

# Government Policy and Critical Success Factors of Small Businesses in Singapore



Government Policy and Critical Success  
Factors of Small Businesses in Singapore

By

Harold Siow Song Teng

**CAMBRIDGE  
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P U B L I S H I N G

Government Policy and Critical Success Factors of Small Businesses in Singapore,  
by Harold Siow Song Teng

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**Dedicated to my loving wife, the one and only Vicky TTL**



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## PREFACE

The difficulties of implementing relevant policies that can successfully transform a nation's economy from a poor developing backwater into a highly industrialized economy are legendary. One of the essential sectors responsible for propelling a country's economy forward is that of the small businesses. From politics to economic policies, the State determines the way how businesses (including small businesses) are being run. The right combination of good government policies for business and a spirit of entrepreneurship among current and aspiring business owners can help develop a healthy entrepreneurial climate, which forms the basis for economic growth.

This book examines in detail, the various types of initiatives undertaken by the Singaporean government to assist businesses and promote entrepreneurship and would appeal to readers from the business community in general and small businesses in particular, along with government officials, business academics, students and the general public. The book also looks at the policies being taken, during the global financial crisis years (2008-2009) to assist businesses and their effectiveness. In addition, the book utilizes a simple business model which allows businesses to use as a checklist, to examine where their firms stand, and also as a personal leadership ability self-appraisal.

The business leaders could better understand how to pursue their ultimate goal of ensuring business successes with better personnel management and leadership training by for example, taking more business management and leadership courses and personal development. Government business policy makers could ensure that they continue to implement high quality, pro-business policies that support the business community in general and small businesses in particular, with relevant industry consultation and at the same time, working together with the employer associations and unions to achieve mutually agreeable industry and business outcomes.

Public policy makers and others could utilize such a model to assess a firm's potential for success so that society could benefit in direct and indirect ways via the allocation of limited resources (government aid, loans and so forth) toward higher-potential firms. In a globally competitive business environment in which a high premium is placed both upon

entrepreneurship and management effectiveness, the theoretical elaboration and practical application of such knowledge will be beneficial.

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I am deeply indebted to my family, especially my wife Vicky, whose love, support and constant encouragement made this book possible. I would also like to offer my sincere thanks to my program director Dr Marguerite Kolar in Australia, my good friend Dr Gurpreet Singh Bhatia for his guidance on econometrics.

I would like to thank my employer and colleagues at the East Asian Institute (EAI), National University of Singapore. It was while working as a researcher for the EAI from 2006 to 2009 which had provided me with the intellectual motivation and drive, to challenge myself academically, which led me to enroll in the PhD program at the International Graduate School of Business (IGSB), University of South Australia in 2007.

Last but not least, I would also like to thank my former employers, the Singapore Ministry of Information, Communications & the Arts (MICA), as well as International Enterprise Singapore (IE Singapore), with whom I had the privilege of serving from 2009-2010, before rejoining academia once again in late 2010.





# ABSTRACT

This book proposes benchmarks that can be used by policy makers to improve the performance of SMEs in Singapore. Business leaders could pursue their goal of ensuring business successes with better personnel management and leadership training by for example, taking more business management and leadership courses and personal development. Government policy makers and others could utilize such a model to assess a firm's potential for success so that society could benefit via the allocation of limited resources toward higher-potential firms. The book introduces an exploratory business success versus failure prediction model, modeled after the Lussier (1995) prediction model, using data from Singapore. Using logistic regression analysis, it is found that the Lussier Model ( $p = 0.057$ ) and the Exploratory Model ( $p = 0.047$ ) are significant predictors of business success and failure.

The logistic regression and factor reduction methods are used to model the relationship between the success and failure of SMEs. Business success is being defined as an SME having made a profit in the past three years. It is found that Model 1 also known as the Exploratory Model is the most suitable predictor model. Using logistic regression modeling, this book finds that: 1) having good quality staff; 2) having good products that are either very new or established older products/ services; 3) having good customer relationships; 4) having good top leadership are the top four most important CSFs associated with business success. Using factor reduction onto Model 1, this book finds that: 1) having relevant past industry experience; 2) having a business plan; 3) having broad access to resources; 4) having good government policy; 5) having good business record keeping; and 6) having good customer relations are important CSFs for small businesses. The results from the two methodologies and interviews with the government business promotion agencies show that a list of CSFs does exist in the minds of small businesses and the variable 'good government policy' is an important CSF.

