMEs. SMEs' lack of social responsibility awareness therefore explains the limited generation of social impacts, which rendered the intended impact of increased CSR among SMEs unachieved.

Implications and suggestions

This study focused on the Shanghai F1 to provide an in-depth insight into major sporting event impacts on local SMEs. The study conveyed a few important messages: First, the Shanghai F1 may have contributed to socioeconomic impacts on SMEs. Shanghai's experience provided an exemplar for other cities interested in staging major sporting events and utilising their spillover and multiplier effects to contribute to the socioeconomic development of the host city and of a special type of local SMEs. The second important message conveyed by this study was that a

carefully staged periodic major sporting event, such as the F1, can provide a substantial contribution to cities' socioeconomic development that one-off mega sporting events do not necessarily provide. The third important message conveyed by this study was that socioeconomic impacts on a host city and local SMEs are strongly associated with two factors:

(1) active staging of numerous event-related promotional activities by governments and (2) active engagement in promotional activities and pursuit of event-related business contracts by SMEs.

This study also led to three suggestions: One was that, because of the potentially moderate impact of a single major sporting event on local SMEs, cities or regions can enhance the cross-leveraged effects from events, which contribute to the socioeconomic development of host cities and local SMEs, by hosting a portfolio of sporting events. The second suggestion was that cities with financial constraints bid for and host periodic major sporting events promising sustainable impacts instead of hosting costly one-off mega sporting events promising only short-term benefits. The third suggestion to be taken from this study is that governments interested in hosting major sporting events should strategically promote these

events and encourage or fund local SMEs' engagement in event-related activities to maximise events' spillover and multiplier effects on the city and local SMEs.

Contribution to knowledge and theory development

This study addressed at least three research gaps in the relevant literature: First, it related to the Shanghai F1, which is a periodically hosted event, rather than to the Olympic Games of the FIFA World Cup, which are one-off events that constitute the subjects of most similar studies. The research found that this major periodic sporting event exerts a sustainable socioeconomic impact on Shanghai's tourism and service industries and its image and international influence. The second gap addressed by this research was in the academic area of micro-level impacts from major sporting events. This study provided a micro-level focus on the impacts that major sporting events exerted on the socioeconomic development of local SMEs. Third, most studies on major sporting events have focused on capital cities. This study on a major sporting event in Shanghai, which is an international economic centre, invites other researchers to investigate major sporting events in Shanghai and other economically developed cities instead of only capital cities.

The study also contributed to the development of two theoretical frameworks by providing empirical evidence of the two concepts' suitability and applicability in an Asian context. The first contribution, unlike most other sport studies which have applied theory of change logic to explain how sport-based interventions have addressed social issues of racism, insufficient active participation in sport, and antisocial behaviours among young people, this research demonstrated the usefulness of theory of change logic in the context of sporting events. Similarly, contribution analysis has been relatively absent from sport studies. This study is one of few that has used contribution analysis theory to assess the impacts of sporting events on local SME business development.

The second contribution is to the development of theoretical frameworks. The combination of both theory of change and contribution analysis used in this study was one of its key advantages and enhanced the rigour and robustness of impact assessment. Theory of change helped to tease out the causal chains underlying the programme. Contribution analysis enabled us to assess the validity of influential factors and assumptions and investigate alternative factors potentially contributing to or impeding the acquisition of socioeconomic benefits by local SMEs as a result of the Shanghai F1. Contribution analysis helped to verify

the robustness of causal chains in the theory of change and guided the detection of other factors influencing impact generation. Knowledge of positive influential factors, such as SME managers' active engagement in event-related business, may help Shanghainese policy makers to promote the Shanghai F1 and use it to obtain more socioeconomic value for SMEs and to stage other major sporting events in Shanghai; negative factors influencing impact generation were identified, such as the contextual barrier whereby some SME managers considered the Shanghai F1 to be more a political event than a commercial one. Hence for future sport evaluation studies, particularly government-led evaluations, a combination of theory of change and contribution analysis is advised to assess the implementation of sport programmes. Third, this research applied the two theories in the Asian sociocultural context. Although the two theories were developed in a western context, they were successfully used in this research to explore and evaluate how the underlying causal mechanism of the Shanghai F1 propelled local SMEs' socioeconomic development. Therefore, the two theories may be general models but lack contextual sensitivity. Future studies can apply the two theories in different sociocultural contexts to evaluate the various programme.

Limitations and future work

There are, of course, some limitations to this study. First, in relation to data collection, the policy makers we interviewed were drawn only from the Shanghai Sport Bureau. Although a range of pragmatic reasons existed for this (e.g., limitations in accessibility to policy interviewees, as the social network in Shanghai comprised mainly people working in sportrelated areas, and limitations in time and budget), policy makers from a broader range of areas (such as urban planning and city economy departments) could perhaps share their perspectives on how and to what extent Shanghai's hosting of major sporting events helped the development of SMEs. Therefore, to mitigate this challenge, when we conducted policy contribution analysis, we followed the suggestions of other studies by collecting perspectives from various stakeholders (interviewing sport policy makers, independent sport policy advisers, and SME managers) and cross-referenced policy documents from different governmental sectors. The second limitation of this study lay in interviewees' narratives (Batty, 2009). When interviewees recalled answers to the questions, their memories might have been inaccurate, which could have affected the data analysis (Barriball and While, 1994). Moreover, the research findings might have been affected by interviewees' subjective and biased perspectives (Ralston &

Kirkwood, 2003). Policy makers might have exaggerated the positive impacts (Cairney, Oliver, & Wellstead, 2016) of the Shanghai F1, and SME managers might have answered yes or no to the interview questions but provided no further information (Ralston & Kirkwood, 2003). Although we interviewed policy makers in various sport sectors and SME managers in variously sized businesses and various industries, some bias remained. This was unavoidable unless we interviewed all SME managers and policy makers in Shanghai.

Future studies are advised to research SMEs to explore how other major non-sport-related events, such as cultural and political events, affect local SMEs' socioeconomic development. A comparative study of impacts that major and one-off mega sporting events exert on the socioeconomic development of SMEs is also merited. To further investigate the significant impact that this study revealed to be exerted on the socioeconomic development of sports and automobile SMEs by the Shanghai F1, several representative sport and automobile companies may be selected for longitudinal study.

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 Major sport events and participation legacy: the case of the 2003 Rugby World Cup.

Appendices

Appendix 1: Outlines of semi-structured interviews with policy makers and

independent sports policy advisers

Theme 1: Shanghai sports & Shanghai major sporting events

1. How do you think the importance of sports in Shanghai? How do you think the role of sports development in Shanghai's development? What do you think future development direction of Shanghai sports?

(Oral background note: From the 11th Five-Year Plan to the 13th Five-Year Plan of Shanghai's sports development, the development goals have mentioned the importance of integration of sports development into the overall economic and social and urban development strategy of Shanghai; The policy mentioned some specific goals: Strengthen the innovation ability of sports industry; Cultivate Shanghai-branded events with international influence; Perfect the elite training system; accelerate the reform of the sports system).

2. How do you think the importance of Shanghai hosting major international sporting events? How can these events contribute to Shanghai's political, economic and cultural

developments?

(Oral background note: The number of international events held in Shanghai exceeded 40 times in 2011. According to the Shanghai Yearbook, the city held a total of 67 international events in 2016. During the 12th Five-Year Plan period, a group of 12BMSE had been formed in Shanghai).

- 3. How do you understand the goal of "Asian Sports Centre City" in the 11th Five-Year Plan? In what ways has Shanghai achieved this goal? and how do you understand the goal "International Sports City" in the 12th Five-Year Plan? and what about the 13th Five-Year Plan?
- 4. How do you think the competition between Shanghai and Beijing in hosting major events? Specifically compared with Beijing, to what extent is sport used as a political tool to compete with Beijing (e.g. Beijing Olympic Games versus Shanghai World Expo)
- 4. To what extent do you think the government supports the development of major sports events in Shanghai? What measures have been taken to support the development of

Shanghainese major sporting events?

Theme 2: The development of Shanghai F1

5. Do you know some historical background that Beijing, Wuhan and Shenyang also applied to the FIA to bid for staging the Chinese F1 Grand Prix, but why Shanghai achieved the bid?

6. How have the controversies before and after Shanghai hosting the F1 been resolved? Please comment the achievements of Shanghai F1 since it was held.

(Oral background note: Since 2004, the Shanghai International Circuit has hosted 15 F1 grand prix and other international and domestic racing sporting events. The Shanghai International Circuit has become a landmark of Shanghai. But the controversy of huge costs of bidding fees and construction fees of the F1 circuit also exists).

7. As far as you know, has the Shanghai F1 recouped its cost? How profitable is it? To what extent it the current achievement related government support?

8. What impact has the development of Shanghai F1 contribute to or impede the development of Shanghai's politics, economy and culture?

Theme 3: The impact of Shanghai F1 on the socioeconomic development of local

small and medium-sized enterprises

10. Do you think the development of SMEs in Shanghai has been affected by the development of Shanghai F1? If so, in what ways? Which types of SMEs have been mostly benefited?

(Oral background note: Northamptonshire Silverstone, which hosts the British Grand Prix, generates around £30m a year in local revenues, while Indianapolis generates around £50m a year in US Grand Prix related revenues)

11.In your opinion, how has the Shanghai F1 contributed to the development of Shanghai's automobile industry?

12.Do you think the impact of the Shanghai F1 on SMEs located inside the racetrack is significantly higher than that of SMEs outside the racetrack?

(Oral background note: In addition to the track construction, the F1 track is also involved in water, electricity, transportation, communication, repair and other industries. After

watching the racing competitions, tourists may consume at food, accommodation and entertainment).

Appendix 2: Outlines of semi-structured interviews with SMEs managers

Theme 1: The impact of sport and SMEs policies on SMEs

- Do you think your company has been continuously influenced by Shanghai F1 since 2004 (positive and negative)? If so, in what way?
- What are the major changes (policies/strategies) that the Shanghai policies have influenced your business since 2004? In what ways?
- Is your company satisfied with the current policy? Please elaborate.
- What policies do you expect that the government can issue in the future to benefit your company?

Theme 1: The impact of Shanghai F1 on the economic development of SMEs

- Do you think your company has been affected by Shanghai F1 since 2004 in terms of economic development?
- In what economic aspects that your company has been influenced?