This book is original whereby the Exploratory Model accurately predicted 86.3 percent of the successful (or failed) firms. Using this model, researchers and interested parties could focus on an identifiable list of factors, to study the business performance of SMEs, as well as understand

if government policy in general, has been beneficial to SME growth and development.

The data analysis presented in this book supports the hypotheses that (i) good government policy is an important CSF towards the success of SMEs, (ii) successful SMEs tend to have a list of CSFs which they can identify and adhere to, and (iii) it is possible to forecast the potential success/failure of a firm using a prediction model. It is surprising that while pursuing their respective business activities, the SMEs surveyed in this study regarded government policy and the availability of business finance though important, amongst other factors, of lesser importance compared to the above-mentioned nine broad variables (good customer relationship appeared twice).

It is recommended that policy makers and others could use the model to assess a firm's potential for success and society can benefit in direct or indirect ways via the reallocation of limited resources be it government aid, loans etc, towards higher-potential firms.

# CHAPTER ONE

## INTRODUCTION

### 1.1 Background

In the immediate aftermath of World War II, Singapore was still a British colony struggling to develop economically. Singapore achieved self-government in 1959 and full independence only in 1965. Economic growth in Singapore started to take a foothold only in the 1960s, spurred on by increases in foreign direct investments (FDI) and domestic savings. In the 1960s gross national product (GNP) per capita was less than US\$320 (EDB 2010).

Since gaining independence, Singapore has successfully transformed its economy from a small regional entrepot into a highly international and industrialized economy. From 1965 till the 1997 Asian financial crisis, the Singaporean economy grew at an annual average rate of over 8.5% (Hew 2004). In spite of its constraints such as its small land size (just about 700 square kilometers) and lack of natural resources, Singapore has become one of the world's most open and competitive economies. Today with a per capita GNP of US\$34,760, Singapore has one of the highest per capita incomes in the world (World Bank 2010).

One of the main economic players responsible for Singapore's economic success is its small and medium-sized enterprises or SMEs. Their overall success has helped propel the country and its people forward. From economic policies to politics, Singapore is a planned and regulated economy. Singapore's economic success story is actually the result of a form of capitalism carefully calibrated and controlled by the government. The Singapore government's interventions and initiations have largely been successful as far as the Singapore economy is concerned. This is an anomaly which many other countries have been unable to replicate successfully.

The policies underlying Singapore's economic success are partially illustrated in the way many businesses (including small businesses) are being run. Singapore displays many of the features associated with a healthy entrepreneurial and pro-business climate, spurred on by deliberate government policy. This book aims to examine and understand the main factors that make small businesses successful in Singapore. This study uses a non-theoretical approach to explore variables (on critical success factors) from past literature, to find the underlying factors small businesses in Singapore believe to be critical to their success.

## **1.2 Necessity, Value & Aim of Research**

Why are SMEs so important to Singapore? Despite the limitations associated with their size, SMEs produce not only more jobs, but also more innovations than large companies. Empirical research has revealed that small firms in the United States spend almost twice as much of their research and development (R & D) dollars in fundamental research as do large firms. This finding provides an alternative to the conventional perception of SMEs being dependent on large firms. Being small enables SMEs to be potentially more flexible and nimble in making changes and exploiting new opportunities compared to larger firms (Yeung & Chew 2001).

Singapore has a large and vibrant community of some 148,000 SMEs in 2007. Together they make up 99 percent of all enterprises, employ six out of every 10 workers and account for 48 percent of total value added in the economy making this group of business enterprises worthwhile studying (Spring Singapore 2008). A recent 2010 publication of the Singapore government suggests that the figures remain largely unchanged with SMEs still accounting for 99 percent of all enterprises, 62 percent of the workforce and 50 percent of GDP. SMEs in the Association of South East Asian Nations (ASEAN) too, account for 99 percent of all enterprises, 70 percent of the workforce and 40 percent of GDP (IE Singapore Work Plan 2010).