- Do you think these effects are positive or negative?
- Has the Shanghai F1 helped to improve competitive advantages in your company's economic development? If so, what kind of advantage? How do you think these competitive edges?
- Does your company wish to develop or enhance other aspects of economic development through Shanghai F1?

Theme 2: The impact of Shanghai F1 on the social development of SMEs

- Do you think your company has been influenced by Shanghai F1 in terms of social development since 2004?
- What aspects of your company's social development have been affected?
- Do you think these effects are positive or negative?
- Does your company want to develop or enhance other aspects of social development through the Shanghai F1?

Appendix 3: A sample of interview transcript (1)

— Policy maker A; 23, December, 2018

PhD student: First of all, I would like to ask you to introduce yourself about your current

and previous work experience related to sports or sporting events.

Policy maker A: Our office is the Planning Industry Department. It mainly focuses on the

planning of the city's sports work, such as the 13th Five-Year Plan, the 12th Five-Year Plan,

the formulation of the planning level, as well as the research and formulation of major policies.

We are also responsible for the industry. Sporting events are probably the most important part

of the sports industry. We're involved in sports, in the overall planning and layout of the

sporting events. We just released a three-year action plan to build a sporting event capital. I

don't know if you've seen it online. This is a recent issue, issued by the Shanghai Sports Bureau.

This is mainly based on the four construction major branding things proposed by Shanghai

governments at present. They are Shanghai service, Shanghai manufacturing, Shanghai consumption, Shanghai culture. The direction proposed by these four brands in the field of sporting events and sports is using three-year action plan to build Shanghai as an international sports capital. We're mostly involved in this kind of policy-making stuff. We want to help to settle the questions: What kind of event is in necessary for Shanghai and how to organise it as a function orientation of the event in the sports work? These are our main tasks.

Xiao: How do you think the importance of sport in Shanghai? How can sports contribute to Shanghai's socioeconomic development?

Policy maker A: Now sports development in Shanghai should be said to be a trinity development model. What is the Trinity? It concludes the national fitness, elite sport and sports industry. Sports is not only aimed to o glory of the country, but also for increase the well-being of the people, as well as for benefitting the whole country. Winning glory for the country is mainly about elite sports, seeking for the well-being of the people is mainly about national fitness, satisfying interests of the country or producing a certain amount of economy is about the sports industry. For a long time, the development of sports has been focused on elite sports.

For a long time, relatively speaking, the national fitness and the sports industry were not paid enough attention or put it in a very important position. In 2014, the State Council issued a "Suggestions on Strengthening the Sports Industry and Promoting Sports Consumption". A very important concept in this is that national fitness has become a national strategy. Well, that's a goal. So our strategy now is the "one body, two wings" model

One body is national fitness. The two wings are elite sports and the sports industry. The two wings have to develop together. It should be said that these three elements are important for Shanghai. A lot of the functions of sport can be understood through this model. Sport is a universal language, the power to change the world. The key lies in sports itself. In the whole economic and social development, it must be divided into three parts. First, national fitness is a kind of people's livelihood and a public service that provides and meets the needs of citizens. From elite sports, sports it is used to promote the spirit of this city. An important embodiment of improving the soft power of the city. A striking example is Yao Ming and Liu Xiang. With these famous athletes in a city, this is the intangible asset of a city, especially the representative meaning of Yao Ming. Then how about the sports industry, which has just been put forward in recent years, but it is not developed in-depth. With the overall economic restructuring in recent years, we think the sports industry is a new economic growth point for a city. So how to integerate all of this is a very important. we call it a sporting event is a macro view of sports, you can think of it that way. The sporting event can be involved in a coherent whole of national fitness, competitive sports, the sports industry. It's a, it's a bridge or a bond.

Therefore, Shanghai has paid great attention to the development of sports events for a long time in recent years. Shanghai was the first city to host sporting event. For example, the Far East Games, which were held in the 1920s, the first East Asian Games held in 1993 was the first East Asian Games held in Shanghai. So how did they do it, away from the traditional, completely government-funded approach? It is the issuance of lottery tickets, fundraising, the East Asian Games, there is a little industry factor in it. Since hosting the East Asian Games, Shanghai has been continuously introducing international sporting events for more than ten years. The Heineken Tennis Open has been held for several years since 1977, 1998. From this to the Tennis Masters Cup in 2002 to this in 2005, all the way to the tennis ATP1000 in 2009, the Tennis Masters Tournament, this has formed an inertia. It's now in its tenth year.

The ATP1000 is in its tenth year. But its predecessor is still a decade or so away. Formula One was introduced in 2004, so it's been 15 years now. It was around 2000 that this

was an important stage in Shanghai's introducing a lot of sporting events to the city. This includes the World Table Tennis Championships in 2005 and the World Table Tennis Championships. A lot of major international sporting events were held during that time. In fact, many of the most famous events in recent years were introduced from 2000. The international marathon was held in 1996, now there are 20 years.

Xiao: What do you think of the role of Shanghai in hosting major international sports events?

Policy maker A: The role of sports in the whole economy and society is different from the role of sporting events in the whole economy and society. Sports is about a wide scope. As mentioned above, sporting events are concluded in it. When we talk about the effects of sports events on economic development, the first one is that there are roughly several effects. The first one, it's a very important vehicle for urban construction. Hosting an event boosts a city's infrastructure, especially for major events. For example, there are a series of international stadiums for our 12 major brand events. With our world swimming championships, held in

2010, there is the Oriental Sports Centre. We have the Shanghai Stadium for the East Asian Games. The Shanghai Stadium was first built in 2007, when we had the National Games held in Shanghai.

The event is an important carrier for the economic and social development of the city and the strengthening of infrastructure construction. Of course, we have never held the Olympic Games, but we think the Olympic Games will also definitely help the city in this respect. The second point that a major sporting event can be a city card and represents the city's image. It should be said that many events, many cities are using the events to promote their city's culture, especially some landscape events. Shanghai has hosted many events of this kind, such asinternational marathon, which is actually an image identity card of a city. The world's most famous marathons are held in the heart of the city. The Shanghai Marathon is also held every year at the Bund Jinniu Square as the starting point. Why doesn't it go to Chongming district or the suburbs, because it has no meaning if held there. The purpose of hosting the event is to present an image of the most beautiful city to the world. There are plenty of examples. We used to hold the F1 relevant promotional activities on the Huangpu River, which is at the junction of Suzhou River and Huangpu River, very beautiful. And of course we have some

other data. For example, we held the F1 in 2011. At that time, in order to promote the Shanghai World Expo, we expanded a lot additional activities. We displayed this content of the World Expo during the F1 race, and the effect was also very good. This is the image of the city, the carrier of the city name card. It should be said that this role, especially in the central and western cities, is becoming more and more important. So two points here. One is that the above mentioned has greatly promoted the overall infrastructure construction of the city. The second piece is that it is an identity card for the image of the city.

And the third one is this called a platform of conducting public diplomacy. A lot of business, whether it's political or economic, is reflected through the games. We are correct in saying that it is a meeting room. Shanghai hosts you for example the world equestrian championship, including tennis, including F1. The prince AND generals all over the world, they all come. The NBA performance competitions held in Shanghai, many celebrities also come to watch. In fact, this is about a kind of communication. In 2017, we also staged an Australian Rules Rugby match in Jiangwan Stadium. That was the first time we hels it. More than 6,000 Australians flew in Shanghai to watch the game. It's for the Aussies, but the Chinese rarely watch it. It's a very interesting phenomenon, it's a platform for external communication.

On the occasion of such an event, it is also good opportunite for the mayor to meet with some of the officials of the international single sport organisation. And we think that on the whole, the effect of these events is pretty obvious.

PhD student: What impact has the development of Shanghai F1 had on the political, economic and cultural development of Shanghai?

Policy maker A: Image card should be said to be sure to achieve. Any big promotional film of Shanghai's city image must have a shot of F1. At the moment we are doing a variety of publicity for the 40th anniversary of reform and opening up, the Shanghai F1 must be one of the elements of this.

The transportation is also developed now, with subway lines going directly to the Shanghai International Circuit. I think the decision of hosting the F1 was ahead of time and left a lot of legacies and wealth. And the utilisation rate of the F1 circuit is still very high, not just the 3 days of the game. It's used most of the time a year, and there are other cars, various different racing games. It is now in use for more than 200 days. It also hosts a lot of different

activities. Because it is located in Jiading, which is originally an automobile city, it is a great help to the development of this kind of automobile in the whole Jiading, including the whole Shanghai, but I don't have the specific data. There's a F1 there, and then it's built around the whole Jiading Motor City and it's capable of generating sparks. If Shanghai can really cultivate a F1 car team, or training a star driver, it is absolutely very good and meaningful. At present, we don't have, but I think in the future, we will have.

PhD student: What do you think of the competition between Shanghai and Beijing in hosting sports events? Specifically compared to Beijing, to what extent is sport used as a tool or as a political tool for competition?

Policy maker A: We think it is... because the urban characters of the two cities are different.

We are very happy to see Beijing hosting the Olympic Games and the Winter Olympics, which is a reflection of the strength of a country, which is a good thing. Many of the events held in Shanghai are actually a somewhat sidderent concept. We don't do this on political purpose. At present, the main well-known events in Shanghai are all such commercial events. This is not a

Beijing concept. Taking New York for example, New York has not staged the Olympic Games at present, but no one can deny that it is a relatively well-known sports city. It's very strong in a few professional clubs. Actually, Shanghai is a little bit like it. Is that it's a natural sporting developmental process. The commercial ones that we cultivate are still F1, ATP, these are all commercial ones. It's not a state-dominated event. The Olympic Games are an event dominated by the state. Of course, we would also like to see, for example, in the next 10 or 20 years, that Shanghai can also host the Olympic Games, which is also a reflection of the city's regeneration. But it does not mean that Shanghai is competing with Beijing, this one is not. If the next Olympics are to be held, I think it will be a national act, not a Shanghai initiative. It would have chosen, maybe Shanghai or Guangdong. We believe that one day, if we develop to a certain stage, we will host this kind of event.

PhD student: To what extent do you think the government has supported the development of major sports events in Shanghai? What measures have been taken to support the development of Shanghai hosting international major sporting events?