According to Singapore SME 2010, SMEs are generally defined as having the following: 1) at least 30 percent local equity (owned by Singapore residents); 2) fixed productive assets (defined as net book value of factory building, machinery and equipment) not exceeding S\$15 million (US\$11.1 million); 3) employment size not exceeding 200 workers for non-manufacturing companies in the Singaporean context. This is

consistent with the European (European Network for SME Research 1995) and American (United States Government Printing Office 1995) definitions of SMEs.

The rationale or formative thinking behind this book project stems from the fact that many countries, particularly developing ones, want to encourage the growth of SMEs for economic development. Singapore has prospered under deliberate government industrial and specific SME Policies and could serve as an example for these countries.

This book aims to do three things, namely: 1) provide an in-depth critical evaluation of the evolution of government policy in Singapore towards SMEs; 2) identify critical success factors (CSFs) of SMEs; and 3) develop a success/failure prediction model. The aims of this book could be summarized into the following three hypotheses:

***H1: Good government policy is an important CSF towards the success of SMEs;***

***H2: Successful SMEs have a list of CSFs which they can identify & adhere to;***

***H3: It is possible to forecast the potential success or failure of a firm using a prediction model.***

Singapore has prospered under deliberate government industrial and specific SME policies. 'Research on the prediction of success and failure of businesses can potentially benefit many: would-be and current small business owners; those who assist, train and advise them; those who provide capital for their ventures; their suppliers; and public policy makers' (Lussier & Pfeifer 2001, p. 229).

It is worth noting that government support for SMEs is increasing in wealthy countries. This is based on the view that SMEs contribute to high-quality employment generation and are exceptionally innovative, as well as the perception that SMEs are more flexible and responsive to the demands of consumers (Parker 2000).

According to Feindt et al (2002), 'most firms do not grow; only very rapidly growing companies call Gazelles do' and that consists of only about 3 percent of all small companies in the European Union (EU). The EU has 16 million companies, of which 99 percent employ fewer than 250 people; 93 percent are micro-enterprises with fewer than 10 employees

(Feindt et al 2002, p. 51). This shows the importance and the need to study SMEs and the reasons for their success or failure in greater detail.

In order for SMEs to operate effectively in the marketplace, two main types of conditions must be in place. First of all, appropriate government policy conducive for small businesses ought to be present. Secondly, SMEs that are successful usually have a list of factors which they have followed closely and adhered to, which allowed them to achieve business success. All SMEs must have a list of things or factors that they have 'to get it right' in order for their particular businesses in question to be successful. As such, an SME's success or failure could potentially be predicted from such a list of success/ failure factors.

### **1.3 Book Outline**

The first chapter of this book begins by introducing the necessity and value of understanding and identifying the vital factors otherwise known as the critical success factors (CSFs) that enterprises ought to possess, so as to be able to maximize their opportunities of business success and reduce the chances of failure.

Chapter 2, the first of two literature review chapters, discusses the relevant literature on government policies over the years since Singapore's independence, from the initial years of experimenting with industrialization to Singapore's gradual economic success and prosperity till date. This chapter also looks at the relevant government policy on small businesses regarded as being important by international scholars studying CSFs in the business field.

Chapter 3, the second literature review chapter, discusses the relevant academic literature over recent years, from the initial evolution of the concept of CSFs to their gradual adoption and popular usage till date. The short listing of the various CSFs and the different models in this chapter is achieved through the literature review of academic research on the CSFs of businesses globally.

Chapter 4 outlines the research methodology of the book and explores the methods which have been used by other relevant researchers in the past and also at present. The details of questionnaire survey design, data collection etc are discussed in this chapter.

Chapter 5 provides an analysis of the empirical results and finalizes the results of the research. It also explains the meaning and implications of the research findings and interprets what each of the respective variable means in the context of this book.

This book concludes with Chapter 6 where the final research outcomes are being discussed, whereby the initial three research questions of this book are considered and linked to the results of the empirical study. Recommendations for future research are also touched on.