Policy maker A: These major events, I should say most of the famous ones are run by the Shanghai JUSS Company. I think five out of twelve branding events, five or six of them are operated by this company. JUSS Company itself is also a state-owned enterprise. When the Shanghai F1 was introduced, in fact, the cost of staging these events was very high, especially for the construction of such venues, because you have to pay the cost of hosting the games. For example, F1, which has to be handed over to the FIA, has a bidding fee, which is very high. These fees used to be paid by the municipal government and the city's financial resources. But the late operation, is by the company, they have to operate well. The biggest characteristics of these sports events is that they have a very strong spillover effect, a very strong external positive effect, but the external effect is not reflected in the revenue.

Xiao: How was the controversy before and after the event resolved? Please comment on the achievements of Shanghai F1 since it was staged.

Policy maker A: As far as I know, the Shanghai International Circuit is a well-built one. If it's an engineering problem, it's basically not a problem at home. Our ability to build roads and

Bridges should be the best in the world. After all these years of testing the car is still working, it's been 15 years now, the car is working very well overall. Many people have great affection for the competition. For the past two years, they will hold a "thriving" road race every New Year's Day. Most people have never walked on the track. That's the car. On 1st January, the F1 track will be open for a mass road running event in which everyone runs around it. Many people are already avid motor racing fans, and others just want to walk on this track to experience it. Because of this activity, more people get to know about the F1 and car racing. The number of people who participate in the event gradually increases every year. Some people who were real F1 fans even took photos kissing the track. \A lot of people. So he's a real fan? He just walks around this track. This is still going to work. At present, it should be said that the track itself has not heard of any problems, the track heard or good.

Xiao: So far as you know, has the Shanghai F1 recouped its cost? How profitable is it?

How much of the current performance is due to government support?

Policy maker A: From our point of view, hosting the F1 is very expensive, and the F1 itself

may not make much money, but the entire city will benefit (from the hosting of the F1). Shanghai needs the F1. Well, you know, Formula One is designed to 'lose money'. Over the years, it's getting better and better, year by year, but overall, if you take everything out, it's still losing money. Because there is lot of revenues are not included in the F1's revenue, such as the increased accommodation and transportation revenue as a result of the F1. Because of event, hotel is filled up all of a sudden, but it is not included in the F1's revenue. The FIA itself has many of these top sponsors, and the fee is paid to the FIA, which is the same at every F1 station around the world. Like this Coca-Cola, which of course is not a sponsor. Coca Cola, for example, sponsors this, and its profits are not available locally.

When it comes to such a big event or festival activities, there are special departments to be responsible for and coordinate. Not all of this activity can be done by a single company. It covers a lot of ground. This kind of event can't be done without government support. It's like the Olympics, it's like the World Cup. They can't be hosted without government support. If there is no government support, all foreign countries need government support. Government act as a backstop.

Xiao: Do you know anything about the historical background, when Beijing, Wuhan and Shenyang also bid for staging the Chinese F1 Grand Prix, but why did Shanghai succeed?

Policy maker A: At that time, I think Beijing and Wuhan did not apply for it. We did it in 2004. There seems to be one in Zhuhai. The FIA also has a choice, it must choose the top city to do host the F1, it also wants to choose an influential city. The FIA has only a dozen stops. You see, another ten stops around the world are in very nice cities. The city of zhuhai can not really do it, it has no ability to host such a major event. This kind of event, if you put it in the second-tier city I think is a little difficult. Shanghai F1 has calculated a lot of car fans. Now it is not easy to buy F1 tickets. Every year, the tickets are quickly sold out. These car fans, even learn drving karting. The consumption of karting is very high. But a lot of the real drivers have developed from this. They may cost a few hundred Yuan for a few minutes. If you go to watch F1 now, you will find a lot of real fans. Also, people living in Jiangsu and Zhejiang, are expected to watch the F1 competitions every year. The F1 event not only serves Shanghai, but also Jiangsu and Zhejiang provinces.

PhD student: I know that the Shanghai International Circuit covering an area of 5.3 square kilometers, and 2.5 square kilometers for the track area, 2.8 square kilometers for the business expo area. Are those SMEs involved in the business expo area significantly influenced by the Shanghai F1 than the SME outside the F1 circuit?

Policy maker A: Actually, there are not many of SMEs around F1 area. It sets up some temporary shops during the games. The business expo area is currently under construction of a public sports park. The hotel should be further away, it won't be near the racing car. First of all, the transportation is more convenient now, the metro line is direct, Line 11 can go directly between the F1 station and the city centre. Now the metro service is very well developed, and the metro line directly reaches the racing track. I think the decision to stage the F1 was made ahead of time, and it had a lot of positive effects. Second, do you watch the games? I'm sure a lot of people drive to the games, otherwise there aren't many other ways to go there. Now it's mainly public transportation. There must be a lot of people living in the city centre. They live in Xintiandi. Because the F1 is different with Disney mode. The Disney, the hotel is very important to itself as a daily operational content. But the F1 is not the same as the way they

operate Disney. The F1 didn't need to do a have a hotel there.

Xiao: Do you think the development of SMEs in Shanghai has been influenced by the development of Shanghai F1? If so, in what ways? Which types of SMEs benefit the most?