## CHAPTER TWO

# GOVERNMENT POLICY TOWARDS SMEs

### 2.1 Introduction

In Singapore the government plays a very active role in assisting businesses in general by providing a conducive environment for the growth and development of businesses and especially SMEs. 'The Singaporean government is strongly of the view that often all it takes is a great idea to create business success; the government is also of the belief that while many successful companies started as SMEs and succeeded by their own merits, others needed a little help since not everyone has the resources or expertise to take their ideas, products or services onto the world stage' says Ted Tan, Deputy CEO of IE Singapore (Tan 2009).<sup>1</sup> This chapter includes a review of related literature and an analysis of government policy toward SMEs. It discusses the main government initiatives from education policy to industrial policy and business policy, since Singapore's early years as a nation, to help SMEs achieve their full potential in Singapore and beyond. The respective academic literature that supports these initiatives is also discussed.

Anwar et al (2004), Kim & Lau (1994), Wade (1990), Krause (1987) all argue that government policies have resulted in massive FDI into Singapore and government expenditure on education and training has resulted in the increased availability of skilled labour. Besides FDI and government spending on education; government expenditure on research and development (R & D); trade and industry; lower taxation etc, have also greatly benefitted the Singaporean economy (Anwar 2004, p. 375). Other indirect actions of the government include the introduction of incentives in encouraging Singaporeans to save more resulting in a higher rate of national saving, which in turn means that there are more funds available for long term investments in the above mentioned areas of the Singaporean economy.



In addition, Anwar (2006) found that investments in human capital are vital for the growth of a country's economy, including its manufacturing industry. Anwar et al (2004) also examined the role of the government in Singapore's manufacturing industry and found that government policies in attracting FDI and government spending in education play very important roles in maximizing the country's industrial successes. The following sections discuss what Anwar (2006, 2004), Hew (2004), Kim and Lau (1994), Wade (1990), Krause (1987) and the rest have examined on the relevant government policies in greater detail and outline their implications and effectiveness on the state of development of SMEs in Singapore.

Table 1 below sums up the development stages of countries including that of Singapore. In the 1960s and 1970s, Singapore began as an original equipment manufacturing (OEM) economy whereby local firms learned the assembly process for standard simple goods from foreign MNCs. In the 1980s, local Singaporean firms learned process engineering and detailed product design skills from foreign MNCs and gained more value-add to the manufacturing process with their own design and manufacturing (ODM). From the 1990s till the present day, local Singaporean firms conduct manufacturing, product design, and R & D for new products and many have started to own their own brands and manufacturing (OBM) abilities.

**Table 1: Stages of Latecomer Development**

<i>Period/ Stage</i>	<i>Technological Transition</i>	<i>Market Transition</i>
1960s/ 1970s Original Equipment Manufacture (OEM)	Local firm learns assembly process for standard simple goods	Foreign MNC/ buyer designs, brands and distributes. Also gains non-manufacturing value added
1980s Own Design & Manufacture (ODM)	Local firm learns process engineering and detailed product design skills	As with above, MNC buys, brands and distributes. MNC gains manufacturing value added
1990s Own-Brand Manufacture (OBM)	Local firm conducts manufacturing, product design, and R & D for new products	Local firm has own brand, organizes distribution and captures all value added

NB: MNC – Multinational corporations; R & D – Research and Development

Source: Adapted from ADB (2003)

## 2.2 Human Capital Development

Since independence in 1965, Singapore's educational system has been through a series of reforms. The policies resulting from these educational reforms have made Singapore a very attractive place for foreign MNCs to come and setup subsidiary companies in Singapore because there is always a pool of relatively highly skilled labour available. The Goh Report (1979) saw the introduction of streaming as the means by which the demand for education would be managed, with schools providing general and academic education and vocational institutes providing vocational education for those students who did not progress well along the traditional academic route.

However, these initial attempts to incorporate vocational and technical education into the curriculum had to be revised because of the low status attached to vocational education. The government did not always get it right. Further reforms were therefore introduced in 1990 to increase the minimum period of education to ten years and upgrade technical education, establishing the Institute of Technical Education (ITE). Higher education has been expanded but access is strictly controlled with the state retaining a clear distinction between the technical and technological orientation of the polytechnics and the academic orientation of the universities (Ashton & Sung, 1997).

On the industrial front, Singapore took advantage of its position as an entrepot trade centre, building on its trading advantages in the oil and chemical industries; other types of industries such as precision engineering and semi-conductor manufacturing were also attracted to the island. In addition to these, the electronics and electrical industries were also attracted to establish themselves in Singapore, where the capital, managerial expertise and technological capabilities were provided by MNCs such as Japan's Hitachi and Germany's Siemens corporations. As of December 2007, Singapore had a small economy with a labour force of 2,730,800, comprising of 1,830,000 locals and 900,800 foreigners (Singapore Manpower Report 2008, p. 56); the range of industries it could support was limited. Thus, when the government sought to move the economy in the direction of higher value-added forms of goods and services, it made sense to build on the initial, fairly narrow manufacturing base and focus on electronics, precision engineering and chemicals. In the services sector, the government pushed for the development of banking, financial and business services, where Singapore already has a competitive

advantage in the region (Huff 1995); Singapore's early years as a former British colonial trading outpost gave it a natural advantage in the services industry.

**Table 2: Technological Stages in Southeast Asia's Electronic Industry**

<i>Decade</i>	<i>Singapore</i>	<i>Malaysia</i>	<i>Thailand</i>	<i>Indonesia</i>	<i>Vietnam</i>
1960s	Assembly	-	-	-	-
1970s	Process Engineering	Assembly	Assembly	-	-
1980s	Product Development	Process Engineering	Assembly	Assembly	Assembly
1990s	Research & Industry	Product Development	Process Engineering	Process Engineering	Assembly

Source: ADB (2003)

Before the 1980s, there were no specific SME policies in place in Singapore. Most SME related policies were introduced only after the 1980s. The priority was to attract FDI into Singapore, to develop the local industries and therefore help solve the critical issue of unemployment. Many policies were formulated to help SMEs and create a conducive environment for them to function. One of the most direct ways to help foreign SMEs establish in Singapore is to attract foreign business missions to visit Singapore and by marketing Singapore as a country with a strong support network of industries. By successfully attracting foreign investments into Singapore, the government is able to generate employment and at the same time, help local industries gain the technical and capital know-how for industrialization as well as encourage population growth (Ngiam 2011).

For example in 1999, Singapore's total active labour force (Citizens, Non-Citizen Residents and Work permit/ Employment pass holders) was 2.2 million and by 2006, the labour force had grown to 2.6 million (Yearbook of Statistics Singapore 2010). This is a growth of about 18 percent whereas the corresponding average annual population growth rate of Singaporean citizens from 1990 till 2006 was only 1.1 percent. The stock of FDI during the same time period grew from S\$170 billion (US\$126 billion) to over S\$310 billion (US\$229 billion) (Yearbook of Statistics Singapore 2010). One could argue that the rapid increase in FDI provided the conditions for such a sharp rise in employment opportunities. The rise in FDI itself partially contributed to the creation of entire systems of SMEs supporting foreign MNCs, and with the other local SMEs

growing alongside, this created an impetus for the collective growth of the SME community in Singapore.<sup>2</sup> This is in line with the research by Anwar (2006 & 2004) where he argues that the Singaporean government's pro-business and pro-FDI policies have helped Singapore and its people prosper.

### **2.2.1 Problems Faced in Establishing the SME Sector**

During independent Singapore's early years, one of the main problems faced by the government centered on training enough skilled labour to support the MNCs. This problem still exists today, but on a smaller scale. First, the Singapore government had to push the MNCs into producing higher value-added forms of production such as high-end semi-conductor manufacturing and the manufacturing of advance pharmaceutical products. Second, with only a small labour force, one of the main problems Singapore faced was how to ensure that all groups within the labour force were provided with the appropriate skills, especially as many of the older workers were educated only up to the primary level. The third challenge involved ensuring the transfer of technological capabilities (brought in by the MNCs) to the indigenous Singaporean population.

The first problem of encouraging high value added production by the MNCs was tackled through the introduction of the Skills Development Fund; a tax levied on low paid labour which thereby discourages employers from using cheap labour. The Fund is used to 'up-skill' the workforce i.e. to provide the financial resources to train the workers. However, the MNCs are reluctant to fund the up-skilling of older workers initially, as their representatives see the lack of secondary education as the responsibility of the government. The up-skilling of older workers is tackled through a variety of programs delivered through employers but funded through the Skills Development Board. These include the Basic Education for Skills Training program (1983), and the Modular Skills Training program (1986), for those in manufacturing, and the Core Skills for Effectiveness and Change (1987) for those in the service sector. In this way the government sought to upgrade the skills of the most vulnerable workers and keep them attractive to employers. In this task they had some success. For example, by 1992, 78% of the target group of 225,000 workers had experienced at least one module of the Basic Education for Skill Training program (ITE 1993). Till the present day, the Skills Development Fund continues to exist.

The government has also used a similar approach to upgrade the skills of workers who are already employed in leading edge companies to prepare them for the next wave of challenges. Working with major companies, the government introduced programs aimed at deepening workers' skills through structured on-the-job (OJT) training. These OJT blueprints, modeled on the Japanese system of OJT, have been developed with major employers in each of the industries targeted for growth and then cascaded down through other employers in the same industry. Since being introduced in 1993, over 100,000 workers had been through the scheme by 1997 (Ashton & Sung, 1997). Similar techniques are still being used to improve workers' problem solving abilities. Using these and other programs, the government has sought to supplement the training provided by MNCs to ensure that the national skill needs, as opposed to the company's skills needs, are met.

The other way in which the government has sought to enhance workers' skills is through the introduction of schemes designed to support the establishment of occupational labour markets. Employers in engineering and related industries require workers trained in intermediate level skills but would not voluntarily underwrite the costs of training. The government therefore established the New Apprenticeship Scheme in 1990 modeled on the German dual system, but modeled to suit local conditions. More highly specialized skills were embedded in the workforce through Joint Industrial Training Centers, developed in collaboration with major MNCs (e.g. Shell Eastern Petroleum Ltd and Texas Instrument) since the 1970s. The Centers provided high level training in electronics and precision engineering.

As the demand shifted toward more knowledge and technology-intensive industries, the scope of providing training was extended to incorporate knowledge from other MNCs and foreign governments (Wong 1993). Another distinctive feature of the Singaporean system is the incorporation of labour into the skill formation process. Following the successful suppression of the communists in the then British Malaya (Singapore and Malaysia today) by the 1960s, the Singapore government successfully incorporated the numerous trade unions that existed at that time into the machinery of a government-directed central umbrella of trade unions, the National Trades Union Congress (NTUC). Today, the NTUC still plays a significant role in both delivering skills training and encouraging employers to up-skill their labour forces (Goh & Green 1997).

The use of the MNCs to provide the capital, technology and managerial expertise, together with the existence of a small labour force, had important implications for the subsequent development of the educational and training system. First of all, the system has to deliver progressively higher level skills across a relatively narrow range of industries. This meant that it had to be focused in terms of the types of skills developed in the secondary and higher education system. Second, the use of MNCs to provide capital and technological know-how meant that ways had to be found to ensure that the new skills acquired were firmly embedded in the local labour force. Third, given the concern of MNCs with their own immediate training needs, there was always a danger that the long term skill needs of the economy would be overlooked. MNCs could not be relied upon to move in the direction of forms of higher value-added production on their own account. Fourth, the small size of the labour force meant maximum use had to be made of all groups of workers (Aston et al 2002, p. 17). These are the distinctive conditions which subsequently helped shape the Singaporean educational and training system till it is today.

In the transformation from a developing to a newly industrialized economy, Singapore initiated the first SME Master Plan in 1989. The SME Master Plan is a comprehensive, detailed list of actions to systematically facilitate the growth of the SME sector in Singapore while focusing broadly on promoting domestic entrepreneurship and innovation; increasing informational market efficiency by encouraging information exchange and improving the dissemination of information about new methods and opportunities; promoting best practices in business through easy access to consultancy adoption and training; and encouraging domestic enterprises to grow and expand internationally (SME Committee, 1989). This marked the true beginning of Singapore's journey to systematically develop local SMEs.

Singapore then gradually upgraded its local expertise so that the country could sustain its international competitiveness, so as to attract more MNCs to relocate to the island. This differentiates Singapore from other countries in the region. A follow-up plan called the SME 21 Plan was released in 2000 to ensure the relevance of the existing available programs to help make SMEs more resilient and to be innovative in the increasingly competitive environment especially in the region. The SME 21 Plan adopts a three-pronged strategic approach to SME development, namely: 1) enterprise-level SME development; 2) sector-level SME