Policy maker A: All the industries related to the F1 formed an F1 industrial chain. The Shanghai F1 brought prosperity for the entire motor sport. There is a motor sports company in Shanghai Songjiang called Lisheng Racing, which is a listed company. It is a beneficiary of the Shanghai F1. There are also many other racing companies in Shanghai. To summarise, the hosting of the F1 prompted development in the entire motor sports industry chain.

For the hotels featured in the package, high occupancy rates are guaranteed during three-day F1 events. The subway facilitates the travel of spectators, who can visit other attractions in the city centre before or after the F1. This is an opportunity for tourism companies and the tourism industry generally to increase their business volume.

Sports enterprises, on the whole, are relatively small in size. Compared with other industries. I take Ali for example, which has a few trillion, which invest only a few hundred

billion in our sports industry. A large number of the sports enterprises are actually well-known for some sports manufacturing, such as Li Ning and Anta. There is few influential sports event company and sports economy company. It turns out that this whole volume is very small. This may also have something to do with this pattern, because sports doesn't account for a large percentage of GDP in the entire national economy. The current level in Shanghai is 1.6%. Generally speaking, if a kind of industry can reach 5% ah, this 8%, its proportion is very large. Oversea countries, the sports industry is around 3%. They may have some professional clubs, such as IEG, including ESP, such as sports media. In recent years, as large companies such as Wanda Sports, Ali Sports, Tencent Sports and Jingdong Sports come in, I feel that the volume of sports enterprises is gradually increasing, but most of them are still small, medium and micro enterprises. We know this is all on a small scale anyway. Why should we encourage this? This is also a very important part of mass entrepreneurship and innovation. Well, the main core of them is built around the fitness and leisure industry and the competition industry, just these small and medium-sized enterprises. Because there's fitness, there's sporting goods, there's marketing, there's trading, it's all around them. In fact, F1, so many years there will certainly be some small and medium-sized enterprises to help it do services, but to what event, we have

done special research in this aspect. This needs to be further studied.

Appendix 4: A sample of interview transcript (2)

— SME manager H; 05, August, 2019

1. **PhD student:** First of all, I'd like to ask you to briefly introduce your company

SME manager H: Our company was founded, I think, around 2004, 2005, by two of our bosses, a French and a German, who came from racing families in Europe. Then they should have taken a fancy to the Chinese market, so they went to China in 2000 and opened this workshop. And we actually have two studios like this in China, one in Zhuhai and one in Shanghai. Zhuhai and Shanghai have the two biggest racing tracks in China. We mainly do teams and services related to racing. Because we have a lot of engineers and technicians, we do the car service for some of the small and medium level racing events, and then we are also the operator of Audi Cup, we do some other operations, like logistics, track communication and things like that. Our company's size should be around 50 people. Our Workshop is a vehicle exhibition, an

exhibition about our team, including the many trophies we put in front of you as soon as you enter the door, to let people know what we are doing in the business. This workshop is also for repairing racing cars. This year, our team participated in the Audi Cup and then in the Porsche TCCA, which have been in Asia for nearly a decade.

1.1 **PhD student:** What are levels of these racings you were talking about, compared to Formula One?

SME manager H: In the equation racing, the top one is F1, then GP2, then F3.Our company will also provide drivers for these high-level competitions.

2. **PhD student:** Whether has your company been affected by the fiscal tax preferential policies since 2004?

SME manager H: I believe that the government should have these subsidies, because the automobile is also a project supported by the government, but I am not clear about the specific

financial aspects.

2.1 **PhD student:** Is there a possibility that hosting F1 has encouraged your company to apply for some special funds or loans for SMEs?

SME manager H: I believe that hosting F1 is a boost for China's auto industry. After it pushes this industry forward, it means that our company's business may grow. And there is also a growth in whole motor racing business. If our business grows, it is inevitable that we need to have our own cars and increase our own advantages, and the corresponding capital investment will also increase. But we didn't apply for special fund of SMEs.

3. **PhD student:** How does your company' obtain revenue, from any aspects?

SME manager H: First of all, we are supplier and build business with manufacturers, such as Audi or Porsche, and part of the revenue comes from servicing them. Then the second aspect is that we have our own teams, and if we have a team it will attract drivers. That our

driver today, they are not very professional, but they are willing to spend money to take part in the racing competitions, they will also pay a member fee. And then our revenue is from sponsor, because we now take part in some events, the company's media exposure is increasing every year, and then our car is always on the podium, the sponsors are usually funding the teams and the drivers.

4. **PhD student:** Which aspect of the company's economic development is mostly affected by F1?

SME manager H: I think it's the car manufacturers' input. Before 2004, there were no big car races in China. Including the CTTC mentioned above, it is also a very basic race. I don't know if there are any manufacturers, but some enthusiasts invest some money and set up some small teams to play together. I can only say that this is a relatively basic. After the F1 [arrived in Shanghai], everything expanded, and then the racing fans also appeared. Manufacturers have noticed the Chinese market, and they will definitely invest in more races and events. For we customers, they are Audi and Porsche. They began to manufacture

in Shanghai. The funding behind this and the funding for previous playing between several small junior teams are actually quite different.

5. **PhD student:** Is there any chance for your company to sponsor other racing events in Shanghai under the influence of F1?

SME manager H: In fact, for us, we mainly do service. Because of Formula One, there will be more racing cars, and everything about racing will increase accordingly. For example, if I serve to one car, I might only need one engineer, three or four technicians plus one communications person for the team, but if I serve to ten cars, that means I have to multiply the jobs by ten. This is a huge increase in the number of employees in the company.

6. **PhD student:** Then there is the question about the competitive advantage, since Shanghai held F1, do you think your company has improved competitive edges in the price, marketing strategy, product design and innovation ability, which aspect do you think is particularly affected?

SME manager H: I think the F1 to Chinese market, in fact, I think it should be, how to say, should lecture us, because actually China's car technology is not very advanced, a few are relatively low. And because of the F1, then some foreign automobile companies, they keep an eye on the Chinese market and they sometimes come to help the market improve the technology and innovation. So, a lot of our engineers can learn the advanced technology from the foreign companies. We are also building business relationships with those companies.

7. **PhD student:** Influenced by F1, has your company been involved in the development of sports industry?

SME manager H: we did a car racing and participated the F1-related activities last year, and then we cooperated with e-sports in that racing. In fact, in the sports industry, in fact, and we now do cross-border sports. Because esports just entered the Chinese market. In other aspects, in fact, we compare with culture and entertainment, because in the field of

sports, people pay more attention to it, and the reasons for coverage are quite similar.

Therefore, we also do it. Nowadays, many competitions are held together with music festivals, so it is also an industry integration.

8. **PhD student:** In terms of social influence, is there any influence on the brand value, corporate image and media exposure of your company affected by F1?

SME manager H: I think the most important thing about Formula One is that it makes the market in China expand, so the number of potential fans grows, and then they pay attention to the racing sports, and then because at the Shanghai International Circuit fans can get close to the real racing cars, it increases their understanding of the car. Our company is near the racetrack, which may attract the attention of the fans, but in this respect, and we haven't made strategies to use the F1 to promote us.

9. **PhD student:** Has your company established any cooperative relationship with other sectors because of F1

SME manager H: I remember last year, there was an auto repair college. We had a partnership with that auto repair institute. They invited our drivers to give them a lecture. Because their students, they had a passion, they chose auto repair, but they didn't have a very good understanding of racing cars. They even never saw a tracing rack before, we brought our drivers to their schools to give them a face to face lecture, including some learning videos, so they know more about what they're learning about and where to practice their learnings after graduation. And there is a potential path for them to be employed. They may come to our garage, if they come in, it will be good for both our company and the institutes. in fact, our overall technology is good.

10. **PhD student:** The last question, from your point, has the F1 contribute to the Shanghai's socioeconomic development? If it has, how do you comment that?

SME manager H: Generally speaking, some people in the world may not know this Shanghai. But through hosting the F1, foreign people have an opportunity to get know

Shanghai. In China, after the building of F1 racing track and F1 related constructions, the influencial circle of F1 was expanded, to Jiading Automobile City and to the whole Shanghai, and event to the whole country, which were driven by the name of F1.In Anting automobile city, it is developing a sports park now, which is helping Jiading to own a sports label.

Appendix 5: T	The impact of th	ne Shanghai f1 o	on the socio-econ	nomic development of SMEs
(Questionnair	e for managers	from Shanghai	i SMEs)	
ID :				
The impact of	f Chinese Form	ula One Grand	Prix on the soc	io-economic development of
local small and	d medium-sized	l enterprises in	Shanghai (Quest	tionnaire for managers from
Shanghai SMI	Es)			
Before we star	rt, please provid	le an answer to	the following sta	atement:
I have read	the information	n sheet and I co	nsent to take pa	rt.
Ye	es		☐ No	
Section A	Basic inform	nation of you	r company	
A1. How long	has your firm l	been in business	s?	
□ 1-3 years	☐ 4-6 years	☐ 7-9 years	☐ 9-12 years	☐ Over 12 years
A2. In which o	of the following	industries does	s your firm belon	ng to
(Only one option	on can be selecte	ed)		

☐ Sport and automobile companies
☐ Entertainment and service companies
☐ Retail companies
☐ financial, scientifical and educational companies
□ other companies
Other, specify:
A3. How many employees in your firm?
☐ Less than 10 people
□ 10-50 people
□ 51-100 people
□ 101-300 people
□ over 300 people
A4. What is your company's annual turnover? (unit: thousand)
□ less than100
□ 100–500
□ 501–1000
□ 1001–2000
□ 12001–10000
□ 20000+
A5. What is the capital nature of your company?
☐ Domestic capital companies
☐ Foreign capital companies
A6. What is the industry characteristic of your firm?
☐ Labor-intensive enterprise
☐ Technology-intensive enterprise

☐ Capital-inte	ensive enterprise		
Section B	Demograp	ohic informati	on of the manager
B1. What is yo	our gender?		
	☐ Female		☐ Transsexual
B2. What is ye	our age?		
□ 18-25	□ 26-39	□ 40-59	□ 60 above
B3. What is ye	our job title?		
	☐ Chief Exec		☐ Chief Finance Officer
B4. How long	have you been i	n your current p	oosition?
□ 1-2 years	☐ 3-4 years	☐ 5-6 years	□ over 6 years
B5. What is y	our education le	vel?	
Č	undergraduate	C	(master)
B6. What is yo	our annual inco	me in 2018? (ս	init: thousand yuan)
□ under 50	□ 51-100	□ 101-200	□ 201-300

□ 301-500	□ over 500
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Section C The impact of policies related to hosting Shanghai F1 on the development of SMEs

C1. Has the development of your firm been affected by the following relevant policies since Shanghai hosted F1 in 2004? If your answer is "Yes", please indicate your level of satisfaction with the current policies.

C11. Tax preference						
	Affected by	Strongly	dissatisfied	neutral	satisfied	Strong
	policies	dissatisfied				satisfied
Tax rate	□Yes □ No					
reduction						
Tax reduction	□Yes □ No					
and exemption	Lies Lino		Ь	Ш		Ь
Other, Specify:						
C12. Fiscal	subsidy					
	Affected by	Strongly	dissatisfied	Neutral	satisfied	Strong
	policies	dissatisfied				satisfied
Employment	□Yes □ No					
subsidies						
R & D subsidies	□Yes □ No					
Other, Specify:						

C13. Loan assistance						
	Affected by	Strongly	dissatisfied	Neutral	satisfied	Strong
	policies	dissatisfied				satisfied
Loan	□Yes □ No					
guarantee	103 🗆 100			<u> </u>		_
Government						
concessional	\square Yes \square No					
loan						
Other,						
Specify:						
C14. Innov	ation & Financ	eing				
	Affected by	Strongly	dissatisfie	ed Neutral	satisfied	Strong
	policies	dissatisf	ied			satisfied
Encouragement	,					
of technologica	l □Yes □ No)				
innovation						
Encouragement	;					
of direct	□Yes □ No	o 🗆				
financing						
Other, Specify:						

Section D The impact of Shanghai F1 on economic development of SMEs

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D1. Please indicate, for each type of growth, how your company has been affected since Shanghai hosted the F1 in 2004.

	Strongly negatively affected	Negatively affected	No effect	Positively affected	Strongly positively affected
Growth in turnover					
Growth in profit					
Growth in domestic market share					
Growth in domestic market share					
Growth in overseas market share					
Growth in exports					
Growth in financing	; <u> </u>				
Growth in sponsorsl opportunities for regional sporting ev Other(s)					
Please specify					
D2. Please indicate, working at your con (5-point Likert scale increased)	npany has chang	ed since Sha	nghai host	ed the F1 i	n 2004.
Greatl		No chang	e increas		Greatly
Casual workers	used			iı	ncreased

(5-point Likert scale: strongly negatively affected, negatively affected, no effect, positively

Workers on			
fixed term			
contract			

D3. Please indicate, for each of the following areas, how your company's competitive advantages have improved since Shanghai started hosting the F1 in 2004. (5-point Likert scale: insignificant improvement, slightly significant improvement, moderately significant improvement, significant improvement and very significant improvement.

	Insignificant	Slightly	Moderately	Significant	Significant
	improvement	significant	Significant	improvement	improvement
		improvement	improvement		
Product price					
Product cost					
Product quality					
Product design					
Product	П	П			
knowledge					
Marketing data		П		П	П
collection capacity	Ц	Ц	Ц	Ц	Ш
Product innovation					
Promotional	П	П	П	П	П
strategy	<u> </u>				
Productive skills					
Attraction of	П	П	П	П	П
liquidity	Ц	J]]	J

Section E The impact of Shanghai F1 on social development of SMEs

E1. Please indicate the extent to which your company has been influenced, in the following respects, since Shanghai hosted the F1 in 2004.

(with a 5-point Likert scale: strongly negatively affected, negatively affected, unaffected,

positively affected, and st	rongly positiv	ely affected)			
	Strongly	Negatively	No effect	Positively	Strongly
	negatively	affected		affected	positively
	affected				affected
Corporate image					
Brand value					
Media exposure					
Market responsibility					
Employees right					
Community responsibility					
Environmental					
responsibility					
Corporate community					
participation					
Other(s)					
Please specify					
E2. Has the Shanghai F partnerships with the form (<i>Yes</i> or <i>No</i>)	-			tunities to es	tablish
		E	Established pa	rtnership	
Higher educational institutes			Yes	□ No	
Other SMEs]Yes	□ No	
Large/ transnational corporation	ns]Yes	□ No	
Sport associations/organisations/corporations]Yes	□ No	
Voluntary institutes]Yes	□ No	
Organisational communities]Yes	□ No	
Local businesses]Yes	□ No	
Equipment suppliers]Yes	□ No	

Trade associations	□Yes	□ No
Thank you for your help for completing this ques	tionnaire. We wou	ald like to invite you to join
a face-to-face interview because the further infe	formation you wil	l provide will help in this
research topic. Do you want to join a face-to-face	e interview?	
□Yes □ No		
If yes, please leave your contact detail, and we v	will contact you i	n about three months late.
Email:		
If you have any further questions about the	survey or study,	please do not hesitate to
contact the lead researcher Dr Shushu C	Chen, Tel: +44	Email: