

UNIVERSITY OF NOTTINGHAM

**UNDERSTANDING AND ADDRESSING THE
CONTEMPORARY SOCIAL ISSUES AND CHALLENGES TO EFFECTIVELY
ACHIEVE AND SUSTAIN THE STRATEGIC COMPETITIVENESS IN SINGAPORE**

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MBA

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By

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A Management project presented in part consideration for the degree of
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Undertaking this management project has been an exciting expedition, filled with many challenges from juggling between my family, studies and overwhelming work commitment that require travelling.

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Abstract

This research dissertation aims to understand the contemporary social issues and challenges that are endemic to Singapore and to address these issues and challenges so as to achieve and sustain the strategic competitiveness in Singapore.

The pursuit of high Gross Domestic Product (GDP) growth aggressively by the Singapore government has resulted in welcoming foreign direct investments, technology and talents to exploit economic growth and address the greying population.

Over time, this obsession has brewed a lethal concoction of contemporary social issues and challenges of elevated cost of living, widening income gap, reduced productivity and inflation.

Mounting displeasure, job complacency and increasing social disquiet amongst the residents lead to unmotivated employees. This resulted in the firms hiring of foreign talent with lower remuneration which will replace the local native citizens.

These burning issues have escalated into income disparity and social tensions which will threaten the political stability. With the rising operating costs, the firms do not upgrade their business operations or re-train their employees, leading to declining productivity.

The critical findings are essential to understand and derive solutions to achieve and sustain the strategic competitive advantages and economic growth in Singapore. As the contemporary social issues and challenges are alarming, there is an urgency to undertake this research topic.

To facilitate this management project, important references that had been cited and applied include Michael Porter's competitive advantages, Porter's Diamond models, SWOT Analysis, PEST analysis and Resource based view framework. Other sources consulted include newspapers, online journals, books and government websites to further appreciate the factual and empirical information from statistics and public opinions to support this research.

TABLE OF CONTENTS

ACKNOWLEDGEMENTS.....	I
ABSTRACT.....	II
1. INTRODUCTION.....	1
2. LITERATURE REVIEW	3
2.1. Concept of Competitive Advantage: Porter's Generic Strategies	3
2.1.1. Cost Leadership	3
2.1.2. Differentiation	4
2.1.3. Focus strategy	4
2.2. Abraham Maslow's Hierarchy of Needs	5
2.3. PEST Analysis.....	5
2.4. Porter's Diamond Model	6
2.5. SWOT Analysis	6
3. SINGAPORE'S ACCUMULATED STOCKPILE.....	7
4. SINGAPORE'S CHALLENGES.....	10
4.1. Singapore during Financial Crisis	10
4.2. Declining Export market.....	11
4.3. Gloomy Tourism sector.....	13
4.4. Unemployment	14
4.5. Immigration Policy, High cost of living and Income Gap.....	16
4.6. Structural Changes in Singapore	22
4.7. Declining Productivity rate	24
4.8. Threats of Firms Departure and Declining Competitiveness	25
5. ANALYSING THE SINGAPORE ENVIRONMENT.....	26
5.1. PEST Analysis.....	26
5.1.1. Political	27

5.1.2. Economic.....	27
5.1.3. Social	28
5.1.4. Technological	28
5.2. Porter's Diamond Model	29
5.2.1. Factor Conditions	30
5.2.1.1. Logistics infrastructure.....	31
5.2.1.2. Administrative infrastructure	32
5.2.1.3. Innovation infrastructure	33
5.2.1.4. Capital Market infrastructure.....	33
5.2.1.5. Communication infrastructure	34
5.2.2. Context for Rivalry and Strategy	35
5.2.3. Demand Conditions	37
5.2.4. Supporting and Related Industries.....	37
5.3. SWOT Analysis	37
5.3.1. Strength.....	39
5.3.2. Weakness.....	39
5.3.3. Opportunity	40
5.3.4. Threats	40
5.4. Resource Based view	40
5.4.1. Logistics hub.....	41
5.4.2. Education	42
5.4.3. Manufacturing.....	43
5.4.4. Biomedical.....	49
5.4.5. Healthcare	49
5.4.6. Financial Services	50
5.4.7. Township Planning	52
6. SINGAPORE GOVERNMENT'S COUNTER MEASURES	54
6.1. Singapore Government's Stimulus Package.....	54
6.2. Tighten Immigration Policy.....	54
6.3. Employees Continued Education and Training	56

6.4.	Cost Benefit Analysis of Revised Labour Policy	57
6.5.	Infrastructure Development and Rejuvenation	58
6.6.	Productivity and Innovation Credit Scheme	59
6.7.	Limitations of Stated Owned and State Guided Enterprises on Innovation.....	61
6.8.	Entrepreneurship and Innovation	63
6.9.	Singapore emerge out of financial crisis	64
6.10.	Singapore's Slower Growth and Inflation	65
7.	SURVEY FINDING AND RESULTS.....	68
8.	STRATEGIES TO IMPROVE COMPETITIVENESS OF SINGAPORE	81
8.1.	Singapore's Regional Integration	81
8.2.	Singapore's Unique Competitive Advantages	84
8.3.	Singapore's Role in Green Renewal Energy, Corporate Social Responsibilities ...	85
8.4.	Singapore's Role in Space Innovation	87
8.5.	Countermeasures to prevent Property bubble.....	87
9.	CONCLUSION.....	89
	SURVEY QUESTIONNAIRE	90
	REFERENCES	96

1. Introduction

The mass rapid influx of cheap foreign labour into Singapore has created a slew of long term social issues amongst residents. This has widened the income gap and resulted in elevated cost of living and reduced productivity.

In pursuit of high GDP growth, Singapore has maintained an outward market-orientation and effective macroeconomic policy. With advanced infrastructure, fewer regulations, free market entry and exit, no expensive, time-consuming bureaucratic red tape and strong intellectual property right, Singapore has attracted foreign direct investment and foreign talents to the shore at record level. The foreign direct investment, skills and state of the art technology have enriched the nation.

The cheaper foreign labour may have helped the firms maintain leaner business operation but has adversely depressed the wages. In contrary, the influx of wealthy foreigner has widened income disparities, causing increased cost of living. Singapore's heavy reliance on foreign labour has resulted in more jobs held by foreigners.

The ramification of the liberal immigration policy is irreversible and created a long term impact and social tension. These alarming social issues had become a major controversial in the recent 2011 General Election with the ruling party losing more votes to the oppositions.

To reduce the social confrontation, the government has encouraged the firms to employ more local native citizens. Higher minimum wages guidelines were set to encourage the employers to follow to reduce the employee's hardship.

In mounting public displeasure, the government has reduced the foreign talents inflow. The tightened foreign labour policy has escalated into high domestic operating cost and wage pressure. More firms are confronted with increased operating overhead at a reduced profit. This cost disadvantage has made the firm less competitive while confronted with external threats.

The shrinking workforce undermined by an ageing demographics and increased wages resulting from the tightened immigration policy has affected the growth of Singapore. Clearly, this tightened policy has driven out low cost labour intensive industries and backfire the

nation's attempt in pursuit of high GDP growth with more firms relocating to cheaper economies.

If Singapore could not react fast enough to leverage and gain competency from high value-added productivity activities, the economy would slow down as profit taking from high value-added productivity industries would not be able to compensate for the loss of revenue from the low cost labour intensive industries that had moved abroad. For those firms who stay, there were no employees re-training or business operations upgrade, leading to reduced productivity.

In the face of these daunting challenges, the government must engage the citizens to jointly address these contemporary issues and to formulate a roadmap to achieve competitiveness, sustainable economic growth and craft out the future of Singapore.

2. Literature Review

The conceptual models discussed in this Chapter are used to analyse the Singapore environment and to improve the odds to compete and win in the region and globally.

2.1. Concept of Competitive Advantage: Porter's Generic Strategies

As a key motivation of this management project is to create competitive advantage for Singapore, it is important to understand the concepts of competitive advantage.

The firms must determine the appropriate strategies to create superior value that resist market competitions and emerge a leader to exploit profit gain and economic growth. This could be done by deterring the competitor's advances through barriers to entry.

Superior value creation must be unique and hard to imitate. The firms should use patents, brand royalties or intellectual property rights to protect their invention against imitation. The new value creation should cover the firm's investment costs of creation by selling at a premium.

Porter (2008) has explained the three generic strategies comprising of low cost leadership, differentiation and focus strategy which could achieve sustainable competitive advantages, increased productivity and economic growth.

2.1.1. Cost Leadership

Low cost leadership strategy can be achieved when the firms produce products or services which reach scale economy and market them at a much lower cost than competitor.

For example, a budget airline can sell flight tickets at no frills cost for the same destination which other premium airlines also fly to. Consumers can choose to forgo on board meals, checked baggage and in-flight entertainment for cheaper airfare.

However, low cost strategy cannot be adopted for every scenario. It is not advisable to promote education using low cost strategy as it will compromise the quality of learning. To facilitate quality learning, periodic investments are necessary to upgrade the education system to remain conducive, well equipped with modern facility and technology.

2.1.2. Differentiation

Value creation should be unique with superior quality, special features, and effective market strategy or excellent after sales service. This will leads to differentiation and deter rival's entry (Porter, 1990a, pp. 37).

As low cost strategy often lead to price war and profit erosion, Firms can choose to uphold their prestigious reputation and high value invention by capitalising on their superior value, reputed brand image and trustworthy credential.

The new value creation need not be of low cost value but with differentiation. Differentiation can be obtained through preferential raw materials access, extensive market, specialised information, close supporting industries interrelationship or exclusive distribution channels.

Often, demanding customers are the forces behind the reasons why firms innovate. It is necessary to understand the market demand condition as highlighted in the Porter's Diamond model and shift the firms with low cost labour intensive industries to high value-added productivity business (Porter, 2008, pp. 228). Potential customers are often convinced of the new value creation or innovation and are more willing to pay a premium.

2.1.3. Focus strategy

In general, low cost leadership or differentiation strategies are used to exploit competitive advantage. However, in focus strategies, the firms can use either cost focus or differentiation strategy for a niche segment where they can engage unorthodox process to meet an unusual customer's demand.

2.2. Abraham Maslow's Hierarchy of Needs

Human capital is viable assets which will help the firm deliver superior value to the customers. Hence, cultivating the employee's motivation is essential which will leads to delivery of superior output.

We can use Abraham Maslow's hierarchy of needs to analyse the employee's behaviour. This framework comprises of Physiological, Safety, Social, Esteem and Self-actualisation (Robbins and Judge, 2008, pp. 70).

As Maslow has explained that after achieving each level, one should be motivated to work toward achieving the next level, with new goals being set to work forward to. However, in Maslow's framework has pointed out that with an absence of economic safety will leads to employee's anxiety and worrying about losing their job. This will limited their creativity, ability and deter them from achieving their goals, potential and reach the pinnacle level of Self-actualisation.

Hence, the employers need to assure their employees of their job security which will indirectly cultivate their motivation and commitment. Employee's talent retention and training are necessary to exploit their potential and to leverage on their expertise to deliver superior values.

2.3. PEST Analysis

In PEST Analysis, it is a strategic framework which can be used to analyse the business environment to determine if there is market growth, decline, business position, potential and direction of operation.

The framework consists of the following factors:

- Political
- Economic
- Social
- Technological

2.4. Porter's Diamond Model

The Porter's Diamond model framework can be used to analyse the business environment of a nation or firm and to determine whether there are market efficiency and effective resource allocation to exploit profit gain and economic growth.

Porter (1990b) has explained that in Porter's Diamond model, it comprises of the following four dimensions which can be used to examine the competitive advantage of a nation or firm.

- Factor conditions
- Demand conditions
- Context for strategy and Rivalry
- Supporting and related industries

2.5. SWOT Analysis

The SWOT analysis is a structured planning framework which can be used to evaluate the Strengths, Weaknesses, Opportunities, and Threats in a business environment and economy.

This framework can be used to identify the internal and external factors to determine the threats to the business and to stamp out any externalities.

The following factors are as follows:-

- Strengths
- Weaknesses
- Opportunities
- Threats

3. Singapore's Accumulated Stockpile

Notwithstanding limited size and scant resources, Singapore had overcome many hurdles during nation building. Singapore has unleashed the power and transformed into an economic miracle. The evolution from an indigenous trading port under British colonial rule to a prosperous nation was amazing. Embracing an outward, development oriented, trade and human resources have contributed to the notable success of Singapore.

Over the year, Singapore has made stellar and strategic progress and become conspicuous amongst world's most distinctive metropolitan city, surpassing many developed nations. Singapore has made impressive and spectacular economic growth at dual accelerating speed of an average GDP of 7.8% between 1970 and 2005 (Sng and Chia, 2011, pp. 3; Figure 1). During independence in 1965, the GDP per capita was S\$2,667 as highlighted in Figure 1.

Figure 1: Singapore's GDP Per Capita (in thousands) – September 2009



Source: *The Conference Board and Groningen Growth and Development Centre.*

The superlative GDP growth of US\$125.3 million has resulted in Singapore having 87% of GDP larger than the other bigger neighbouring countries such as Vietnam, Myanmar, Cambodia and Laos who have a combined GDP of only US\$67 million (Chia and Sng, 2009, pp. 8).

The city has high foreign exchange reserves accumulation and enviable balance of payments surplus. With GDP per capita of US\$36,537, it is one of the top 10 richest countries in the world (Han, Ibrahim, Chua, Lim, Low, Lin and Chan, 2011, pp. 16).

Today, Singapore is a premier civic pinnacle with sound macroeconomic systems, gleaming world-class infrastructure, strong national security and political stability. Singapore's diverse and multifaceted economy has earned prestigious accolades as 'Renaissance city of Asia'.

The cornerstone of Singapore is a free trade market orientation with geographic location that attracted foreign direct investments. Foreign direct investment has accounted 60% in 2007 as the nation is regarded as an excellent location for their Asian operations (Das, 2010, pp. 50). These resulted in the entry of 7 of the top 10 pharmaceutical companies and top 10 medical technology foreign firms setting up their regional headquarters in Singapore (EDB Singapore, 2013).

Although, Singapore is a small nation, the accommodating business environment and strong international trade relations, has earned 3rd position, for being one of the easiest countries in the world to do business with, after New Zealand and United States (US) (World Bank, 2005, pp. 2).

During 2008, Singapore has GDP per capita of S\$53,192, which has earned 7th position globally and 2nd position in Asia, behind Hong Kong with prosperity of 90.3% of US (Ketels, Lal, and Neo, 2009, pp. 26). This shows that Singapore has a strong financial foundation with solid prosperity level as witnessed in Figure 2.

Figure 2: Countries Prosperity - 2005

City	GDP Bill PPS	GDP per Capita PPP\$	Population
New York, United States	1133	60485	18732000
London, United Kingdom	452	53145	8505000
Los Angeles, United States	639	51922	12307000
Hong Kong	244	34576	7057000
Tokyo, Japan	1191	33714	35327000
Singapore	129	29813	4327000
Seoul, South Korea	218	22188	9825000
Mexico	315	16813	18735000
Shanghai, China	139	9584	14503000
Beijing, China	99	9238	10717000
Mumbai, India	126	6922	18202000

Source: UN Population Division and UK Economic Outlook in March 2007

4. Singapore's Challenges

4.1. Singapore during Financial Crisis

With many unanticipated economic events unfolding daily, the Singapore economy is not completely insulated by the sluggish US financial catastrophe spill over and the wrecked Europe sovereign debt woes. The crisis has dented the overall economic confidence and clouded the economic outlook. Indeed, no country in this world can remain in isolation without being eschew from the once hegemony, US (Das, 2010, pp. 35).

As most of the large domestic demands in the West are fulfilled by the Asian economies, Singapore has a high dependency on US and Europe's domestic demand which constituted 33.4% of the total non-oil export as shown in Figure 3.

Figure 3: Market-share of Singapore's Total Non-oil Exports

	USA	Europe	Japan	Indonesia	Malaysia	Thailand	Hong Kong	Taiwan	China
2007 Share (% of total)	15.2	18.2	6.2	6.4	9.3	4.8	6.8	3.9	9.5

Source: *Yearbook of Statistics 2009, Department of Statistics Singapore*

The impaired and striking weakness in the west has caused synchronised decline in Asian goods, threatening to curb Singapore goods. Confronted with the languishing western hemisphere and competitions from other cheaper emerging economies, it has endangered Singapore's position as a compelling regional hub. The persistent imbalance has snowballed and sent shock waves to this trade dependent country.

The gripping financial market turmoil was so contagious that it has adversely triggered Singapore to be the first Asian economy to enter the recession in 2008. Hence, Singapore has experienced the worst contraction in late 2008 and early 2009 with confrontation of intermittent bouts of volatility which hindered growth.

According to Citibank's report, Singapore has dropped from 24th position to 39th position under economic strength category (The Economist Intelligence Unit, 2013, pp. 9). Growth has been brittle and susceptible to periodic global headwinds ever since Singapore exposure

to several recessions ranging from Asian economic crisis, dotcom bubble burst electronic slumps, SARS outbreaks and the recent Great financial recession.

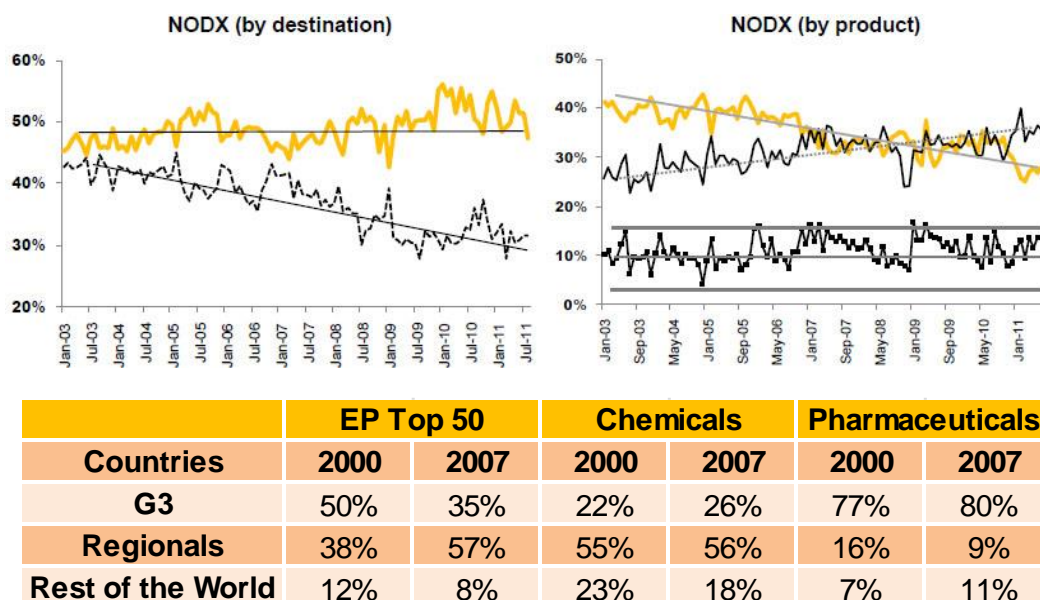
Singapore was caught up in the vicious cycle of economic faltering with policies being challenged by myriad financial vulnerabilities. The other two larger economies, China and Japan, who are the key drivers of growth for other economies, were also succumbed with provoking unprecedented contraction and steep export, exacerbating the crisis further. Many countries faced onslaught draconian blow in the economy.

Cross border trade were also affected with declining demand. The disappointing economic news has postulated the scale and hastened the deceleration the global economy (Associated Press, Reuters, 2012).

4.2. Declining Export market

With Singapore economy affected due to non-oil export declined by 12.5% and further shrank by 0.6% in the first quarter of 2013, the electronic shipment of 17.9% in March 2013 was the reason for the plummet (Chan, 2013a). The demand from G3 which comprise of US, Euro Zone and Japan have declined from 50% to 35% as shown in Figure 4.

Figure 4: Non-Oil Export by Destination and Product



Source: MayBank FX Research, Bloomberg

Singapore's export is predicted to stay weak due to the trepid growth of Singapore currency to curb inflation. This has made the export more expensive and Singapore less attractive with cessation flow of the foreign direct investment. The economic contraction has caused a ripple effect on Singapore's Tourism, Retail, Transportation, Logistics and other export business.

Although, the Wholesale and Retail industry has increased from S\$ 48,917 million in 2009 to S\$ 55,184.9 million in 2012, there was a decline by 2.6% in 2012 as compared to the previous year as illustrated in Figure 5.

Figure 5: Gross Domestic Product by Industry

					2011				2012				2013
	2009	2010	2011	2012	I	II	III	IV	I	II	III	IV	I
	Million Dollars												
GDP AT CURRENT MARKET PRICES	274,655.3	315,921.2	334,092.7	345,560.5	83,280.8	82,205.6	83,124.3	85,482.0	85,793.8	86,224.2	85,227.3	88,315.2	86,866.7
Goods Producing Industries	71,593.9	81,938.7	83,869.5	86,861.6	20,716.0	20,751.5	21,201.3	21,200.7	21,543.0	22,558.3	21,320.2	21,440.1	19,935.1
Manufacturing	53,999.8	64,459.8	65,361.7	67,189.7	16,345.4	16,217.0	16,394.8	16,404.5	16,838.1	17,689.5	16,219.7	16,442.4	15,083.5
Construction	13,584.4	12,584.4	13,186.3	14,231.2	3,146.6	3,103.3	3,437.9	3,498.5	3,439.3	3,445.6	3,651.4	3,694.9	3,704.1
Utilities	3,900.1	4,781.2	5,206.6	5,329.7	1,196.0	1,402.2	1,340.7	1,267.7	1,237.7	1,395.0	1,422.0	1,275.0	1,119.4
Other Goods Industries ¹	109.6	113.3	114.9	111.0	28.0	29.0	27.9	30.0	27.9	28.2	27.1	27.8	28.1
Services Producing Industries	178,231.9	204,323.6	216,629.1	222,251.0	54,581.3	52,921.3	53,488.1	55,638.4	55,790.5	54,336.6	54,911.8	57,212.1	57,744.0
Wholesale & Retail Trade	48,917.0	55,246.2	56,886.3	55,184.9	14,076.7	14,095.2	13,616.2	14,898.2	13,821.2	13,563.7	13,592.6	14,207.4	13,236.4
Transportation & Storage	21,530.1	25,546.5	23,733.7	25,104.5	5,813.9	5,919.6	5,798.9	6,201.3	6,018.3	6,332.4	6,247.2	6,506.6	6,039.7
Accommodation & Food Services	5,465.9	6,606.8	7,640.3	8,170.2	1,831.5	1,893.2	1,944.7	1,970.9	2,017.7	2,032.9	2,056.3	2,063.3	2,069.4
Information & Communications	10,479.1	11,172.3	11,837.2	12,327.8	2,884.5	2,941.0	3,053.4	2,958.3	3,008.3	3,032.6	3,141.5	3,145.4	3,147.8
Finance & Insurance	31,388.3	33,558.9	37,113.5	38,485.5	9,304.6	9,151.6	9,516.6	9,140.7	9,734.5	9,572.7	9,540.1	9,636.2	10,891.4
Business Services	34,726.5	40,559.1	44,478.7	47,224.4	10,788.3	10,921.0	11,274.1	11,495.3	11,412.1	11,667.2	11,993.1	12,152.0	12,269.4
Other Services Industries	25,725.0	31,633.8	35,139.4	35,753.7	9,881.8	7,999.7	8,284.2	8,973.7	9,778.4	8,135.1	8,341.0	9,499.2	10,089.9
Ownership of Dwellings	10,887.9	11,710.3	13,715.1	15,416.6	3,198.8	3,394.4	3,493.4	3,628.5	3,723.7	3,836.2	3,910.3	3,946.4	3,953.6
Gross Value Added At Basic Prices	260,713.7	297,972.6	314,213.7	324,529.2	78,496.1	77,067.2	78,182.8	80,467.6	81,057.2	80,731.1	80,142.3	82,596.6	81,632.7
Add: Taxes on Products	13,941.6	17,948.6	19,879.0	21,031.3	4,784.7	5,138.4	4,941.5	5,014.4	4,736.6	5,493.1	5,085.0	5,716.6	5,234.0
Percentage Change Over Corresponding Period Of Previous Year													
GDP AT CURRENT MARKET PRICES	1.9	15.0	5.8	3.4	9.8	4.5	5.5	3.5	3.0	4.9	2.5	3.3	1.3
Goods Producing Industries	5.6	14.4	2.4	3.6	4.2	-1.2	4.3	2.4	4.0	8.7	0.6	1.1	-7.5
Manufacturing	2.9	19.4	1.4	2.8	4.5	-2.6	2.7	1.2	3.0	9.1	-1.1	0.2	-10.4
Construction	20.7	-7.4	4.8	7.9	-0.4	-0.2	10.5	9.2	9.3	11.0	6.2	5.6	7.7
Utilities	-1.3	22.6	8.9	2.4	13.9	14.0	9.2	-0.4	3.5	-0.5	6.1	0.6	-9.6
Other Goods Industries ¹	1.9	3.4	1.4	-3.4	10.7	-1.7	-1.1	-1.0	-0.4	-2.8	-2.9	-7.3	0.7
Services Producing Industries	0.7	14.6	6.0	2.6	10.9	5.5	5.1	2.9	2.2	2.7	2.7	2.8	3.5
Wholesale & Retail Trade	8.0	12.9	2.6	-2.6	4.8	1.2	-0.3	4.6	-1.8	-3.8	-0.2	-4.6	-4.2
Transportation & Storage	-15.7	18.7	-7.1	5.8	-3.7	-8.0	-10.1	-8.3	3.5	7.0	7.7	4.9	0.4
Accommodation & Food Services	-7.5	20.9	15.6	6.9	20.8	18.2	14.8	9.8	10.2	7.4	5.7	4.7	2.6
Information & Communications	9.0	6.6	6.0	4.1	5.3	7.1	9.4	2.3	4.3	3.1	2.9	6.3	4.8
Finance & Insurance	2.3	6.9	10.6	3.7	14.0	12.5	14.7	1.9	4.6	4.6	0.2	5.4	11.9
Business Services	-1.0	16.8	9.7	6.2	11.7	8.1	10.6	8.4	5.8	6.8	6.4	5.7	7.5
Other Services Industries	3.5	23.0	11.1	1.7	28.5	8.7	6.3	2.1	-1.0	1.7	0.7	5.9	3.2
Ownership of Dwellings	2.0	7.6	17.1	12.4	16.4	18.3	18.4	15.4	16.4	13.0	11.9	8.8	6.2
Gross Value Added At Basic Prices	2.1	14.3	5.5	3.3	9.2	4.1	5.4	3.3	3.3	4.8	2.5	2.6	0.7
Add: Taxes on Products	-2.0	28.7	10.8	5.8	20.3	11.2	6.2	6.7	-1.0	6.9	2.9	14.0	10.5

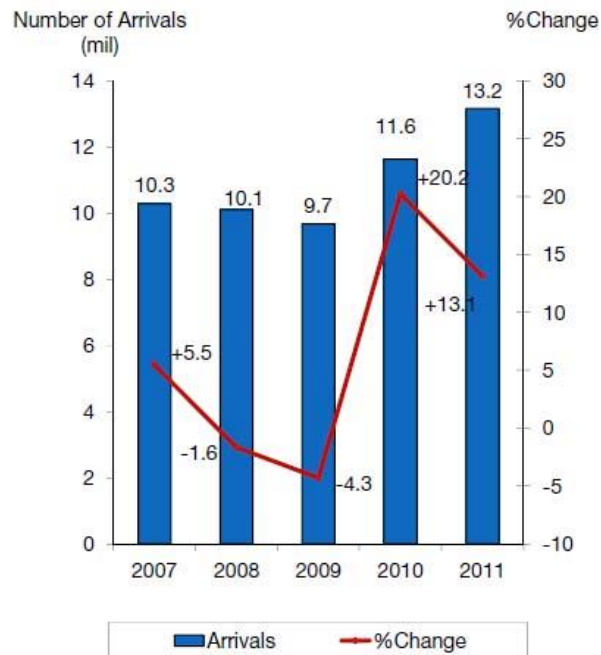
Source: Yearbook of Statistics 2012, Department of Statistics Singapore

4.3. Gloomy Tourism sector

Although, Tourism has served as an important pillar of growth for Singapore, the tourist arrival in 2008 and 2009 has declined during crisis period as illustrated in Figure 6. There is also a shift from high-end traveller to budget traveller during the economic downturn.

Business trips were cut back. Some business travellers have downgrade to travelling on budget airlines. Travellers on holiday have travelled on budget airline instead of international carriers.

Figure 6: Number of tourist arrival in Singapore 2007 – 2011

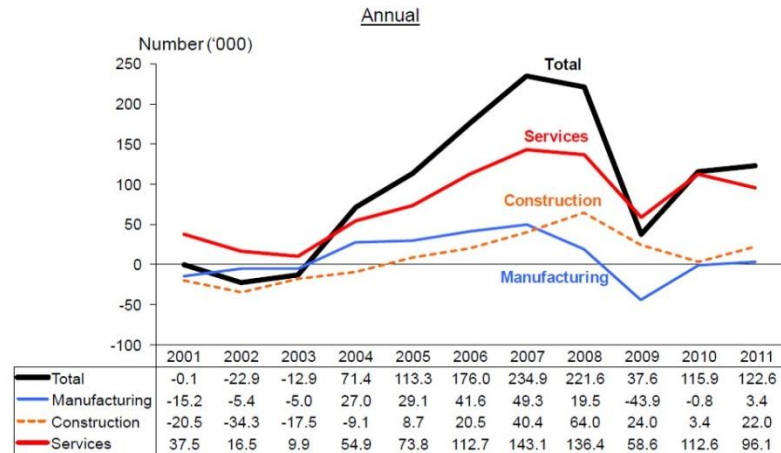


Source: Singapore Tourism Board Annual Report on Tourism Statistics

4.4. Unemployment

The recent crisis had caused cyclical loss of employment as postulated in Figure 7. Many firms have indulged in cost cutting measures and cancelling investment projects. The bank's uncertainty has further weakened the market. The labour forces from the manufacturing, construction and services sectors were retrenched between 2007 and 2009, causing a sharp hike in unemployment as shown in Figure 7.

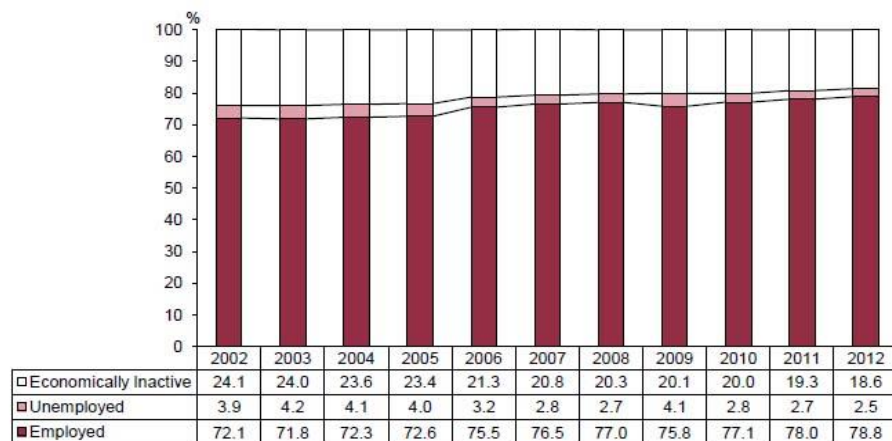
Figure 7: Retrenchment in Singapore Manufacturing sector



Source: Ministry of Manpower Research and Statistics Department Singapore March 2012

Several workers from the service sectors were also displaced. The unemployment rate had climbed up to 4.1% in 2009, as compared to previous year unemployment rate of only 2.7% as shown in Figure 8. The increased unemployment rate has sparked public outcry over the immigration policy with the working class more vulnerable to the consequences of the recession.

Figure 8: Resident Population aged 25 To 64 by Economic Activity Status, 2002 - 2012 (June)



Source: Singapore Ministry of Manpower

4.5. Immigration Policy, High cost of living and Income Gap

As the pursuit of high GDP growth has been the hallmark of Singapore, the nation has tried to achieve high growth through capital accumulation, technological and skill upgrading, increase productivity and efficiency.

Due to limited talent pool, Singapore has use high standard of living to attract foreign professionals. The rapid immigrant influx has boosted the declining fertility rate and addressed the greying population.

The Monetary Authority of Singapore (MAS) has further exacerbated the problem by promoting high end financial wealth banking service to lure foreigner. Permanent residency was offered as incentive to foreigners who placed S\$5 million in any MAS registered financial institutions.

As a result, there was a rapid acceleration of trajectory enormous amount of wealth fund from the preponderant high net worth individual into the nation. By late 2007, the total cumulative fund was S\$1.17 trillion which was a high growth from one third as compared to the previous year (Cunha, 2010, pp. 17).

The accelerated wealthy foreign influx has resulted in Singapore having the highest concentration of millionaire households of 38.6% which was 170,000 in 2010, increased from 123,000 in 2009 (Boston Consulting Group, 2011; Wong, 2012). These households comprise of 15.5%, holding at least S\$1 million of asset (Boston Consulting Group, 2011; Wong, 2012). Singapore's Top 40 richest has assets worth of S\$74.5 billion, which was 9% increased as compared to previous year (Forbes, 2012).

Among these foreigners is Eduardo Saverin, the Facebook co-founder who is ranked the 8th richest in Singapore, with a high net worth of US\$2.2 billion (Temasek Times, 2012c). The city has moved up Mercer consulting firm's most expensive cities ranking from 8th position from the previous year to 6th position in 2012 (Mercer, 2012). Singapore is now on par with Zurich and more expensive than New York.

The Global Liveability Survey of the Economic Intelligence unit has highlighted that Singapore is an extremely expensive place to live, ranking in 6th position from the previous, 9th position (Navaratnarajah, 2013a).

The downside of pursuing accelerated GDP growth is at the expense of struggling local native citizens who could not catch up with the nation's advances. It resulted into inflation, high income disparities, widening income gap and manifested into social divide and challenges for the policymakers.

Singapore has one of highest income disparity in the world. The Gini coefficient which measures the income gap with perfect equality as 1 and perfect inequality as 10, was 0.425 for Singapore in 2008 (Han, Ibrahim, Chua, Lim, Low, Lin and Chan, 2011, pp. 143). Surprisingly, Singapore's Gini coefficient was even higher than Japan. The Gini coefficient for the Scandinavian countries such as Denmark, Sweden, Finland and Norway were ranging from 0.247 to 0.269 in 2009 (Han, Ibrahim, Chua, Lim, Low, Lin and Chan, 2011, pp. 143).

The city state is no longer a place for domestic but a major destination for foreigners. These foreigners are often in a better position to take advantage of the astounding economic success of Singapore at the expense of the local native citizens.

The total population in Singapore was 5.31 million in 2012 (Department of Statistics Singapore 2012; Law, 2012a). Of which, 3.29 million were Singaporean, 0.53 million were permanent resident and 1.49 million were non-resident (Department of Statistics Singapore, 2012; Law, 2012a).

Over reliance on foreign resources has resulted in 38.2% of the labour forces being held by the foreigners. This works out to a ratio of at least 1 in 3 people are either foreigner or permanent resident. The government immigration statistics also showed that between 2007 and 2011, the foreigners who were granted citizenship or permanent residency were not economically active, with the number of dependents outstripping the number of working individuals (Henson, 2012).

The high influx of immigrants was a result of the government favouring meritocracy. There were 63% of immigrants with Tertiary education who became new citizens in 2008 as compared to only 36.6% of local native citizens with Tertiary education as shown in Figure 9.

Figure 9: Average Education Level as at 2008

	Existing		New			
Population, 2008	Citizens	SPR	Citizens	SPR	Non-Resident	Total
Education attainment	3,164,400	478,200	20,513	79,167	1,196,700	4,839,300
Not stated			3.1%	0.6%	N/A	N/A
Up to secondary	63.4%	35.4%	33.9%	21.5%	N/A	N/A
Post-secondary	36.6%	64.6%	63.0%	77.9%	N/A	N/A

Source: Yearbook of Statistics 2008, Department of Statistics Singapore

This resulted in well-educated immigrants competing with the local native citizens for Professional, Managers, Engineers and Technician (PMET) jobs at lower remuneration which put the local native citizens at disadvantage.

The local native citizens are estranged in this densely populated city of only 710 square kilometres, scrambling and competing for frenzy and overheating property market, amidst a limited housing supply. The local native citizens are crowded out of good school, jobs, healthcare and transportation.

Intense competition can be seen for as young as 7 year old children who need to compete for their places in Primary school admission. Nearly one fifth of the Primary 1 places in the prestigious schools were given priority to school alumni, parent volunteers and community leaders who have stronger connection (Phneah, 2013).

With more privileged children congregating in premium primary schools, this will increased their opportunities to access to affiliated secondary schools. This will creates a concentration of power and influence, entrenched in a small elite circle which further intensifies the social inequality of opportunity in the society.

Often, these wealthy parents will invest and contribute to the school to enhance the learning environment. The current school system is also unfavourable to the less privileged children with more prestigious schools located in wealthy districts. This enables the children from the

richer families to have a better chance of getting admission to these reputed schools where priority will be given to those staying within 1 to 2 kilometres.

For those parents from the poorer background, they cannot afford to do community service or become parent volunteers like the richer parents as they have to struggle to make end meet. Minister Mentor Lee Kuan Yew has further attributed this phenomenon by emphasizing the need for well-educated parents to cultivate conducive home learning environment to derive meritocracy (Phneah, 2013).

The frequent crumbling of the public infrastructure, Mass Rapid Transit (MRT), a public monorail system is another infrastructure failure which has precipitate congestion and manifested into public discontent.

Former Chief Economist to the Government of Singapore Investment Corporation (GIC), Yeoh Kam Keong has warned against the mass immigration of cheap foreign workers which will depress the working class wages (Temasek, 2012b). It has become disincentive with the downward pressure on employee's salary with reduced job opportunities. This leads to an increase in low income group.

It is cognisant that the obvious declined in living standard are felt by many squeezed low and middle-income group. They often find it challenging to cope up with the increased cost of living and struggled to make a living under the twin scourges of rampant inflation and stagnant wages. These issues have threatened their livelihood and entrapped them in the abject poverty cycle with barely enough to provide for the family or improve their children's future opportunities.

The families from the bottom 20% have emerged to be the hardest-hit by inflation (Tan, 2012b; Low, 2012c). Figures from the Department of Statistics has revealed that the country's lowest earner has experienced 6.3% increase in pricing over the last six-month in 2012, as compared to the top 20% income earners feeling only 4.6% of price increase (Tan, 2012b; Low, 2012c). The remaining 60% of the middle income group has experienced a price increase of 5.2% (Tan, 2012b; Low, 2012c).

Institute of Policy Studies faculty associate, Tan Ern Ser has cautioned that the price incremental has resulted in lower income group feeling painstakingly as their expenses are attributed mainly to daily necessities (Tan, 2012b; Low, 2012c).

These low and middle-income groups often have no control and widely blamed the affluent foreigner for swelling property prices and putting the property out of reach. This resulted in a surge of property prices by 16% in third quarter of 2009 (Wilson, 2011, pp. 163). The hyperactive property market has resulted in many wealthy speculators trying to profit from the re-sale or rental of the sizzling hot property. Mortgage loan has grown tremendously with the surge of debt level at 75% of GDP from 38% in 2000 (Navaratnarajah, 2013b).

International Monetary Fund (IMF) has cautioned against the imbalance which will cause asset bubbles (Chan, 2013b). Asset inflation due to extremely high consumption along with elevated household debt levels will threatened price instability, risk asset bubble and imminent economic market collapse.

What Singapore is experiencing currently is not high standard of living but high cost of living. In order to improve the living standard, firms need to penetrate into high value-added industries which will provide job opportunities with higher remuneration that could improve the employee's living standard (Porter, 1990a, pp. 36).

All this while, Singapore is a refuge country for the wealthy individuals in the region who rely on the excellent healthcare system. Healthcare cost has increased with the patronage of these affluent individuals who set foot and enclave the shore. The private expenditure on healthcare has come up to a hefty 63.7% of Singapore's total healthcare costs with government subsidise of only 37.3% as reported by World Health Organisation in 2010 (Tan, 2012a).

The annual expenditure on healthcare by the government is 3.4% of GDP, which is one of the lowest in the world as compared to US, Denmark, UK, and Norway ranging from 16%, 9.9%, 9% and 8.6% of GDP respectively (Sng and Chia, 2011, pp. 83). The Singapore government has played a relative small role in healthcare financing. The medical inflation

brought forth by catastrophic expenditure has put many at risk of wiping out their entire saving and bankrupted by their own illness.

The low and middle income group's livelihood have been threatened with escalating living cost which has quietly eroded their life savings, driving many into poverty. With the increased life expectancy, this has destitute as they have no bountiful saving to see through their retirement.

The Health Minister of Singapore, Khaw Boon Wan has further exacerbated the social tension by suggesting the elderly to retire in a nursing home in Malaysia, where costs are cheaper (Khalid, 2009). This sparked criticisms from opposition minister, Sylvia Lim, for a bad indication on the affordability of Singapore healthcare (Khalid, 2009).

Tay Ping Hui, a renowned local artiste and a volunteered member from the ruling party, People's Action Party (PAP) has cautioned the potential dangers of having an uncontrolled and unabated influx of immigrants as equivalent to using steroids to gain great muscles which will overload and damage the internal systems, causing it to be irreversible (Temasek Times, 2012a).

Former French President Nicolas Sarkozy has warned the potential difficulty in integrating the foreigners with the local community (Temasek Times, 2012a). Baumol, Litan and Shramm (2007) has highlighted on advocating higher immigration will be detrimental to the economic integration, causing ostensible social inequality and poverty eradication.

The foreign influx may have brought forth some short term tangible economic benefits but resulted in more disastrous social problems. It has altered Singapore's demographics to beyond recognition and diluting the national identity. Furthermore, Singapore is the only nation in the world who does not impose tax levy on their permanent residents who sell their public housing after they leave the country for good.

The social problems have become incongruous with the risk of disjuncture and difficulty to assimilate in cohesion. Many local native citizens have vindicated the government for these social issues as they become equivocal of their future. On 16 February 2013, about 5000 of

the local native citizen has staged the biggest protest for their simmering discontents over the immigration policy. This was the boldest defiance in the country. Hence, the government needs to calibrate the immigration policy to a lower rate.

4.6. Structural Changes in Singapore

With global intense competitions and increased operating costs, it has hollowed Singapore out of low cost labour intensive industries towards high value-added knowledge based and services industries based on differentiation and innovation. The shift was not easy for Singapore who has relied on low cost labour intensive industries all this while.

Furthermore, the high value-added industries require sophisticated technology, large investment and quality skillsets which Singapore lacks. Quality skill required time to develop. Hence, foreign talents with relevant experience need to be imported to impart their knowledge to the locals to cultivate their skillsets.

As a result, there is a major structural change from low cost labour intensive employment to high value-added knowledge based and service industry employment. Employment in Electronic, Electrical, Machinery, Equipment and Medical and Precision Instruments manufacturing has declined from 184,400 jobs in 2001 to 95,500 jobs in 2011 (Figure 10).

However, the employment in service industries has grown 58%, from 1,438,800 in 2001 to 2,278,800 in 2011 (Figure 10). Another high growth industries are Petroleum, Chemical and Pharmaceutical manufacturing with employment increased from 22,000 in 2001 to 52,800 in 2011 (Figure 10). In financial sector, the employment has grown from 101,900 in 2001 to 176,700 in 2011 (Figure 10).

One would not expect Singapore to shift from low cost labour intensive industries to high value-added knowledge based and services industries as low cost labour intensive industries such as electronic manufacturing was all along the key driver for Singapore growth. However, this radical change is necessary to ensure that Singapore continues to stay resilient, sustainable and grow.

Figure 10: Employment by Industry, 2001 – 2011

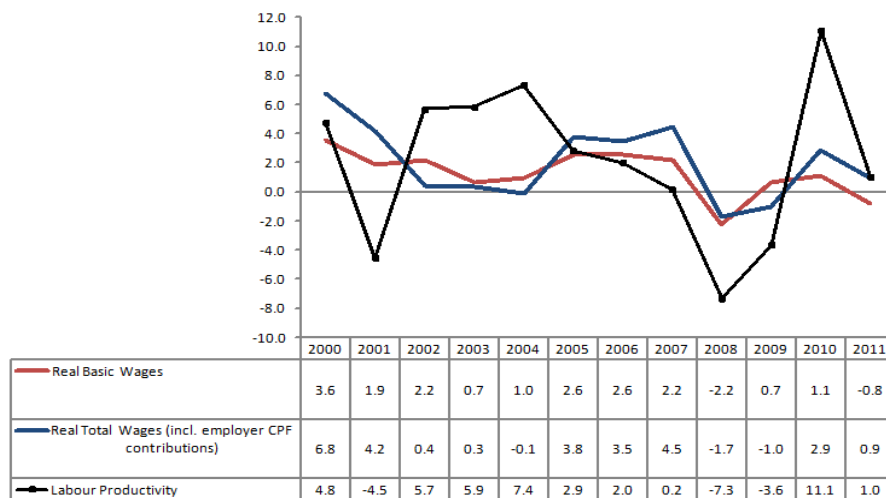
										In Thousands				
SSIC 2005	Industry	2001	2002	2003	2004	2005	2006	2007	SSIC 2010	Industry	2008	2009	2010	2011
	TOTAL	2,171.0	2,148.1	2,135.2	2,206.6	2,319.9	2,495.9	2,730.8		TOTAL	2,952.4	2,990.0	3,105.9	3,228.5
C15-36	MANUFACTURING	430.1	424.7	419.7	446.7	475.9	517.5	566.8	C10-32	MANUFACTURING	564.7	520.9	520.1	523.5
C15-17	Food, Beverages and Tobacco	23.0	24.1	24.4	25.3	27.9	30.1	33.3	C10-12	Food, Beverages and Tobacco	33.1	34.5	35.8	36.4
C22-23	Paper Products and Printing	25.6	25.0	24.7	25.1	26.1	26.8	26.9	C17-18,22	Paper / Rubber / Plastic Products and Printing	44.2	40.6	40.7	40.2
C24-26	Petroleum, Chemical and Pharmaceutical Products	22.0	22.8	27.0	28.2	29.8	33.3	38.9	C19-21	Petroleum, Chemical and Pharmaceutical Products	51.6	58.0	54.2	52.8
C27	Rubber and Plastic Products	18.4	17.3	18.2	18.5	17.6	17.7	18.2						
C30	Fabricated Metal Products	25.5	24.6	24.7	25.7	27.2	29.2	31.1	C25,28	Fabricated Metal Products, Machinery and Equipment	108.9	98.9	102.4	106.5
C31	Machinery and Equipment	52.4	52.3	53.0	58.4	63.6	70.0	74.4						
C32	Electrical Products	11.5	10.3	9.9	9.7	9.7	10.5	10.8						
C33	Electronic Products	105.1	100.1	97.3	105.1	107.8	111.1	110.5	C28	Electronic, Computer and Optical Products	105.6	95.0	100.2	95.5
C34	Medical and Precision Instruments	15.4	15.7	14.7	15.9	16.5	15.2	15.6						
C35	Transport Equipment	78.9	83.2	78.0	86.3	100.5	122.3	152.4	C29-30	Transport Equipment	160.8	135.6	126.4	132.1
C18-21, C28, C29, C36	Other Manufacturing Industries	52.2	49.1	47.9	48.5	49.2	51.3	54.7	C13-18,23-24,27,31-32	Other Manufacturing Industries	60.5	55.3	60.4	60.1
F45	CONSTRUCTION	287.2	252.9	235.4	226.3	235.0	255.5	295.9	F41-43	CONSTRUCTION	353.4	377.3	380.7	402.7
G-V	SERVICES	1,438.8	1,455.3	1,465.2	1,520.1	1,593.8	1,706.5	1,849.6	G-U	SERVICES	2,011.6	2,070.2	2,182.7	2,278.8
G50-51	WHOLESALE AND RETAIL TRADE	325.2	325.1	322.8	333.8	346.4	365.0	384.9	G46-47	WHOLESALE AND RETAIL TRADE	420.4	426.1	440.6	456.5
G50	Wholesale Trade	190.3	189.9	187.9	196.2	203.8	219.1	237.2	G46	Wholesale Trade	280.2	283.4	295.6	304.4
G51	Retail Trade	134.9	135.2	134.9	137.6	142.7	145.9	147.6	G47	Retail Trade	140.2	142.8	145.0	152.1
H52-56	TRANSPORT AND STORAGE	161.0	164.5	163.9	166.6	173.0	179.0	184.0	H49-53	TRANSPORTATION AND STORAGE	198.6	196.2	202.4	209.1
H52, H552	Land Transport and Supporting Services	64.2	67.0	65.1	66.1	67.6	69.2	72.1	H49, 5221	Land Transport and Supporting Services	79.1	79.6	81.2	82.5
H53, H553	Water Transport and Supporting Services	32.6	32.8	33.5	34.0	36.7	38.2	43.6	H50, 5222, 5225	Water Transport and Supporting Services	45.6	44.4	45.0	46.3
H54, H554	Air Transport and Supporting Services	29.8	30.0	28.8	28.2	27.6	28.5	23.8	H51, 5223	Air Transport and Supporting Services	22.2	22.2	23.7	25.5
H551, H555, H559, H56	Other Transport and Storage Services	34.4	34.7	36.4	38.2	41.2	43.1	44.5	H521, 5224, 5226, 53	Other Transportation and Storage Services	51.7	50.0	52.6	54.8
J58	HOTELS AND RESTAURANTS	118.1	121.4	123.3	127.5	133.2	145.8	162.1	J55-56	ACCOMMODATION AND FOOD SERVICES	184.0	187.2	199.9	209.1
J581	Hotels	27.5	26.4	25.3	25.1	25.8	26.3	26.9	I55	Accommodation	29.1	28.7	32.3	33.7
J582	Restaurants	90.6	95.0	98.0	102.3	107.3	119.5	135.1	I56	Food and Beverage Services	154.8	158.6	167.6	175.4
K60-63	INFORMATION AND COMMUNICATIONS	64.8	62.7	60.2	63.0	66.6	73.1	79.4	J58-63	INFORMATION AND COMMUNICATIONS	84.8	87.7	96.5	104.5
K60-61	Broadcasting and Publishing	14.9	14.0	12.5	13.2	13.4	13.9	14.5	J58-61	Telecommunications, Broadcasting and Publishing	33.8	34.6	36.5	37.7
K62	Telecommunications	18.8	18.6	18.1	18.0	17.5	17.7	18.2						
K63	IT and Other Information Services	31.1	30.0	29.5	31.8	35.7	41.5	46.7	J62-63	IT and Other Information Services	51.0	53.1	60.0	66.8
L65-66	FINANCIAL SERVICES	101.9	99.9	102.1	108.2	116.0	127.3	145.1	K64-66	FINANCIAL AND INSURANCE SERVICES	152.1	154.4	165.7	176.7
L65	Financial Institutions	85.3	82.3	83.8	88.6	94.8	104.4	125.3	K64 & 66 (excl. 662)	Financial Services	125.8	127.2	137.6	148.0
L66	Insurance	16.6	17.6	18.3	19.6	21.2	22.8	23.8	K65 & 662	Insurance Services	26.3	27.1	28.1	28.6
M70-71	REAL ESTATE AND LEASING SERVICES	46.5	46.9	46.1	45.9	48.4	52.9	61.4	L68	REAL ESTATE SERVICES	75.3	78.3	80.4	83.6
N73-76	PROFESSIONAL SERVICES	106.1	102.4	102.3	106.9	114.6	128.4	150.5	M69-75	PROFESSIONAL SERVICES	170.2	174.6	187.7	198.5
N73	Legal, Accounting and Management Services	56.6	55.4	56.0	58.9	62.3	68.1	78.0	M69-70	Legal, Accounting and Management Services	80.6	82.3	91.1	95.7
N74	Architectural and Engineering Services	29.8	27.9	26.8	27.2	29.1	33.9	40.3	M71	Architectural and Engineering Services	46.8	52.2	53.6	56.8
N75-76	Other Professional Services	19.8	19.1	19.5	20.9	23.1	26.3	32.2	M72-75	Other Professional Services	39.9	40.2	43.0	45.9
O78	ADMINISTRATIVE AND SUPPORT SERVICES	66.6	71.5	76.4	87.3	97.4	113.2	124.1	N77-82	ADMINISTRATIVE AND SUPPORT SERVICES	142.7	150.3	160.0	167.2
									N80	Security and Investigation	29.3	31.8	32.0	33.9
									N81	Cleaning and Landscaping	35.6	37.9	40.1	40.4
									N77-79,82	Other Administrative and Support Services	77.8	80.6	87.9	92.9
P80-V99	COMMUNITY, SOCIAL AND PERSONAL SERVICES	448.6	461.0	468.1	480.8	498.3	522.0	554.1	O-U	COMMUNITY, SOCIAL AND PERSONAL SERVICES	583.5	615.4	649.5	673.8
P80, T94	Education and Public Administration	152.3	156.5	160.8	162.1	166.3	172.3	178.6	O84-P85	Public Administration and Education	182.4	194.3	201.5	209.0
Q85-86	Health and Social Services	58.4	60.4	62.1	64.0	65.4	68.4	74.0	Q86-88	Health and Social Services	83.4	88.5	95.9	103.4
R,S,U,V	Other Community, Social and Personal Services	237.9	244.1	245.2	254.8	266.7	281.3	301.6	R90-93	Arts, Entertainment and Recreation	33.5	40.5	52.8	56.2
A,B,D,E	Others	14.9	15.3	14.9	13.5	15.2	16.4	18.5	S,T,U	Other Community, Social and Personal Services	284.2	292.1	299.2	305.1
									A,B,D,E,V	Others	22.8	21.7	22.4	23.5

Source: Singapore Yearbook of Manpower Statistics, 2012

4.7. Declining Productivity rate

Although the nation has proliferated tremendously in population, the increase did not boost the productivity rate. Heavy reliant on cheaper foreign resources due to increased cost has caused many employers not to upgrade their business operation, resulting in reduced productivity. The productivity rate has declined to 7.3% in 2008 as illustrated in Figure 11.

Figure 11: Labour Productivity in Singapore from 2000 – 2011



Source: Department of Statistics, Ministry of Trade and Industry Singapore

Although the productivity has managed to recover in 2010 and 2011 due to government heavy subsidies on job re-training programmes, the labour productivity has further contracted by 2.6% in 2012 (Ministry of Manpower, 2012; Low, 2013a).

The productivity and efficiency rate has even stumbled from the 2nd position to 14th position in 2012 (Low, 2012a). The reduced productivity was partly due to the rising labour cost by 8.7% which has caused the employers to maintain a leaner operation through cut back in staff re-training or operation upgrade (Low, 2013a).

This concluded that without the government's support, the productivity will not be sustainable. Many economists have cautioned the potential challenges Singapore will face in shifting toward higher productivity led economy (Low, 2013a).

4.8. Threats of Firms Departure and Declining Competitiveness

The escalating operating costs has make Singapore vulnerable to threat of firms relocating to other emerging economies. If Singapore continues to compete using low cost labour intensive goods, it will loses competitive advantage to the regional competitors who are now hot on Singapore's heel with lower cost of operation.

It has become detrimental to the nation's overall competitiveness with Singapore slipping into 4th position on the recent global competitiveness ranking, compiled by Swiss business school IMD (Teh, 2012).

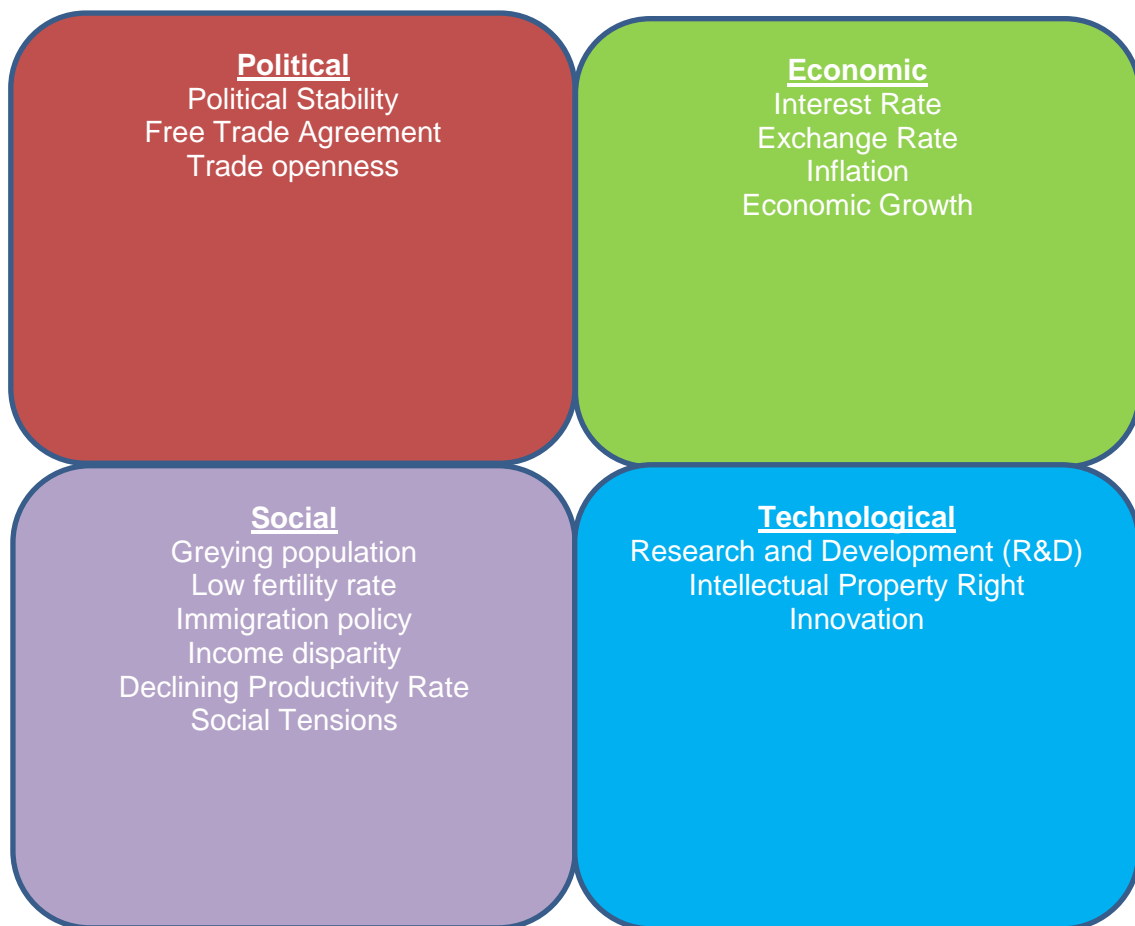
As a small nation with limited resources surrounded by other larger neighbours with bountiful and cheaper resources, Singapore is actually at competitive disadvantage. Hence, Singapore needs to differentiate itself from these neighbours through reforms and address the current challenges with appropriate counter-cyclical measures to gain sustainable economic growth.

5. Analysing the Singapore environment

5.1. PEST Analysis

The PEST Analysis is a framework that can be used to examine the factors affecting Singapore environment from the aspect of political, economic, social and technological. A concise summary of findings is illustrated in Figure 12.

Figure 12: PEST Analysis



Source: Author's own definition

5.1.1. Political

The political stability of Singapore is attributed to the strong national defence, sound macroeconomic and fiscal policies. As Singapore is the most prolific country who actively pursued several Free trade agreements regionally, this has improved bilateral ties.

The Free trade agreements have enable Singapore to receive tariff concessions which lower the cost of exports and gain competitive advantages. Due to the strong bilateral ties, Singapore could engage the US navy to protect the shore.

5.1.2. Economic

Interest rate, exchange rate, inflation and economic growth are the factors that affect the economy and impact on the way business operates and make decisions.

With Singapore banks offering low interest rates, this enable firm's borrowing to finance their business. As for exchange rates, it is dictated by Monetary Authority of Singapore (MAS) who frequently used it to move within an undisclosed policy band to manage the economy.

To combat inflation, the government has manipulated the exchange rate by strengthening the currency so that the imported daily necessity will not be too expensive.

However, the high cost of living cannot be avoided with the massive cash inflow from foreign firms and wealthy immigrants which has caused the inflation and widening the income gap. The wealthy individuals have invested in the property with some willing to pay a higher price for properties located in the prominent locations, resulting in price hike.

This trend carries a potential risk of asset bubbles, market crash and economy falling into doldrums. To combat Asset bubble, the government has introduced several rounds of countermeasures to deter price hike and speculation. However, this will slow down the economy with reduced property investment.

Hence, the government need to decide which objectives to pursue first. To live with the scorching inflation and has good economic growth or combat inflation but with slow economic growth.

5.1.3. Social

Singapore's first cohort of baby boomers after post World War II has turned 65 years old with almost a million people entering their silver year (National Population and Talent Division, 2012, pp. 7). Increasingly retired elderly will outnumber the younger generation. As a result, Singapore total fertility rate (TPR) was at a low rate of 6.3 in 2011, and is forecasted may shrink to fertility rate of 2.1 by 2030 (National Population and Talent Division, 2012, pp. 15).

Desperate to address the greying population, the government's lax immigration policy has opened a floodgate to massive foreign influx for population renewal. This catalyst has created a huge income disparity and unequal wealth distribution.

The local native citizens have to scramble to compete with these foreigners for jobs, housing, reputed schools, healthcare and public transportation. If left unchecked, these social tensions could stretch to breaking point.

5.1.4. Technological

To advance to a Knowledge based economy, the government has encouraged the firms to engage in Research and Development (R&D). R&D is an essential factor input as mentioned in Porter's Diamond model which will spur creativity, innovation and productivity (Porter, 2008, pp. 227).

The government has relaxed the regulation for new business setup, intellectual property rights and provides attractive incentives to facilitate innovation and research. These initiatives have lured foreign firm's entry with their technology and R&D to Singapore. The government also has their R&D centre - Agency for Science, Technology and Research (A*STAR), which is the national research body to oversee public sector in R&D.

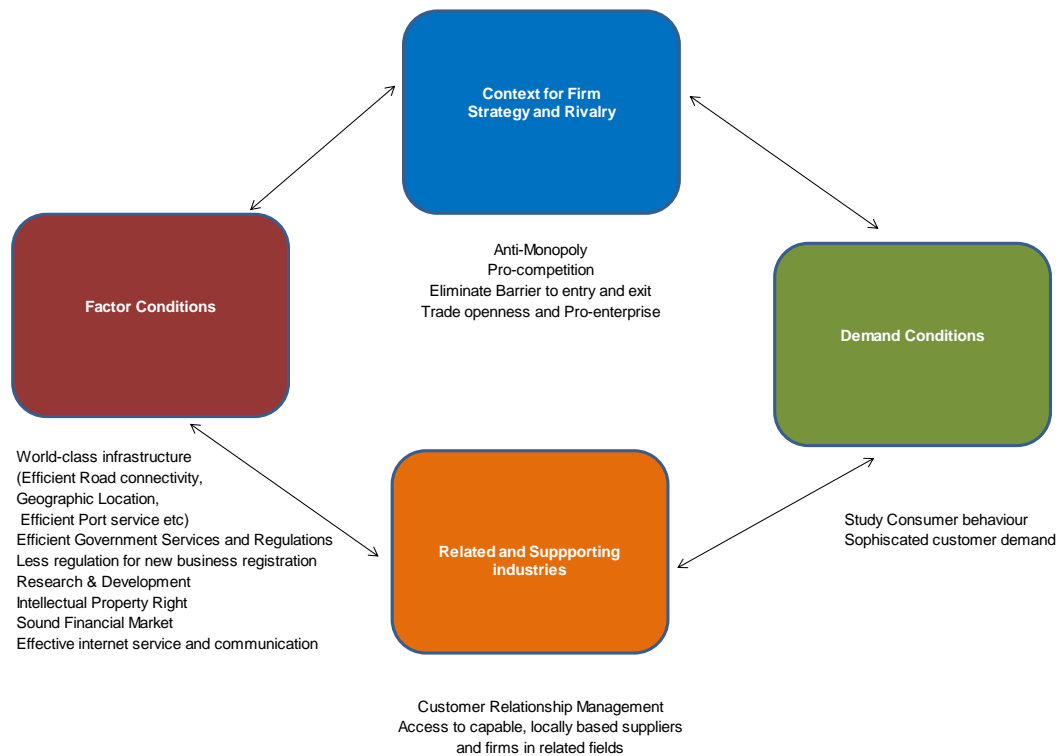
Hence, Singapore was able to build a momentum to deploy expertise to cultivate innovation that leads to technology intensive exports such as pharmaceutical products to capture economic benefits.

5.2. Porter's Diamond Model

Porter (2008) has highlighted that Porter's Diamond models can be used to assess if there is market efficiency and effective resource allocation to exploit profit gain and economic growth.

The Singapore environment is to analyse from the Porter's Diamond model aspects of factor conditions, demand conditions, context for strategy and rivalry and supporting and related industries. A concise summary of findings is illustrated in Figure 13.

Figure 13: Porter's Diamond Model



Source: Michael Porter's *Competitive Advantage of the Nation*

5.2.1. Factor Conditions

In Factor conditions, Singapore's diversification of expertise which comprises of the following key array of infrastructures is analysed.

- Logistics infrastructure
- Administrative infrastructure
- Innovation infrastructure
- Capital market infrastructure
- Communication infrastructure

5.2.1.1. Logistics infrastructure

Singapore has a strong foothold in logistics infrastructure. Concomitant with the growing demand and burgeoning world trade, Singapore's free trade policy and geographical proximity of seaport served as a crossroad. The overwhelming export has resulted in Singapore being one of the busiest seaports in the world as illustrated in Figure 14. The efficient road infrastructure enables smooth connectivity between the warehouses and ports.

Figure 14: Shipping Statistics

Container Ports			Cargo Airports		
Rank 2008 (2007)	Port and Country	TEUs	Rank 2008	Port and Country	Tons
1 (1)	Singapore	29,918,200	1	Memphis, USA	3,840,575
2 (2)	Shanghai, China	27,980,000	2	Hong Kong	3,772,673
3 (3)	Hong Kong	24,248,000	3	Anchorage, USA	2,826,499
4 (4)	Shenzhen, China	21,413,888	4	Seoul, Korea	2,555,582
5 (5)	Busan, Korea	13,425,000	5	Shanghai, China	2,494,808
6 (7)	Dubai, UAE	11,827,299	6	Paris, CDG, France	2,297,896
7 (11)	Ningbo, China	11,266,000	7	Tokyo, Japan	2,252,654
8 (12)	Guangzhou, China	11,001,300	8	Frankfurt, Germany	2,169,025
9 (6)	Rotterdam, Netherlands	10,800,000	9	Louisville, USA	2,169,025
10 (10)	Qingdao, China	10,320,000	10	Miami, USA	2,078,290
11 (9)	Hamburg, Germany	9,700,000	11	Singapore	1,922,982
12 (8)	Kaoshiung, Taiwan	9,676,554	12	Los Angeles, USA	1,877,876
13 (14)	Antwerp, Netherlands	8,663,736	13	Dubai, UAE	1,668,506
14 (17)	Tianjin, China	8,500,000	14	Amsterdam, Netherlands	1,651,385
15 (16)	Port Kelang, Malaysia	7,970,000	15	Taipei, Taiwan	1,605,681
16 (13)	Los Angeles, USA	7,849,985	16	New York, USA	1,595,577
17 (15)	Long Beach, USA	6,487,816	17	Chicago, USA	1,524,419
18 (18)	Tanjung Pelepas, Malaysia	5,600,000	18	London, UK	1,395,909
19 (20)	Bremen/Bremerhaven	5,500,709	19	Bangkok, Thailand	1,220,001
20 (19)	New York/New Jersey	5,25,053	20	Beijing, China	1,191,048

Source: *Shipping Statistics, Air Cargo World*

According to the World Bank report, the Logistics Performance Index (LPI), Singapore logistics-related administrative has achieved high efficiency with strong presence of the related supporting industries (Ketels, Lal and Neo, 2009, pp. 62). The close interrelations between related and supporting industries such as Port authority, shipping companies and customers in the value chain has further illustrated the importance of Porter's Diamond model which will produce greater value, close co-ordination, timely shipment and delivery

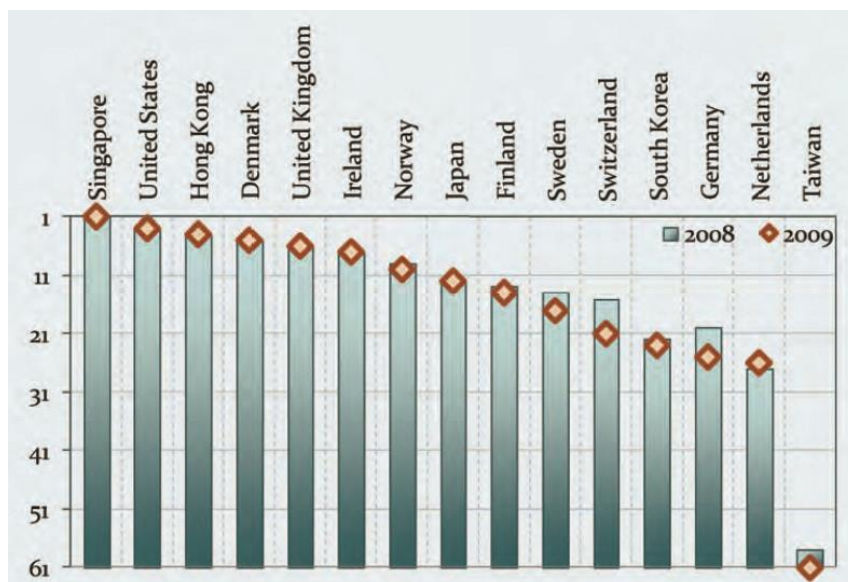
(Porter, 2008, pp. 229). This competitive advantage will lead to good economic performance and significant global market share in the logistics arena.

5.2.1.2. Administrative infrastructure

With Singapore having efficient government administrative services through computerised online e-government web portal service, the residents can gain access to these web portals to pay utility bills, renew passports, apply for domestic worker permit, declare and pay income tax and even make hospital visit appointments etc.

The business environment is friendly with fewer regulations required to register for a new business, making Singapore the most friendly business environment, out of 180 countries as shown in Figure 15.

Figure 15: Ease of doing business rank 2008 – 2009



Source: *Doing Business 2009*, jointly published by the World Bank and IFC

5.2.1.3. Innovation infrastructure

The government has invested 35% of GDP in R&D and intellectual property right to foster innovation. This is a much higher investment as compared to Organisation for Economic Co-operation (OECD) investment in innovation (Ketels, Lal and Neo, 2009, pp. 68). With more foreign firms setting up their R&D centre in Singapore due to fewer regulations and trade openness, new R&D centres will create more jobs to boost employment rates.

With the government encouraging Small medium enterprise (SME) and Multi-national Corporation (MNC) to work together to foster innovation, this successful synergy will materialise as they would be able to sell their invention for profit gain.

5.2.1.4. Capital Market infrastructure

Singapore has performed well in capital markets. However, Singapore is ranked in lower position for financial market sophistication due to prudent financial systems. This is attributed to sovereign wealth funds, leading to less private sector activities.

With the government's effort in driving the economy through capital market investment using Government Investment Corporation (GIC), this will weather off and reduce the impact of the recent crisis on Singapore.

In the recent financial centre ranking, Singapore was ranked 4th position, ahead of US for competitiveness, efficiency and excellence as highlighted in Figure 16.

Figure 16: Financial Sector Development Report, 2009

Country	Stock Market Capitalization	Stock Market Value Traded	Bank Deposit
	% of GDP	% of GDP (2007)	% of GDP (2007)
Hong Kong	500.5	443.5	267.9
Switzerland	301.5	427.8	135.9
United Kingdom	141.3	378.4	141.8
Singapore	196.2	238.1	107.8
United States	143.6	308.5	73.8
Netherlands	115.8	239.1	115.8
Japan	105.7	148.4	186.1
Sweden	134.3	217.9	49.2
Finland	129.6	220.8	49.6
South Korea	101.5	203.5	63.4
Germany	57.0	102	100.7
Norway	84.0	123.5	50.6
Denmark	83.0	78.6	62.3
Ireland	60.8	53.5	93.1

Source: *The World Economic Forum*.

If Singapore continues this momentum, Singapore is predicted to dethrone Switzerland in 2015 as the world's top centre for managing international funds (Reuters, 2013).

5.2.1.5. Communication infrastructure

The final dimension of Factors condition is Communication Infrastructure. Singapore was ranked in the 7th position globally in 2009 in this dimension as shown in Figure 17.

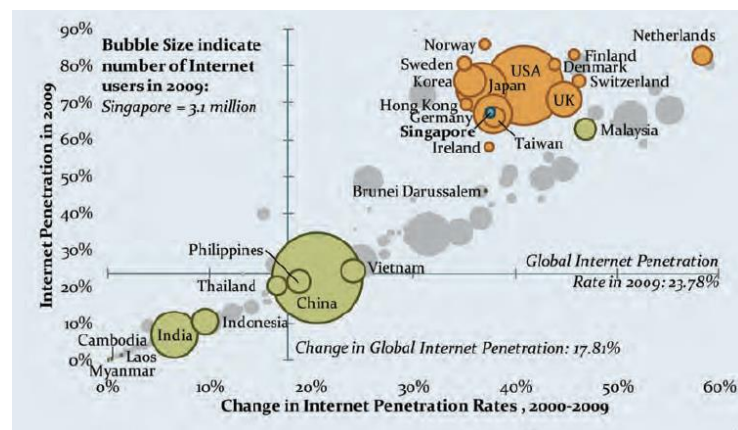
Figure 17: Communications Infrastructure indicators

Indicator	Score		Rank		
	2009	Full data set in 2009	Constructed 2001 Sample 2009	vs 2008	vs 2001
Communications Infrastructure	0.38	7	72	-3	1
Internet access in schools	6.2	5	4	3	-2
Mobile cellular subscribers per 100 inhabitants (hard data)	133.54	8	5	-3	3
Personal computers per 100 inhabitant (hard data)	76.87	7	7	-	-1
Quality of telephone/fax infrastructure	6.77	12	12	-4	-3
Internet users per 100 inhabitants (hard data)	68	17	15	-2	-4
Main (Fixed) telephone lines per 100 inhabitants (hard data)	41.97	28	23	-5	-6

Source: *Unpublished data from the New Global Competitiveness Index (2009), Professor Michael Porter and the Institute of Strategy and Competitiveness*

Singapore has done reasonably better than Scandinavian countries in this aspect as shown in Figure 18. This is attributed to the government's effort of turning the city state into a wireless internet platform with internet access in the public places such as shopping malls, restaurants and libraries.

Figure 18: Global Internet penetration and use, 2009



Source: World Development Report by Miniwatts Marketing Group and World Bank

5.2.2. Context for Rivalry and Strategy

The context for Rivalry and Strategy will revealed the challenges the firms might face in the market. The way the business operates, corporate structure, behaviour and the government's role in the economy will affect the rivalry, strategy and competitiveness in the economy.

Trade openness, foreign direct investment, licensing rules and antitrust policy has played important roles in cultivating local rivalry which will influence the business environment (Porter, 2008, pp. 228). The rivalry may intensify competition but improve the attractiveness of the firms or nation as they strive to be competitive.

Singapore was ranked very high in this aspect in 2009 due to the trade liberalisation, free trade policy, flexible labour policy, well regulated capital market and intellectual property rights as demonstrated in Figure 19.

Figure 19: Context for Rivalry and Strategy

Indicator	Score	Ranks			
	2009	Full Data set in 2009	Constructed 2001 Sample		
			2009	vs 2008	vs 2001
Context for Strategy and Rivalry	2.29				
Impact of rule on FDI	6.61	1	1	-	-
Cooperation in labour-employer relations	6.35	1	1	1	-
Pay and productivity	5.64	1	1	-	-
Low rigidity of employment	Nil	1	1	-	-
Low tariff rate	Nil	1	1	-	-
Investor protection	9.3	2	2	-	-
Intellectual property protection	6.16	2	2	1	13
Restrictions of capital inflows/outflows	6.1	2	2	4	3
FDI role in technology transfer	6.07	2	2	1	-1
Regulatory quality	1.92	2	2	1	-
Prevalence of foreign ownership	6.33	3	3	-1	1
Absence of trade barriers	6.29	4	3	-2	2
Low distortive effect of taxes and subsidies on competition	5.9	4	3	-2	1
Low impact of taxation on incentives to work and invest	5.62	4	2	-2	-2
Effectiveness of antitrust policy	5.52	5	5	12	16
Strength of auditing and accounting standards	6.1	6	6	5	11
Efficacy of corporate boards	5.54	6	6	1	12
Quality of competition in the ISP sector	5.59	10	10	3	8
Low market dominance by business groups	5.19	10	9	3	5
Intensity of local competition	5.65	18	16	7	13
Low market disruption from state-owned enterprises	4.42	27	22	10	-10

Source: Unpublished data from the New Global Competitiveness Index (2009), Professor Michael Porter and the Institute of Strategy and Competitiveness

With Singapore being pro-enterprise to progress to an advance economy, vigorous local rivalry is created with Competition law stamping out any monopoly (Porter, 2008, pp. 228). This will enhanced the consumer's experience with a wide array of choices. Promoting competitions will lead to economic growth, efficiency, increased productivity, innovation which will strengthen the nation's competitiveness.

5.2.3. Demand Conditions

The demand over the years has changed. As a result, firms are studying consumer's behaviour to design their products and services to cater to new demand. Singapore was ranked 1st globally in demand sophistication in 2009 as shown in Figure 20.

Figure 20: Demand Condition indicator

Indicator	Score	Full Data set in 2009	Rank		
	2009		Constructed 2009	Constructed 2001 vs 2008	Sample vs 2001
Demand Conditions	1.99	1	1	-	1
Government procurement of advance technology products	5.51	1	1	1	-
Laws relating to ICT	5.96	1	1	-	2
Government success in ICT promotion	6.25	1	1	1	-
Buyer sophistication	4.73	6	5	1	9
Stringency of environmental regulations	5.73	12	11	1	1
Presence of demanding regulatory standards	5.69	16	15	-2	-

Source: Unpublished data from the New Global Competitiveness Index (2009), Professor Michael Porter and the Institute of Strategy and Competitiveness

5.2.4. Supporting and Related Industries

The close interrelationship with the government policies and the 'Win Win' customers and vendors relationships in a value chain will help the firms to achieve sustainability and profit.

5.3. SWOT Analysis

SWOT analysis is a structured planning framework which can be used to analyse and evaluate the Strengths, Weaknesses, Opportunities, and Threats in a business or economy.

This framework will identify the internal and external factors to determine whether it is favourable or unfavourable to achieve the business objectives and competitive advantages.

The following factors will be analysed as follows:-

- Strengths
- Weaknesses:
- Opportunities
- Threats

Further analysis is explained in detail below and summaries in Figure 21.

Figure 21: SWOT Analysis

<p style="text-align: center;"><u>Strength</u></p> <p>Strategic location Free Trade Policy/Trade Openness Free Trade agreements with Tariff concession Strong, Stable Macroeconomic and Sound Policy High Foreign Reserve Capital accumulation Efficient Healthcare Reputed Education systems World Best Airline Diversified Trade hubs (Tourism, Logistics, Shipping, Maritime, Sports, Life Science, Biomedical, Pharmaceutical, Oil Refinery, Rig, Repair, Financial, manufacturing)</p>	<p style="text-align: center;"><u>Opportunity</u></p> <p>Regional Role model for excellent infrastructure Close regional integration Early mover advantage</p>
<p style="text-align: center;"><u>Weakness</u></p> <p>Lack of natural resources Low cost leadership (Cheap foreign labour) Limited Creativity and innovation</p>	<p style="text-align: center;"><u>Threats</u></p> <p>Easily replace in leadership location due to high labour cost Expensive lands and building rentals, lease</p>

Source: Author's own ideas and suggestions

5.3.1. Strength

Singapore's centralised strategic location is a strength as it serves as a cross junction for inter-countries shipment. Singapore's growth has flourished due to trade openness, free trade policy and foreign direct investments.

With Singapore's constant restructuring to remain competitive, it is a key strength. Furthermore, Singapore's aspiration to be a diversified hub for Tourism, Education, Healthcare, Life sciences, Biomedical, Pharmaceutical, Logistics, Shipping, Maritime, Aviation, Oil refinery, rig and repair, manufacturing, has created many business opportunities to ignite growth.

5.3.2. Weakness

Unlike these regional neighbours, Singapore does not have any natural resources to rely on. With the huge regional emerging markets in China and India and aggressive technological competition from Korea and Taiwan, it is necessary for Singapore to engage differentiation to build competitive advantages.

When Singapore pursued low cost strategy using low labour intensive manufacturing and cheap foreign labour all this while, Singapore was entrenched in the price war competition with the regional competitors.

To keep the cost down, the employers do not upgrade their business operation or enhance their employee's learning, leading to declining productivity. Porter (2008) has highlighted the importance of upgrading the business infrastructure to achieve efficiency. Another weakness is the curb nature of Singapore with government playing a centralised role in the market space, resulting in little creativity or innovation from the local entrepreneurs.

5.3.3. Opportunity

The regional emerging market is developing rapidly. With Singapore's competency and excellence in healthcare, education, township planning, roads, railway and infrastructure development, Singapore can provide consultancy to these neighbours and at the same time reap early mover advantage and profit by investing in these emerging economies.

5.3.4. Threats

The regional neighbours are growing aggressively with lower cost of operations that has threatened Singapore's competitiveness in low cost labour intensive industries. Instead, Singapore should be a role model to guide these regional neighbours in infrastructure improvement and nation building.

However, these regional emerging economies often viewed Singapore as their competitor rather than 'mentor'. Hence, this will reduce the cross border integration, resulting in regional rivalry which Singapore should avoid being caught up with.

5.4. Resource Based view

Resource based view can analyse the firms or economy's strengths and weakness. Resources are assets controlled by the firms or economy. Assets, capabilities, competencies, processes, information, knowledge are resources which can be used along with the firm's strategies to achieve efficiency and effectiveness.

When resources are costly to imitate, these resources are classified as resources immobility. These resources will become the strength and competency for the firms or economy to exploit opportunities, neutralise threats and gain competitive advantages. Competitive advantages often rely on the firms or economy's managerial and organisational process to shape the asset's position.

With scarcity of natural resources, Singapore will need to leverage on strategic macroeconomic and fiscal policies, human capital and technology to achieve competency.

Important key resources are the competencies for Singapore

- Logistic hub
- Education
- Manufacturing
- Biomedical
- Healthcare
- Financial services
- Township planning

5.4.1. Logistics hub

Situated at the geographical location which serves as a crossroad for international shipping routes for major shipment, it is a natural entry for cargo to be shipped through the Straits of Malacca. The tariff concession has encouraged vessels to call at Singapore's port which intensified cross border trade.

The advanced computerised shipping infrastructure has solved any immediate operating problems and reduces constraints on any growth of shipment traffic. This leads to faster turnaround time, well co-ordinate allocation of vessel berthing, warehouse location allocation, stowing of containers and allocation of trucking gates.

Another excellent resource competitive advantage is Singapore Changi Airport which is a regional aviation hub who served more than 80 airlines. This award winning national carrier, Singapore Airlines (SIA) is an international acclaim five star airline who has honed a top-notch image for enhanced flying experience, myriad services, comprehensive inflight entertainment, innovation and efficient air cargo transportation. This national carrier has evoked the nation's pride for earned trusted and global recognition.

Due to efficient seaport, airport and road infrastructures, cargo can be shipped within a shorter timeframe. This relinquished Singapore position as a regional Logistic hub.

5.4.2. Education

With the government favouring meritocracy and fostering quality education, it will leads to more skilful, quality workers and increased productivity. Over the years, Singapore has made significant efforts to develop the country into an international education hub.

Education syllabus are reviewed and improved on frequently to equip the students with a wide array of the latest knowledge. Learning has been comprehensive from learning languages to Literature, Geography, History, Mathematics, information Technology to Economics etc. These subjects are the fundamental which cultivate the student's knowledge.

In Tertiary education such as Polytechnic education, the students are send for on-site job attachment in their final year to gain industry jobs experience. This exposure will leads to better understanding of the job nature to gain competency.

As part of the learning effort, the government has cultivated the education system to be a one-stop information and service centre and "Arts and Learning hub". This attracted many reputable universities, such as INSEAD, Chicago Booth, University of Las Vegas, Nevada and New York University's Tisch School of Arts, to set up their campuses in Singapore. The partnerships with local universities, National University of Singapore (NUS), Duke University School of Medical, Adelaide University and Australian National University have combined the universities' excellence to cultivate cross fertilisation of ideas, information exchange which improve learning experience.

With the English-speaking learning environment, combines with the best of Asian and Western education systems, high standards and reputation for public order and safety, Singapore has become an ideal destination for foreign students to further their studies. The comprehensive education system is a good resource advantage of Singapore.

5.4.3. Manufacturing

With Singapore's heavily reliant on manufacturing as one of the key growth drivers, manufacturing has accounted 26.7% of Singapore's GDP in 2010 (Michigan State University). This constitutes more than half of the export (Michigan State University).

Since independence in 1965, Singapore was confronted with limited resources and scale. However, the government was not intimidated by the weakness and had adopted a pro-business, pro-foreign investment, industrialisation and export-oriented economic policy to stimulate growth. With cheaper operating cost and wages at that time, it has attracted several foreign firms to set up their manufacturing base in Singapore.

However, over the years, the high operating cost and wages have caused many firms to relocate to lower cost economies. This resulted in Electronic manufacturing export declined from S\$78,160.7 million in 2006 before the recent financial crisis to S\$ 56,135 million in 2011 as shown in Figure 22.

Figure 22: Domestic Exports by Commodity – Electronics

Commodity Section	Million Dollars						
	2001	2006	2007	2008	2009	2010	2011
Machinery & Equipment	68,567.6	99,553.1	94,852.8	88,131.9	75,465.5	94,412.0	91,057.6
Electronics	58,880.2	78,160.7	70,893.9	62,645.2	51,403.8	64,685.5	56,135.0
Integrated circuits	13,345.5	25,420.2	21,887.4	20,490.6	18,753.5	26,872.2	25,435.0
Parts of personal computers	11,840.5	16,084.5	15,505.8	14,536.3	11,880.9	12,884.6	11,051.3
Disk drives	14,923.8	9,665.6	7,359.7	7,108.4	5,432.6	5,472.6	2,801.5
Telecommunications equipment ³	2,136.1	6,969.6	4,530.7	2,846.7	1,295.4	1,665.3	1,932.1
Consumer electronics ⁴	3,051.5	4,712.9	4,910.8	2,596.1	2,233.7	1,786.1	1,258.7
Personal computers	2,408.3	985.4	1,327.6	1,335.4	1,219.7	1,657.7	2,338.0
Parts of integrated circuits	1,482.6	4,774.5	7,767.1	6,990.3	4,873.2	7,811.8	4,730.3
Diodes and transistors	1,875.6	3,792.0	2,711.4	2,911.3	2,686.0	3,558.4	3,777.6
Non-electronics	9,687.4	21,392.4	23,958.9	25,486.6	24,061.7	29,726.4	34,922.6
Electrical circuit apparatus	1,478.9	2,714.3	3,162.5	2,873.2	2,355.9	2,979.2	2,961.0
Electrical machinery nes	959.1	2,887.0	2,577.3	2,380.1	2,050.6	3,204.1	3,017.8
Miscellaneous Manufactures	9,883.0	15,594.9	17,066.4	16,314.3	15,483.6	19,498.7	21,322.0
Professional scientific & controlling instruments & apparatus nes	2,420.9	3,681.3	4,475.1	4,381.2	4,514.5	5,889.5	6,803.6
Photographic apparatus equipment & supplies & optical goods nes; watches & clocks	848.7	1,186.0	1,264.5	1,342.1	1,081.4	1,513.3	1,498.4
Articles of apparel & clothing accessories	706.9	384.9	334.6	314.4	225.8	184.2	184.1
Miscellaneous manufactured articles nes	5,776.9	10,080.2	10,668.4	9,918.7	9,346.3	11,566.9	12,449.4
Miscellaneous	821.6	2,091.7	2,579.8	2,895.8	3,247.7	3,275.5	3,124.6

Source: Yearbook of Statistics Singapore 2012, Department of Statistics Singapore

The demand of electronic manufacturing output has fallen by 11.3% in 2012 as shown in Figure 23. The soften global demand and rising manufacturing cost by 5.3% in the first quarter of 2013, caused by the declining electronic manufacturing, has continue to weigh down the economy by 4.7% as reported by Ministry of Trade and Industry (MTI) (Low, 2013a; Low, 2013b).

Figure 23: Main Indicators of the Singapore Economy

	Nominal Value-Added (% Share)	Real Growth (%)
Manufacturing	100	0.1
Electronics	25	-11.3
Chemicals	7.9	-0.4
Biomedical Manufacturing	25.5	9.9
Precision Engineering	14.6	1.3
Transport Engineering	15.7	11.2
General Manufacturing Industries	11.3	2

Source: Ministry of Trade and Industry - Economic Survey of Singapore 2012

However, with the government's timely investment in Biomedical and Pharmaceutical sector, GDP has grown tremendously to 27% since 2005 (Nah, 2006, pp. 7). Manufacturing which include Biomedical and Pharmaceutical has increased from S\$132,991 million in 2001 to S\$272,667 million with manufacturing export increased from S\$84,209 million in 2001 to S\$184,676 million in 2011 as seen in Figure 24.

Figure 24: Principal Manufacturing Statistics

	Unit	2001	2006	2007	2008	2009	2010	2011
Establishments	No	4,041	7,892	8,166	8,640	9,296	9,090	na
Workers	No	345,141	381,909	404,057	435,154	417,569	414,176	418,560
Materials	\$m	76,724	136,542	147,493	160,889	124,673	151,927	164,892
Remuneration	\$m	12,665	15,255	16,597	17,736	16,950	17,987	18,675
Operating Cost	\$m	29,581	47,211	49,867	55,746	53,597	63,243	na
Manufacturing Output	\$m	132,991	229,541	243,442	253,765	217,642	260,011	272,667
Total Output	\$m	138,323	237,880	253,381	263,887	226,784	273,050	285,454
Value Added	\$m	32,018	54,127	56,021	47,252	48,514	57,880	57,673
Net Operating Surplus	\$m	11,266	30,479	32,041	22,315	24,430	32,634	na
Direct Exports	\$m	84,209	141,065	152,318	168,052	150,774	178,133	184,676
Net Fixed Assets	\$m	48,130	47,524	47,814	47,319	47,242	51,760	na
Gross Fixed Assets	\$m	92,078	112,856	114,499	115,338	120,826	128,971	na

Source: Yearbook of Statistics Singapore 2012, Department of Statistics Singapore

Figure 25: Gross Domestic Product by Industry

Million Dollars							
Industry	2001	2006	2007	2008	2009	2010	2011
At Current Market Prices							
GDP at Current Market Prices	157,136.1	231,580.6	267,630.4	268,772.4	270,012.7	310,036.8	326,832.4
Goods Producing Industries	47,039.8	69,260.2	72,933.7	67,703.4	71,514.7	81,576.4	81,684.5
Manufacturing	35,070.9	58,954.0	61,102.1	52,475.9	53,999.8	64,459.8	64,198.0
Construction	8,284.9	6,520.9	7,872.8	11,256.7	13,584.9	12,610.6	12,759.0
Utilities	3,551.8	3,678.9	3,848.2	3,863.2	3,825.0	4,403.8	4,624.6
Other Goods Industries ¹	132.2	106.4	110.6	107.6	105.0	102.2	102.9
Services Producing Industries	94,511.4	145,261.3	170,855.8	176,159.0	173,668.6	199,015.0	211,877.9
Wholesale & Retail Trade	19,900.4	40,952.8	48,029.3	44,396.7	45,101.8	52,264.6	53,328.3
Transportation & Storage	14,190.9	20,930.3	24,761.7	26,010.0	21,627.7	25,191.9	25,169.5
Accommodation & Food Services	3,598.9	4,687.2	5,329.8	5,909.2	5,461.6	6,447.3	7,300.4
Information & Communications	6,660.8	8,398.2	8,875.2	9,639.4	10,269.5	10,650.0	11,013.7
Finance & Insurance	16,240.5	24,582.0	30,171.0	30,599.2	31,228.6	33,469.1	36,688.5
Business Services	16,594.9	23,948.3	30,305.6	34,915.4	34,554.4	39,885.4	43,390.2
Other Services Industries	17,325.0	21,762.5	23,383.2	24,689.1	25,425.0	31,106.7	34,987.3
Ownership of Dwellings	6,021.3	7,187.7	8,321.1	10,678.0	10,887.8	11,579.3	13,495.8
Gross Value Added at Basic Prices	147,572.5	221,709.2	252,110.6	254,540.4	256,071.1	292,170.7	307,058.2
Add : Taxes on Products	9,563.6	9,871.4	15,519.8	14,232.0	13,941.6	17,866.1	19,774.2
At 2005 Market Prices							
GDP at 2005 Market Prices	163,450.0	227,059.0	247,169.5	251,374.0	248,911.2	285,658.5	299,624.7
Goods Producing Industries	50,116.6	69,817.7	74,553.9	73,465.3	72,467.9	90,392.9	96,506.8
Manufacturing	38,432.8	59,838.0	63,393.0	60,738.5	58,217.8	75,492.8	81,236.0
Construction	8,388.1	6,426.4	7,474.0	8,975.3	10,509.4	10,918.2	11,205.8
Utilities	2,719.9	3,442.4	3,575.3	3,644.7	3,635.8	3,880.2	3,960.2
Other Goods Industries ¹	142.1	110.9	111.6	106.8	104.9	101.7	104.8
Services Producing Industries	100,030.8	140,733.4	154,156.8	161,302.9	159,660.6	177,365.5	185,186.3
Wholesale & Retail Trade	22,213.7	37,614.4	40,496.6	41,807.0	39,859.8	45,895.7	46,413.5
Transportation & Storage	16,684.3	21,763.2	23,856.5	25,082.2	22,588.0	24,367.4	25,509.1
Accommodation & Food Services	3,926.3	4,410.5	4,620.7	4,661.1	4,569.1	5,124.9	5,421.5
Information & Communications	6,107.8	8,287.3	8,676.2	9,371.5	9,701.8	10,030.3	10,178.4
Finance & Insurance	16,225.3	24,410.2	28,108.8	29,581.1	30,223.5	33,960.0	37,038.1
Business Services	17,036.4	22,971.4	26,444.1	28,382.6	29,216.2	31,035.5	31,875.0
Other Services Industries	17,774.4	21,276.4	21,953.9	22,417.4	23,502.2	26,951.7	28,750.7
Ownership of Dwellings	5,484.8	6,296.7	6,315.5	6,289.8	6,315.3	6,295.5	6,281.7
Gross Value Added at Basic Prices	155,716.0	216,847.8	235,026.2	241,058.0	238,443.8	274,053.9	287,974.8
Add : Taxes on Products	7,639.0	10,211.2	12,143.3	10,316.0	10,467.4	11,604.6	11,649.9

Source: Yearbook of Statistics Singapore 2012, Department of Statistics Singapore

Manufacturing revenue has risen from S\$38,432.8 million in 2001 to S\$81,236 million in 2011 as shown in Figure 25.

Figure 26: Domestic Exports by Commodity – Pharmaceutical

Commodity Section	Million Dollars						
	2001	2006	2007	2008	2009	2010	2011
Total	118,444.3	227,378.0	234,903.1	247,618.0	200,003.1	248,609.8	281,349.7
Food	1,387.2	2,402.8	2,622.3	3,153.3	3,138.3	3,639.7	4,108.5
Coffee, tea, cocoa, spices & manufactures	407.5	635.9	704.2	861.3	781.5	904.4	959.4
Fish, seafood (excl marine mammals) & preparations	274.0	262.3	227.9	210.0	200.3	194.7	194.6
Vegetables & fruits	17.2	27.7	29.1	33.1	26.1	27.8	31.7
Beverages & Tobacco	261.9	393.0	426.2	440.4	403.2	426.1	457.6
Beverages	95.0	161.8	192.8	192.5	171.7	183.6	195.5
Tobacco & manufactures	166.9	231.2	233.4	247.9	231.6	242.6	262.1
Crude Materials	580.1	1,404.8	1,549.0	1,756.6	1,115.0	1,523.5	1,705.6
Metalliferous ores & metal scrap	412.9	1,078.5	1,173.3	1,244.6	767.7	1,026.1	1,208.9
Crude rubber	14.4	4.1	4.7	4.5	4.2	21.4	5.9
Crude fertilizers & minerals (excl coal petroleum & precious stones)	18.8	77.4	87.9	174.6	97.8	151.4	140.1
Crude animal & vegetable materials nes	70.0	79.6	79.7	81.8	70.4	61.6	56.2
Mineral Fuels & Lubricants	21,716.5	59,604.6	63,271.1	89,526.2	58,655.0	75,011.1	103,953.8
Petroleum & products ¹ & related materials	21,246.9	58,853.3	62,437.9	88,854.9	58,262.5	74,722.3	103,651.7
Animal & Vegetable Oils	260.3	216.2	278.1	473.2	246.4	267.2	236.8
Fixed vegetable fats & oils, crude, refined or fractionated	175.6	67.9	85.0	121.6	92.7	104.8	130.7
Animal or vegetable fats & oils ² nes	71.6	137.7	183.4	343.3	138.8	146.0	97.3
Chemicals & Chemical Products	12,131.9	39,613.1	45,046.5	37,588.8	36,821.2	43,528.3	48,450.9
Organic chemicals	5,181.0	19,032.9	22,479.5	16,589.5	16,666.6	19,497.8	23,006.0
Plastics in primary forms	2,898.0	8,356.1	8,970.6	8,793.3	6,934.7	9,627.2	9,383.3
Medicinal & pharmaceutical products	1,219.3	7,195.2	8,090.5	5,741.8	7,307.6	7,133.7	7,632.3
Essential oils & resinoids & perfume materials; toilet polishing & cleansing preparations	473.3	1,117.6	1,210.3	1,369.7	1,444.1	2,107.8	2,557.7
Manufactured Goods	2,834.3	6,503.7	7,210.8	7,337.4	5,427.2	7,027.7	6,932.1
Non-ferrous metals	254.1	934.0	1,074.6	1,079.6	655.2	1,097.7	1,059.9
Iron & steel	264.3	1,047.6	1,250.2	1,332.6	748.3	824.2	870.1
Manufactures of metals nes	873.4	2,243.3	2,322.8	2,526.0	1,888.5	2,557.2	2,005.5
Non-metallic mineral manufactures nes	263.6	609.6	609.4	559.2	451.9	646.8	1,121.9
Textile yarn, fabrics, made-up articles nes & related products	448.0	454.9	484.2	384.5	302.6	362.7	331.4
Paper, paperboard & articles of paper pulp or paperboard pulp	391.7	693.6	871.2	926.2	983.3	1,092.3	1,070.8
Rubber manufactures nes	197.9	368.5	412.7	374.5	316.5	341.2	332.1

Source: Yearbook of Statistics Singapore 2012, Department of Statistics Singapore

The Biomedical and Pharmaceutical industry was the reason behind this tremendous increase in manufacturing as shown in Figure 26. Biomedical and Pharmaceutical manufacturing have helped to mitigate part of the fall in electronic manufacturing demand, with an increase by 9.9% in 2012 as shown in Figure 23.

Both Electronics and Biomedical manufacturing industries continue to be the key contributor with manufacturing output accounted for 31.4% and 19.6%, respectively in 2010 (Michigan State University).

Growth has re-bounced with increased demand for Pharmaceuticals and other manufactured goods from Singapore. Hence, the government plays an important role to shape manufacturing.

5.4.4. Biomedical

Although Singapore is not an early mover for biomedical technology, it has made small but significant steps in research. With Singapore inheriting the biomedical research from foreign firms, it has exploit from this collaboration and export the biomedical products to gain competitive advantages, reaps profit and economic growth.

5.4.5. Healthcare

As Singapore has been renowned for one of the best healthcare systems in the region, this is due to advance medical education through Duke-National University Singapore medical school, a joint collaboration between Duke University in US and National University of Singapore. This collaboration has helped the students gain exposure of the latest medical knowledge.

High flyer students are also granted government scholarship opportunities to advance their medical education overseas. The influx of foreign medical professionals has also brought in their expertise to serve the local community and international patients.

The hospitals in Singapore are generally clean and well equipped with the latest medical technology to treat their patients. Hence, healthcare is a quality resource and competency for Singapore.

5.4.6. Financial Services

The strong vision to establish Singapore as a global financial center leads to the government encouraging financial institutions to expand and grow their businesses in Singapore.

With Triple-A rating, Singapore is accredited for the strong growth, efficient, transparent legal and judicial framework, favorable regulatory, tax regime and banking confidentiality. Strategically located in the heart of Southeast Asia, Singapore is one of the world's fast growing economies with well-established business infrastructure, global connectivity and trade linkage.

The robust economic environment has attracted many foreign offshore financial institutions to set up their base in the new Marina Bay Financial Centre. These reputable financial institutions have served many fast growing emerging markets in the Asia Pacific region. Hence, Singapore is one of the premier asset management locations in Asia with over 600 financial institutions.

Despite of market uncertainties, Singapore's financial services sector has registered 9.1% growth in 2011 (Monetary Authority of Singapore Annual Report 2011/2012, pp. 29). The foreign exchange market has a healthy growth in 2011.

However, the financial sector has only expanded by a modest 0.5% as compared to previous year (Ministry of Trade and Industry, 2013, pp. 47). This weak performance was due to sentiment-sensitive segment in Forex trading, stock broking and insurance industry that has place a drag on the performance.

Based on the 2011 Singapore Asset Management industry Survey, assets managed by Fund Managers in Singapore was S\$1.34 trillion (Monetary Authority of Singapore, 2011, pp. 1). More than 70% of the Asset Management was sourced outside of Singapore and more than 60% of the total assets were invested in the Asia-Pacific region (Monetary Authority of Singapore, 2011).

The wealth management and private banking facility has offered global investor unparalleled access to the global markets with more investment channeled to Singapore. The bank deposit has also grown from S\$182,551.4 million in 2001 to S\$483,323.4 million in 2011 as

shown in Figure 27. The number of assets and liability held by the bank has grown from S\$373,747.9 million in 2001 to S\$ 859,253.9 million in 2011 as demonstrated in Figure 27.

Money supply has also increased from S\$36,082.9 million in 2001 to S\$ 129,118.9 million in 2011 (Figure 27).

Figure 27: Banking and Finance

End of Year	Money Supply (M1)	Official Foreign Reserves	Total Assets / Liabilities			
			Domestic Banking Units	Merchant Banks	Finance Companies	Asian Currency Units
			Million Dollars			
2001	36,082.9	139,714.3	373,747.9	56,398.4	14,961.1	465,472.8
2006	52,242.6	208,991.8	508,449.9	78,029.3	10,066.6	698,648.5
2007	63,938.6	234,545.6	582,859.0	89,070.2	12,781.8	906,991.0
2008	75,703.8	250,346.0	668,298.4	72,602.3	12,586.4	912,739.4
2009	93,472.1	263,955.4	706,814.2	76,354.4	11,691.9	869,399.6
2010	112,465.5	288,954.1	781,607.4	89,760.3	11,523.6	971,299.4
2011	129,118.9	308,403.2	859,253.9	87,851.0	12,165.3	1,035,391.3
Percentage Change Over Previous Year						
2001	8.5	0.6	11.3	-5.8	-24.4	-3.4
2006	13.4	8.4	19.6	20.3	6.6	14.3
2007	22.4	12.2	14.6	14.1	27.0	29.8
2008	18.4	6.7	14.7	-18.5	-1.5	0.6
2009	23.5	5.4	5.8	5.2	-7.1	-4.7
2010	20.3	9.5	10.6	17.6	-1.4	11.7
2011	14.8	6.7	9.9	-2.1	5.6	6.6

End of Year	Domestic Banking Units		Finance Companies			CPF
	Deposits of Non-Bank Customers	Loans & Advances to Non-Bank Customers ¹	Deposits	Loans & Advances for		Amount Due to Members
				Hire Purchase on Motor Vehicles	Housing	
Million Dollars						
2001	182,551.4	162,920.8	10,641.4	4,054.2	1,884.7	92,221.2
2006	272,462.6	194,597.6	7,150.3	2,064.8	1,681.3	125,803.8
2007	314,985.8	233,393.9	10,087.2	2,509.1	1,767.1	136,586.9
2008	347,507.4	272,175.4	9,975.7	2,485.5	1,587.6	151,307.1
2009	391,495.1	281,296.8	9,111.0	2,158.6	1,226.4	166,804.0
2010	433,757.8	322,743.8	8,891.4	1,930.4	1,485.5	185,888.0
2011	483,323.4	420,455.5	9,481.0	1,899.6	1,517.1	207,545.5
Percentage Change Over Previous Year						
2001	6.6	5.8	-22.0	-20.4	-31.9	2.1
2006	21.8	6.3	12.3	-8.9	6.2	5.0
2007	15.6	19.9	41.1	21.5	5.1	8.6
2008	10.3	16.6	-1.1	-0.9	-10.2	10.8
2009	12.7	3.4	-8.7	-13.2	-22.8	10.2
2010	10.8	14.7	-2.4	-10.6	21.1	11.4
2011	11.4	30.3	6.6	-1.6	2.1	11.7

Source: Yearbook of Statistics Singapore 2012, Department of Statistics Singapore

The growing attractiveness for Singapore currency has led to foreign entities accounted for 25% of all Singapore dollar debt issuances in 2011 as compared to 19% in 2010 (Monetary Authority of Singapore Annual Report 2011/2012, pp. 29). This resulted in rapid wealthy accumulation with more than half of the increase in global wealth in 2010.

With Singapore geographical proximity and sophisticated telecommunication infrastructure, it has enhanced the global connectivity and close contact with their relationship managers and their clients to transact in any part of the world within the same working day. This has help Singapore to earn prestigious reputation as the 4th largest Forex centre globally.

These competitive advantages are excellent resources which established Singapore's role as a well-established premier financial asset management hub, serving regional and international markets.

5.4.7. Township Planning

Singapore is excellent in township planning with remarkable transformation from a rural island into a metropolitan city.

The infrastructures are upgraded periodically. Land areas were expanded through reclamation. Housing estates are well-planned and equipped with good facilities such as Schools, Libraries, Shopping malls, markets, Sundry shops, Cinema, Restaurants, Swimming pools, Sport complex, Monorail train, Buses or Bus terminals.

The commercial districts are also well-equipped with Office buildings, Banks, Shopping malls, Restaurants, Food centre, Food court, Monorail train, Buses and even health Fitness centre. The landscape is organised in such a way that it promotes work life balance.

Singapore is a vibrant city with beautiful iconic resorts, Singapore Flyer, Garden by the Bay, green and clean enchanted garden and stunning city skyline as backdrop. The Formula one night race, maritime attractions, luxurious hotels, historical and Art museum, cruises and day and night zoo has further enhanced the Tourism image.

Hence, Singapore has become a resort destination for tourists and locals who check in to the resort hotels to spend their vacations.

There was initially a gradual increase in Hospitality - Accommodation and Food Services until a decline to S\$ 4,569.1 million in 2009 (Figure 25). However, when two integrated resorts were opened in early 2010, it has increased the hospitality sector to S\$5421.5 million in 2011 (Figure 25).

Currently, Singapore is exploring underground space development to further utilise the land space. If this project is successful, it will be a competitive advantage for Singapore to replicate and provide consultancy to the regional emerging economies to reap profit from consultancy.

6. Singapore Government's Counter measures

6.1. Singapore Government's Stimulus Package

The recent financial crisis is the impetus for change where Singapore need to think more actively as a mega city to restructure, shape and transform into a sustainable environment (Wilson, 2011, pp. vi).

Revamping the business operation process, improving productivity and efficiency is ideal during economic crisis where the firms or country can take advantage of the lower cost to restructure the economy. To restore the confidence in the financial systems, monetary policy needs to work in tandem with fiscal policy on macro prudential regulation.

Amid the heightened uncertainty, the government has responded to the external shock with timely implementation of effective countermeasures to counter-react against the adverse effect and risk aversion. This has help to catapult the nation out of recession. The government has rescued the crisis with emergency intervention of an unorthodox monetary policy by using the exchange rate to abandon the four years long strong Singapore currency in favour of a zero appreciation in 2008.

The government has also offered a stimulus package of S\$20.5 billion with tax rebates and employer's Central Provident Fund (CPF) contribution reduction to lower the business cost, boost the nation's liquidity and capabilities (Das, 2010, pp. 75). This stimulus package involves investment into infrastructure, education, healthcare and R&D which stimulate the aggregate demand and cushion the rapid decelerating economy from another deleterious effect of downturn.

6.2. Tighten Immigration Policy

To ensure social cohesion, the government has tightened the foreign labour by increasing the foreign worker levy. A mandatory regulation is imposed to limit the recruitment of every foreign worker to five employments of Singapore citizens. Das (2010) has highlighted the

government's effort in 2009 to further bolster the employment by expanding public sector recruitment with 18,000 jobs for over the next two years.

The National Wages Council (NWC) has enforced an annual wage guideline which comprised of a basic salary, monthly variable component (AWS) and an annual variable bonus. Das (2010) has reported that during the financial crisis, the employers has received 12% cash grant for the first S\$2,500 of monthly wages on their Central Provident Fund (CPF) employer's contribution which equated to about 9% reduction. The employers were allowed to cut the employee's year-end bonuses to defray the business cost. Das (2010) has also highlighted that corporate income tax was cut by 1% to 17% which has become one of the lowest in the world.

The countermeasure has aid the firms who were under the reeling of the economic crisis to reduce the business cost, improved corporate cash flow and mitigated risk. The government's countermeasures which include preserving jobs, keeping viable corporate firms afloat and forestalled them from resorting to retrenchment have lessened the economic hardships.

However, the downside of tighten immigration policy is losing the low income jobs to other low cost economies. Employment rate were lower in Computer, Electronic and Optical manufacturing sector with only 95,500 jobs in 2011 as compared to pre-crisis period of 211,300 jobs in 2007 (Figure 10). 115,800 jobs were lost within the short time span of 4 years due to firms relocating.

Loss of low income or low skilled jobs to other low income economies cannot be avoid if Singapore advances toward high value-added Technological and Knowledge based economy.

To ease the burden on low and middle incomes group whose wages are hit by competition from immigrant workers, re-training the employees are required to upgrade their skillset and to gain competency. Only through Education, it will improve social mobility for the poor which will remove the barrier for better job prospects with higher wages. This will leads to a productivity led economy.

Instead of relying on foreign talent for boosting the fertility rates, the government has implemented attractive Marriage and Parenthood incentive package to encourage the local couples to start new family to address the greying population.

6.3. Employees Continued Education and Training

The government has enunciated in February 2010, an imperative long term development strategies to restructure infrastructure by infusing S\$1.1 billion over the next five years (Das, 2010, pp. 190). This stimulus package consists of tax benefits and grants to encourage companies to upgrade their operations to improve productivity and ignite growth.

With the government aiming to raise productivity to 2% to 3% annually, instilling learning will leads to better skilled workforce which can produce cutting-edge ideas to increase productivity (Ministry of Finance, 2010). Skill upgrading will leads to competency.

However, statistics has shown that 33.4% of the domestic labour has received below secondary education as at 2011 as shown in Figure 28.

Figure 28: Resident Education Level from Age 15 years old and over

Year	Pupils per Teacher		Combined Gross Enrolment Ratio	Literacy Rate	Residents Age 25 Years & Over	
	Primary	Secondary			Mean Years of Schooling	% with Secondary or High Qualification
	Number		Percent			
2001	25	20	87	92.9	8.5	53.1
2006	23	18	95.1	94.5	9.3	58.8
2007	22	18	96.1	94.8	9.4	59.7
2008	21	18	96.6	95.2	9.7	63.2
2009	20	16	97.7	95.6	9.7	63.2
2010	19	16	102.8	95.9	10.1	65.5
2011	19	15	103.8	96.1	10.2	66.6

Source: Yearbook of Statistics Singapore 2012, Department of Statistics Singapore

It is shocking to learn that the educational level for local native citizens at tertiary level is only 36.6% as compared to 63% of tertiary educated immigrant who became new citizens recently as highlighted in Figure 9. It is imperative for the workforce to be re-trained to ensure competency and employment in the competitive job market.

Hence, the government has pledged S\$2.5 billion in 2010 to be use over the next five year for continued education (Das, 2010, pp. 191). Human capital development is enriched through the below comprehensive re-training programmes as follows:-

- Continuing Education and Training system (CET)
- Skills Programme for Upgrading and Resilience (SPUR)
- Workfare Training scheme (WTS)
- Workforce Skill Qualification (WSQ)
- Workfare Income supplement (WIS)

Each training programme would be subsidised up to 95% of absentee payroll (Das, 2010, pp. 192). The training programme will enhance the employee's skillset and expertise to achieve productivity.

6.4. Cost Benefit Analysis of Revised Labour Policy

With tightened immigration policy, some firms will leave Singapore for other regional economies with lower cost and greener pasture. For those firms who stay, they are confronted with higher cost. These issues will only be temporary if the firms move away from low cost labour intensive industries to high value-added industries.

In terms of benefits, with the minimum wages guidelines set to encourage firms to follow, this will leads to higher employee's remuneration and employee's satisfaction. The employees can cope up with the living cost with improved quality of life.

The drawback of higher remuneration is reduction of corporate profit along with increased operating cost. However, if the firms retrain their employees, discover and utilise their employee's talents and upgrade their business operation, it will improve productivity.

In terms of cost, the firms will enjoy more profit with improved business infrastructure which will generate more revenue. This will improve the firms and the nation's attractiveness and gain sustainable competitive advantage.

6.5. Infrastructure Development and Rejuvenation

In the past, Singapore has leverage on the clean, green and safe country image to promote Tourism. However, Singapore Tourism was declining during the recent crisis period. Singapore was also not able to compete in Tourism due to limited natural landscape like the other neighbouring countries.

To inject new life into the Tourism sector, the government has allowed the development of two mega integrated resorts with casinos with more than US\$5 billion of investments and also other infrastructure development.

The government infrastructure development and rejuvenation projects comprise of the following projects:-

- Marina Bay Financial Centre
- Marina Bay Sands and Resort World Integrated Resorts
(Casinos, Hotels, Restaurants, Theme Park, Museum, Retail shops)
- Garden by the Bay
- Formula One Grand Prix night race
- Mass Rapid Transit (MRT) train Downtown line
- Marina Coastal Expressway
- Education
- Healthcare
- Housing
- Eco-town

When the integrated resorts opened their doors in early 2010, it has created many jobs opportunities. Paradoxically, the casino was a longstanding ban by the conservative government, a few decades ago. It was seen as egregious by many Singaporeans who opposed against the casinos as it would surface into problem gambling, family violence or social problems.

Is the future of Singapore so dire which resulted in the government reversing the four decade long policy and resorting to casinos in pursuit of economic growth? The government was quick to dispel any notions and rhetoric concerning the integrated resorts investment as not a desperate panacea to address the declining economic future for economic survival of Singapore. The government had defended their stand with the lustrous benefits of the integrated resorts as an improved diversification which will accrue astronomically to the economy. The government has also highlighted that Singapore need to be vigorous and move up the value chain from low cost labour intensive industries and assume a new identity in higher value-added knowledge-based and service oriented economy.

The integrated resorts are the sharpest manifestation where Singapore reposition to be service-oriented in this new paradigm. Indulging in the glitz and glamour of high end gambling will leads to wealth creation and competitive advantage to stay competitive in this dynamic world. Singapore can also take the opportunity to capitalise and epitomise on these iconic integrated resorts stunning landmark to enhance the Tourism image.

‘Uniquely Singapore’ a slogan used by Singapore Tourism Board should be promoted more frequently to differentiate Singapore from other countries. As the service industry has 60% of gross value with a portion contributed by these integrated resorts, this resulted in the increase in tourist’s spending (Rajan and Thangavelu, 2009, pp.3). Singapore is able to capture economic vitality through Tourism.

6.6. Productivity and Innovation Credit Scheme

The stimulus package consists of investment into R&D. The government has intensified the R&D and build technological base to increase innovation and productivity and to weed out

any inefficiency. From the past, innovation through entrepreneurial capitalism was the key determinant behind the astonishing high growth of US.

The emergence of new ideas and inventions will emanated through innovation. For innovation to flourish, any barriers to entry and control or monopolistic practices need to be abolished. Conducive environment need to be created to nurture innovation.

So far, the Singapore government has done well in instilling O type innovation by using codified knowledge to improve existing products or ideas. However, Singapore is still a follower for V type innovation which involves inimical creativity to derive new inventions (Chia and Sng, 2009, pp. 30).

To cultivate innovation, the policymaker has formulated their policies to encourage information flow and protect intellectual property right. By encouraging foreigner firm's investment in R&D, Singapore has inherited and gained global access to these firm's knowledge base technology and research.

The government has further initiated the innovation projects with heavy investment in Life Sciences, Biomedical, Pharmaceuticals, Biotechnology, Medical technology and Information Technology. The joint venture in Life sciences with local start-up of Genome Institute, an institute of Cell and Molecular Biology and an institute of Bioengineering under national research body, Agency for Science, Technology and Research (A*STAR), National University of Singapore (NUS) and Duke University School of Medical has facilitated Biomedical research and turn the city state into a Biomedical innovation.

With Tuas Biomedical Park and Jurong Petrochemical built to house R&D centres and intellectual property right protection, these initiatives have attracted many foreign firms including US and United Kingdom (UK) pharmaceutical firms, Pfizer, GlaxoSmithKline and German software company, SAP to set up their research and innovation centre in Singapore. The government has further enhanced the prospect of scientists by offering training opportunities with larger remuneration packages.

The government tax subsidies under Productivity and Innovation Credit (PIC) scheme with up to 400% tax deductions or 60% cash pay-out has aid the firms in R&D, intellectual property rights, existing business operations upgrade or new products purchase (Inland Revenue Authority of Singapore). The government has offered tax concession on royalties and intellectual property right. This programme will defray the firm's costs while improving business operation to achieve productivity.

The government has recognised the development of Small medium enterprise (SME), as a crucial phase of growth to reap the potential benefit of innovation. As a result, the government has cultivated 1000 Small medium enterprise (SME) (Han, Ibrahim, Chua, Lim, Low, Lin and Chan, 2011, pp. 140). The government has encouraged and strengthened the relations between the Small medium enterprise (SME) and Multi-national Corporation (MNC) to foster skill linkage to enhance R&D and innovation.

Synergy between the Small medium enterprise (SME) and Multi-national Corporation (MNC) were encouraged under Public-Private Co-innovation programme. The reason why the Small medium enterprise (SME) and Multi-national Corporation (MNC) should work together is because no economy can be successful by relying on entrepreneur alone.

Often, these smaller firms do not have the capacity to reach scale economies. Their close partnership will lead to rapid sourcing of new inputs, refining and translating the scientific research into commercial success where the consumers can purchase. Hence, Good capitalism is a result of blending both entrepreneurial firms and bigger firms to shape innovation.

6.7. Limitations of Stated Owned and State Guided Enterprises on Innovation

The 2010 Economic Strategies Committee (ESC) has concluded that Singapore had made significant progress towards productivity-driven growth and has done well in economic competitiveness (Ministry of Education, 2012).

However, Ex-Minister Dr Lee Boon Yang has commented that Singaporeans are good in execution but lack in creative thinking (Lee, 2002). Singaporeans need to be bold to transform ideas into value.

Over the recent years, the government has privatised some state-directed investments and state owned corporation to become Government Investment Corporation (GIC) and Government Linked Corporation (GLC) to spur the economy through privatisation. However, this efforts have not reached the level to compete with advanced economies due to Government Linked corporation (GLC) are still indirectly championed by an authoritarian government which limit creativity, resulting in disappointing entrepreneurship performance (Ketels, Lal and Neo, 2009, pp. 52).

Although Singapore has ranked 1st position in manufacturing input in Boston Consulting Group, innovation performance is only ranked at 9th position and 5th position in INSEAD University and Conference of India Industry Global innovation ranking (Ketels, Lal and Neo, 2009, pp. 70; Boston Consulting Group, 2011). In Economic Intelligence unit – Cisco (EIU-Cisco) ranking, Singapore fare at 16th position for the policies toward trade, investment, innovation inputs and outputs, research, R&D spending and patents (Ketels, Lal, and Neo, B, 2009, pp. 70).

The absence of enterprises established by home grown domestic private entrepreneur leads to the government formation of Government Linked Corporation (GLC). In State-guided capitalism, it involves an intrusive government who exercise a centralised command and control to dictate the future directions and influences on the allocation of resources. This will be an impediment to the economic growth. The World Bank (World Bank, 1993, pp. 9) has cautioned on the potential economic performance failure with state guided capitalism steering with government guiding of the resource allocation in absence of market mechanism.

Although, to some extent, state guided capitalism are good initiatives but may risk running out of 'steam' as a growth engine. The government need to be cautioned of the private sector companies viewing Government Linked Corporation (GLC) as competitors who can use their overwhelming market power to crowd out the local private enterprise.

This will prevent the large network of local corporate dynamism and halt the growth of domestic private entrepreneurs as they need to compete unfairly in the same level playing field with the Government Linked Corporation (GLC) for domestic and international market. These are the factors that lead to the lack of growth ambitions and limited entrepreneurship in Singapore.

Hence, the collaboration between government, firms, research institutions and institutions are necessary to drive economic growth.

6.8. Entrepreneurship and Innovation

It is necessary for the market to move freely through entrepreneur instead of state and bureaucrats as entrepreneurs are subjected to the economic calculus, guided by the market forces. The resurgence of productivity and innovation is best to be left at the rein of entrepreneurs who hold more important role in contributing radical ideas. Only through entrepreneurship, there will be a conduit between investments in knowledge and economic growth (Audretsch, 2007, pp. 63). Entrepreneurship is the missing link between new ideas, innovation and economic growth.

As Entrepreneurs are often concerned with profit maximising, the Government Linked Corporation (GLC) may be accountable to their shareholders but still supervised by the government. The Government Linked Corporation (GLC) may be influenced by the government and be shielded from competition through artificial barrier of entry, giving them an unfair competitive edge over private enterprises.

As a result, Government Linked Corporation (GLC) tends to be more bureaucratic and less innovative. With the government remaining the driving force behind R&D and innovation, over reliance on government is not self-sufficient for Singapore to stay forefront. Without healthy dosage of entrepreneurship, we have witnessed the slowdown in Japan and European economies

Hence, the government's lavish innovation grants and incentive may poses some limitations to any breakthrough technology as the entrepreneur may need to start their next R&D even before the current one reached any conclusion (Baumol, Litan and Shramm, 2007, pp. 2).

The government's huge investment in R&D and innovation has further sparked scepticism due to limited talents, low return on investment (ROI) and still at infancy phase. It is impossible for Singapore to compete with the more advanced R&D centres in the western hemisphere that have more concentrated research with accumulated number of years and head-start in R&D. However, the government viewed reaping the benefit from R&D and innovation as a long term perspective which will need more time to nurture.

Hence, R&D and innovation will help the companies to manage their bottom-line by keeping their operation more cost-efficient and expand their development in top-line knowledge-based next generation products and services. This will improve the technological frontier for Singapore gradually.

6.9. Singapore emerge out of financial crisis

Fuelled by the government unconventional monetary policy to weather the economic meltdown, there was a nascent recovery as the city state revived in the second quarter of 2009. The city state was able to exit from the crisis earlier due to the robust policy framework and resilient financial systems.

As the nation has limited exposure to toxic debts, high saving ratio of 46.3% of GDP, high foreign reserves accumulation and flexible wages structure were the ammunition to cushion any economic shocks (Chia and Sng, 2009, pp. 11). Hence, the overall damage to the financial systems has been contained.

6.10. Singapore's Slower Growth and Inflation

As the Singapore economy has underwent severe pounding of the financial turmoil from shrinking GDP to recovery and then back to slow growth recently, many felt the upbeat of the high inflationary pressure of 5.1% for the first half of 2012 (Reuter, 2012).

Although with strong infrastructures development, the construction sector has expanded by a robust 7.3%, however the inflation has exceeded most of the neighbouring countries due to the rapid rising cost of accommodation by 10.5% and private road transportation by 7.5% (Reuter, 2012; Low, 2012b). These are the driving forces for faster than expected pace of price increase which accounted for two-third of the inflation.

All the while, MAS has aimed for low inflation to ensure the stability of Singapore currency to protect the economy against any erosion of investor's confidence. Since the Asian financial crisis in 1997-1998, Singapore has learnt to manage the nation's currency as managed float within an undisclosed policy band. This has leads to price stability and safeguarding against seizure and speculation.

However, as a small economy, Singapore is generally a price taker in the international market. Singapore manufacturers could not dictate the prices of the goods they trade internationally and have to accept prevailing market prices. As a result, Singapore manufacturers are not able to pass on the effects of inflation to international buyers.

To combat inflation, the government has appreciated Singapore currency against US dollar to cushion against domestic inflationary pressures. Strengthening Singapore currency leads to cheaper imported daily necessities.

However, the growth has been dampened with lacklustre export performances, resulting in a slower GDP of 1.2% in 2012 due to stronger Singapore currency which has affected the export competitiveness and eroded profit margin as shown in Figure 29 (Chen, 2013). The profit erosion has translated into a lower rate of return and reduced investment. Hence, domestic inflationary pressures are unlikely to ease or recede.

Figure 29: Gross Domestic Product (GDP)

Gross Domestic Product at 2005 Prices

	4Q11	2011	1Q12	2Q12	3Q12	4Q12	2012
Percentage change over corresponding period of previous year							
Overall GDP	3.6	4.9	1.5	2.3	0	1.1	1.2
Goods Producing Industries							
Manufacturing	9.2	7.6	-1.3	3.9	-1.6	-1.5	-0.2
Construction	2.9	2.6	9.6	12.3	7.7	5.9	8.8
Service Producing Industries	2.1	4.4	2	1	0.2	1.5	1.2
Quarter-on-Quarter annualised Growth rate, seasonally adjusted							
Overall GDP	-2.5	4.9	9.5	0.2	-6.3	1.8	1.2
Goods Producing Industries							
Manufacturing	-11.1	7.6	18.4	-0.8	-9.9	-10.8	-0.2
Construction	-2.2	2.6	41.6	18.1	-17.4	-8.9	8.8
Service Producing Industries	1.7	4.4	3.2	-0.1	-3.9	7	1.2

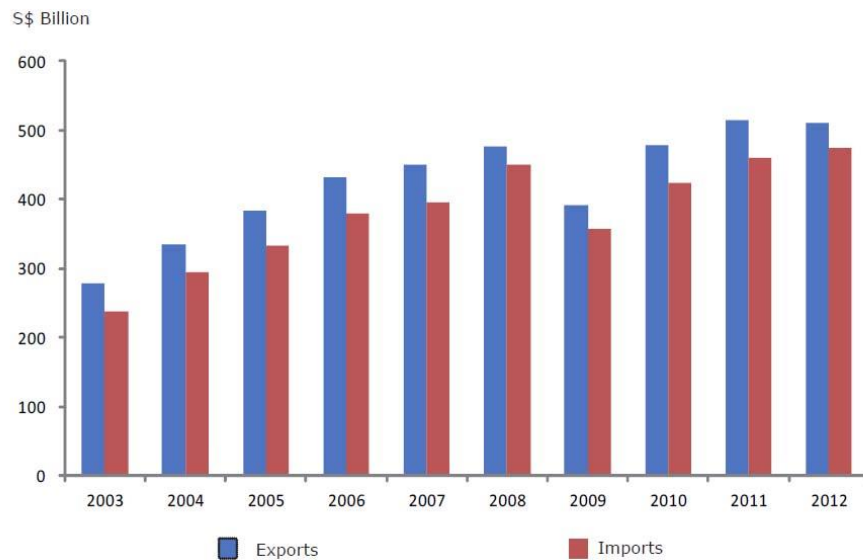
Source: Ministry of Trade and Industry

Chia and Sng (2009) has pointed out that Singapore is experiencing slower growth and may face stagflation as the growth tends to be slower for developed economy as highlighted in Lim's S-curve hypothesis. This is because countries who has several year of high achievement with high capital accumulation will tend to slow down due to a diminished capital returns.

Since independence, Singapore has been enjoying substantial strong growth. Capital growth has slowed down as Singapore entered a mature phase of economic development (Chia and Sng, 2009, pp. 100). Hence, comparing to previous year, the GDP was 4.9%, Singapore has witnessed a slower GDP growth at 1.2% in 2012 as reported by Figure 29 (Chen, 2013).

Another reason why GDP is slower than pre-crisis period was due to the dampened demand from the stultified and shadowed economies of US and Europe. While a considerable amount of time is required to rebuild these sluggish nations' economies and savings, Singapore's merchandise domestic export has witnessed a plunge at alarming rate in 2009 as highlighted in Figure 30. The economy has only managed to slowly recover from the 2nd quarter of 2009 onward.

Figure 30: Singapore Merchandise Exports and Import from 2003 – 2012



Source: *Yearbook of Statistics 2012, Department of Statistics Singapore*

Hence, Singapore needs to stay focus to insulate against external disturbances by increasing the core competency, competitiveness and productivity to stay vigilant.

7. Survey Finding and Results

A survey was conducted for 40 participants via interview and telephone communication (Figure 31). The survey has gathered the resident's opinions toward the Singapore environment, government policies, immigration policy and their expectation of the future of the nation. From the survey results in Figure 32, we can understand the market rationale which is the pulse of the market.

The companies which the participants work in are withheld for confidentiality. The participants comprises of mainly Singaporean with some foreigners residing locally. The survey participants are between 20 to 65 years old. These participants were selected because they represent the low, mid income group to high income earners. Many different views and perspectives were gathered during the survey which has contributed to some solutions to address Singapore's challenges.

Generally, the residents felt that the government has done well in the development of Singapore. However, with majority seats being held by a single ruling party for many decades, it has created complacency within the government as they tend to overlook the resident's voices in their policy making. The residents often felt suffocated by the high cost of living, caused by the rapid wealthy immigrant influx which resulted in congestion and competition in the infrastructure. As a result, the local native citizens have to shelve the family planning to later.

The residents felt that it is not necessary to form a new ruling government but they hope to see more opposition parties winning the electoral votes in the next election to represent their alternate voices in the Parliament. The opposition parties will need to work in tandem with the ruling party to address the high cost of living and to improve the quality of life.

The government should leave the Population growth to nature to take its course or to the local residents who are willing to multiply when the living cost becomes more manageable. Immigration policy should be modulated to avoid hasty immigrant inflow which will dilute the nation's identify.

The residents felt that the government should continue the excellent effort in nation building to bring the country to next level by leveraging on the core competencies and create new ones to gain competitive edges over other countries.

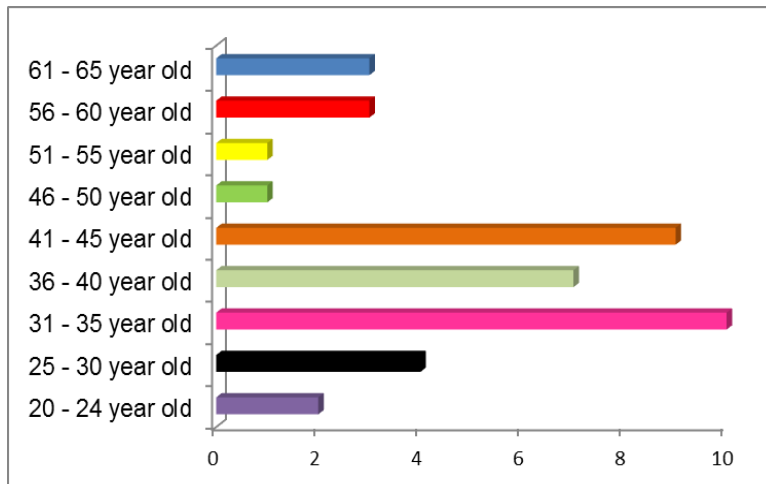
Figure 31: Survey Participants

No	Name	Position	Income Tier	Place of Birth	Age Group
1	Gary Tan	Sales Executive	Low income group	Singaporean	31 - 35 year old
2	Wayne Ng	Sales Executive	Low income group	Singaporean	20 - 24 year old
3	May Yee	Homemaker	Low income group	Malaysian	46 - 50 year old
4	Nelfa Revamonte	Foreign Domestic worker	Low income group	Filipino	25 - 30 year old
5	Anthony Goh	Regional Trainer	Middle income group	Singaporean	31 - 35 year old
6	Brenda Tay	Sales Administrator	Middle income group	Singaporean	31 - 35 year old
7	Chan Yan Fu	Sales Merchandiser	Middle income group	Singaporean	25 - 30 year old
8	Chng Luan Eng	Accountant	Middle income group	Singaporean	56 - 60 year old
9	Chua Zhiwei	Business Development Manager	Middle income group	Singaporean	31 - 35 year old
10	Evelyn Yong	Senior Sales Administrator	Middle income group	Singaporean	36 - 40 year old
11	Jonathan Tan	Senior Technical Engineer	Middle income group	Singaporean	41 - 45 year old
12	Edward Lim	Credit Officer	Middle income group	Singaporean	41 - 45 year old
13	Kevin Lim	SMB Sales Specialist	Middle income group	Singaporean	41 - 45 year old
14	Pamela Chng	Bank Executive	Middle income group	Singaporean	25 - 30 year old
15	Lawrence Koh	Financial Consultant	Middle income group	Singaporean	41 - 45 year old
16	Lim Yong How	Senior Java Developer	Middle income group	Singaporean	41 - 45 year old
17	Lynn Lim	Financial Consultant	Middle income group	Singaporean	31 - 35 year old
18	Mark Chng	Administrative Executive	Middle income group	Singaporean	51 - 55 year old
19	Mervyn Goh	Technical Solution Consultant	Middle income group	Singaporean	31 - 35 year old
20	Michael Mak	Partner Manager	Middle income group	Singaporean	36 - 40 year old
21	Nash Teh	Technical Engineer	Middle income group	Singaporean	31 - 35 year old
22	Ng Quan Tee	Tour Guide	Middle income group	Singaporean	36 - 40 year old
23	Nicholas Yeow	Account Manager	Middle income group	Singaporean	31 - 35 year old
24	Ong Chun Hong	Account Manager	Middle income group	Singaporean	20 - 24 year old
25	Ong Yong Liang	Account Manager	Middle income group	Singaporean	25 - 30 year old
26	Sharon Tan	Manager	Middle income group	Singaporean	31 - 35 year old
27	Ching Phuai Yeow	Sole Proprietor	Middle income group	Singaporean	61 - 65 year old
28	John Kher	Teacher	Middle income group	Singaporean	61 - 65 year old
29	Vivian Ang	Head - Corporate Solution Division	Middle income group	Singaporean	36 - 40 year old
30	Brenda Ling	Finance Manager	Middle income group	Malaysian	31 - 35 year old
31	CK Lim	Accountant	Middle income group	Singaporean	41 - 45 year old
32	Michael Ching	Entrepreneur	Middle income group	Singaporean	36 - 40 year old
33	Ong Sok Ching	Tailor	Middle income group	Malaysian	60 - 65 year old
34	Fern Wong	Marketing Director	High income group	Singaporean	36 - 40 year old
35	Sally Ching	Director	High income group	Singaporean	56 - 60 year old
36	James Chew	Regional Manager	High income group	Singaporean	36 - 40 year old
37	Lok Lye Loon	Platinum Adviser	High income group	Malaysian	41 - 45 year old
38	Michael Chua	Managing Director	High income group	Malaysian	41 - 45 year old
39	KV Mohan	Managing Director	High income group	Singaporean	56 - 60 year old
40	Stan Lee	Managing Director	High income group	Singaporean	41 - 45 year old

Source: Author's list of contact

Figure 32: Survey Results

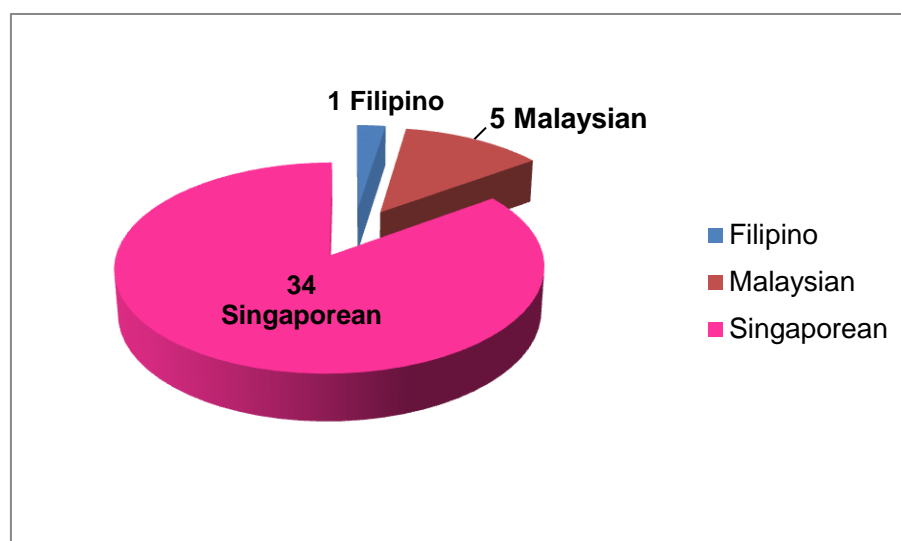
i) Age Group



Age	Quantity
20 - 24 year old	2
25 - 30 year old	4
31 - 35 year old	10
36 - 40 year old	7
41 - 45 year old	9
46 - 50 year old	1
51 - 55 year old	1
56 - 60 year old	3
61 - 65 year old	3

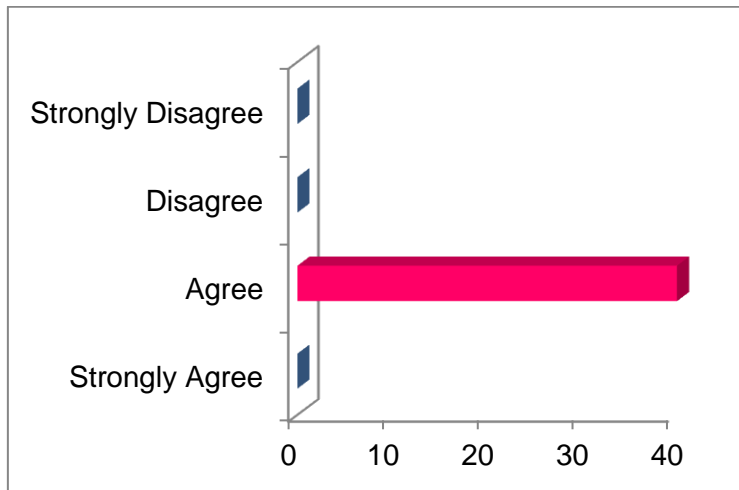
Source: Author's Survey result compilation

ii) Place of Birth



Source: Author's Survey result compilation

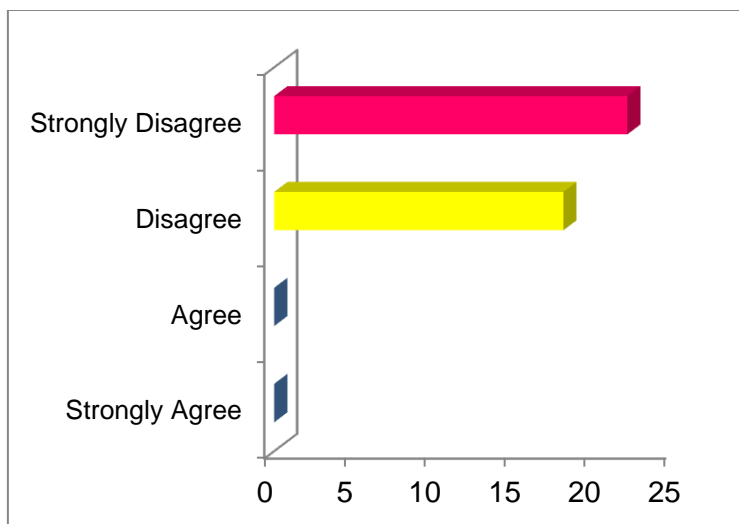
- iii) Do you think the Government has done their best to bring Singapore to where it is today?



Opinion	Quantity
Strongly Agree	0
Agree	40
Disagree	0
Strongly Disagree	0

Source: Author's Survey result compilation

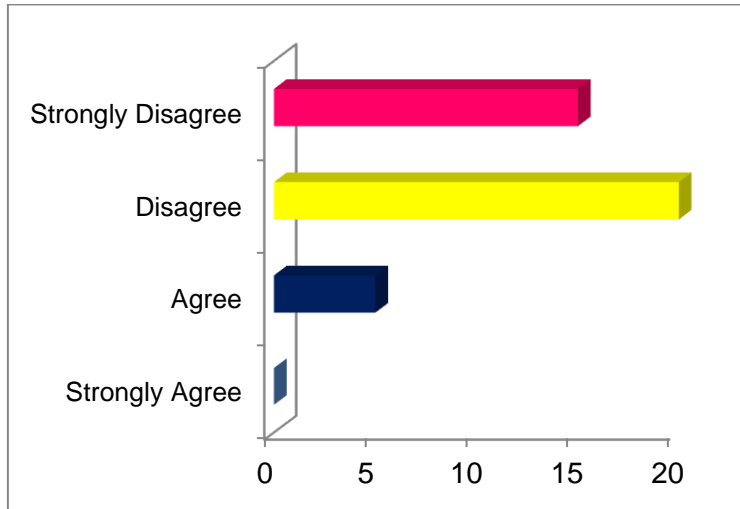
- iv) Do you think the Government has done enough to help the residents cope up with the high cost of living and inflation?



Opinion	Quantity
Strongly Agree	0
Agree	0
Disagree	18
Strongly Disagree	22

Source: Author's Survey result compilation

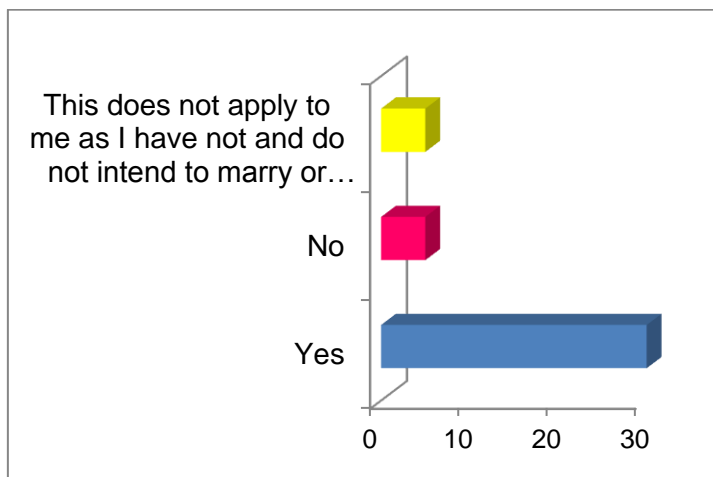
v) Are you able to cope up with the current living, medical cost and inflation?



Opinion	Quantity
Strongly Agree	0
Agree	5
Disagree	20
Strongly Disagree	15

Source: Author's Survey result compilation

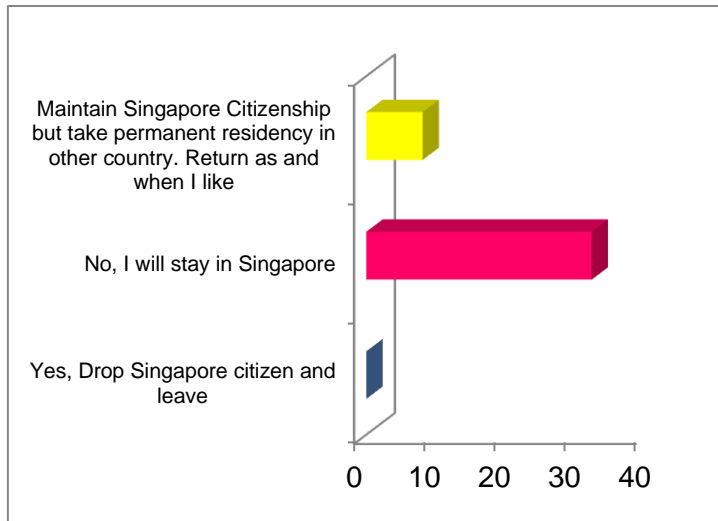
vi) Are you concern if your next generation can cope up with the future living cost and standard?



Opinion	Quantity
Yes	30
No	5
This does not apply to me as I have not and do not intend to marry or start a new family	5

Source: Author's Survey result compilation

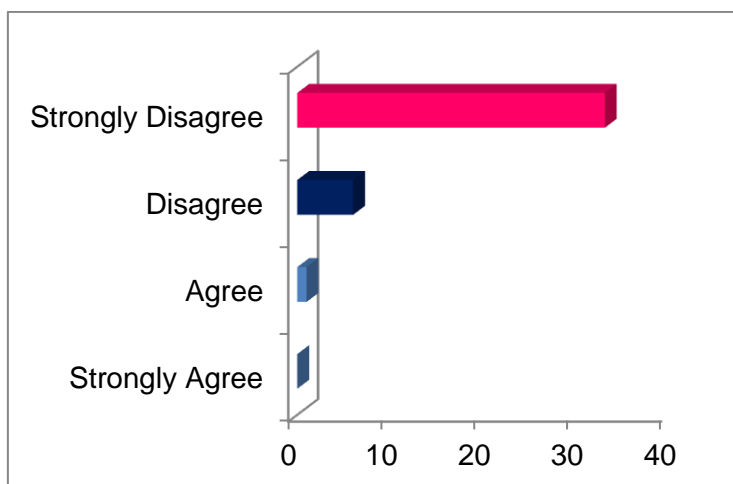
- vii) Will you migrate to other country if citizenship or permanent residency is granted to you and your family when money is not an issue?



Source: Author's Survey result compilation

Opinion	Quantity
Yes, Drop Singapore citizen and leave	0
No, I will stay in Singapore	32
Maintain Singapore Citizenship but take permanent residency in other country. Return as and when I like	8

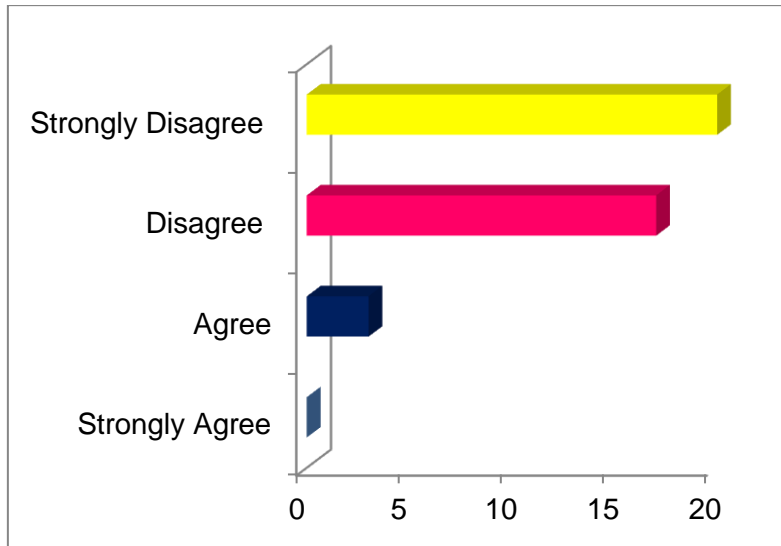
- viii) Citizenship or permanent residency was granted to wealthy foreigner who placed at least \$5 million in any of the Singapore bank. Do you think this is necessary to boost the wealth and GDP growth in Singapore?



Source: Author's Survey result compilation

Opinion	Quantity
Strongly Agree	0
Agree	1
Disagree	6
Strongly Disagree	33

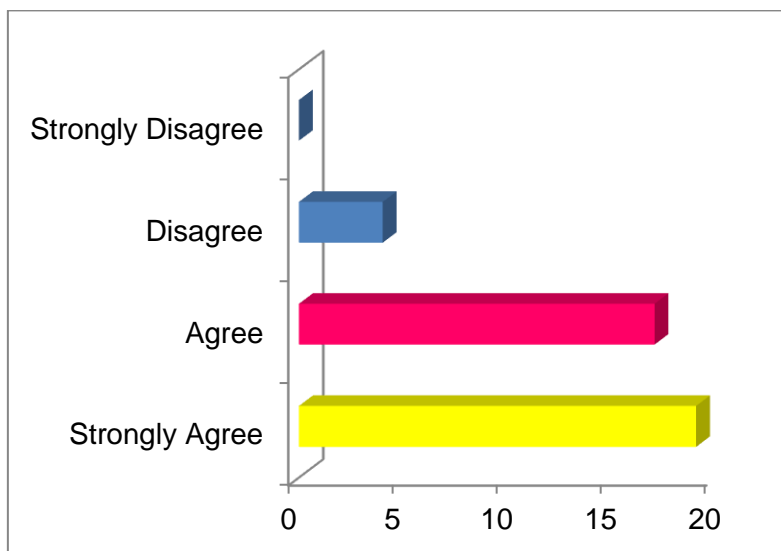
ix) Do you think the foreign talents are necessary to boost the economy?



Opinion	Quantity
Strongly Agree	0
Agree	3
Disagree	17
Strongly Disagree	20

Source: Author's Survey result compilation

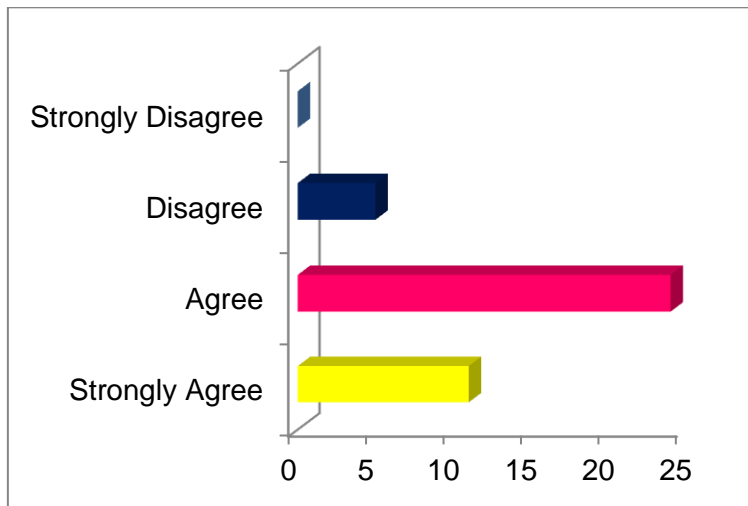
x) Do you think it is necessary to allow cheap foreign workers to take up the low income job to boost the economy?



Opinion	Quantity
Strongly Agree	19
Agree	17
Disagree	4
Strongly Disagree	0

Source: Author's Survey result compilation

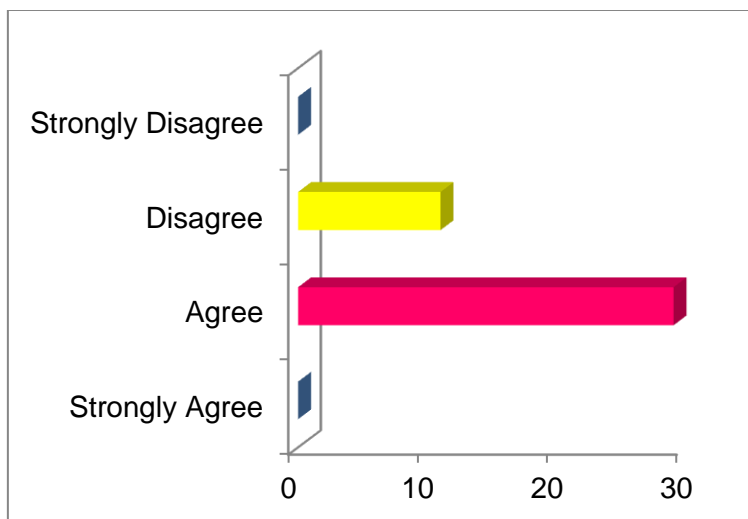
- xi) If foreign talents do not come in, do you think Singapore will be sustainable and grow?



Opinion	Quantity
Strongly Agree	11
Agree	24
Disagree	5
Strongly Disagree	0

Source: Author's Survey result compilation

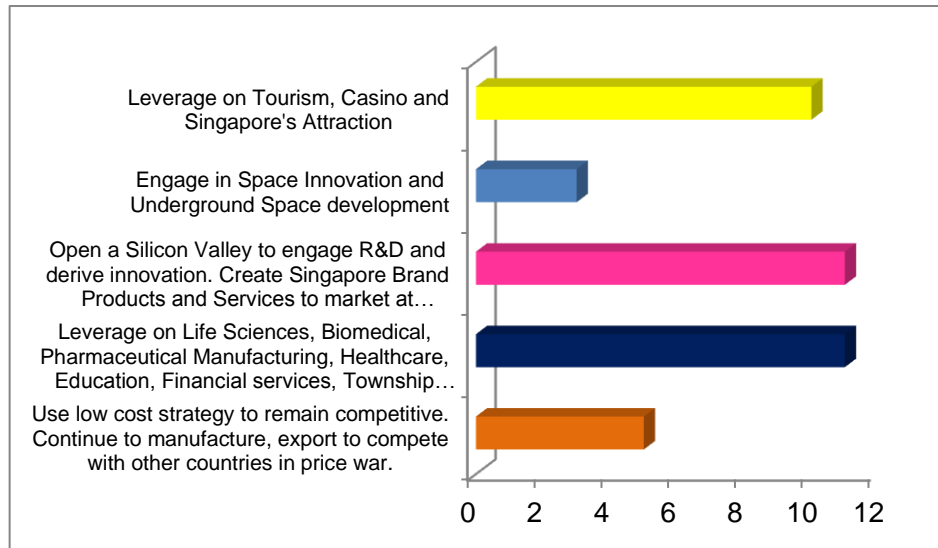
- xii) Do you think Casino is a right choice to boost the economy growth?



Opinion	Quantity
Strongly Agree	0
Agree	29
Disagree	11
Strongly Disagree	0

Source: Author's Survey result compilation

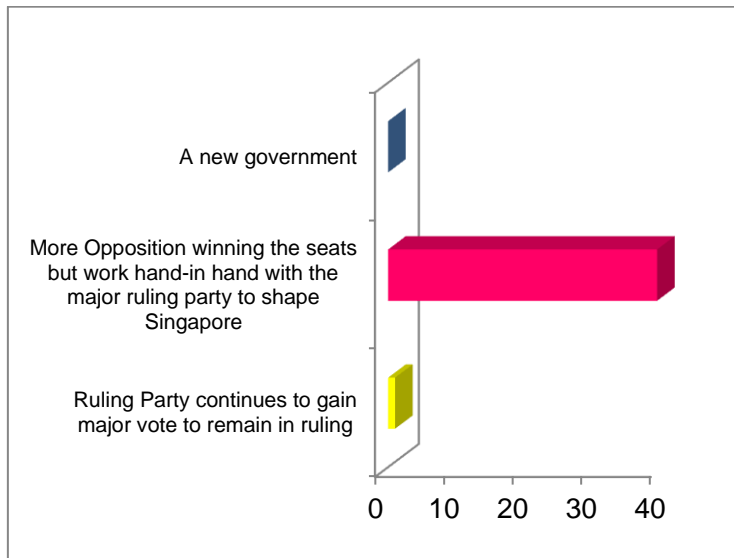
- xiii) What is the strategy the Government should adopt to gain competitive advantage over other emerging countries? (Choose up to a few choices)



Opinion	Quantity
Use low cost strategy to remain competitive. Continue to manufacture, export to compete with other countries in price war.	5
Leverage on Life Sciences, Biomedical, Pharmaceutical Manufacturing, Healthcare, Education, Financial services, Township planning and Export to prosper. Use these core competencies to mentor other emerging countries in their nation building and take the opportunity to invest in their countries	11
Open a Silicon Valley to engage R&D and derive innovation. Create Singapore Brand Products and Services to market at premium, gain market share, competitive edge, profit and growth to boost the economy.	11
Engage in Space Innovation and Underground Space development	3
Leverage on Tourism, Casino and Singapore's Attraction	10

Source: Author's Survey result compilation

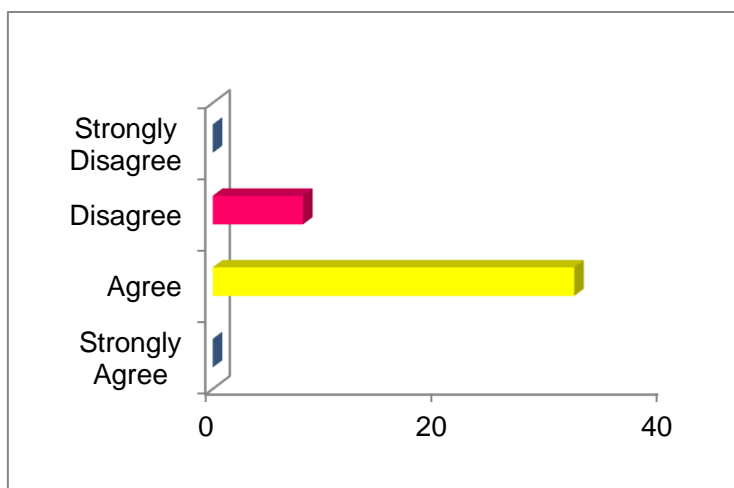
xiv) In the next General Election in 2016, what do you hope to see?



Opinion	Quantity
Ruling Party continues to gain major vote to remain in ruling	1
More Opposition winning the seats but work hand-in hand with the major ruling party to shape Singapore	39
A new government	0

Source: Author's Survey result compilation

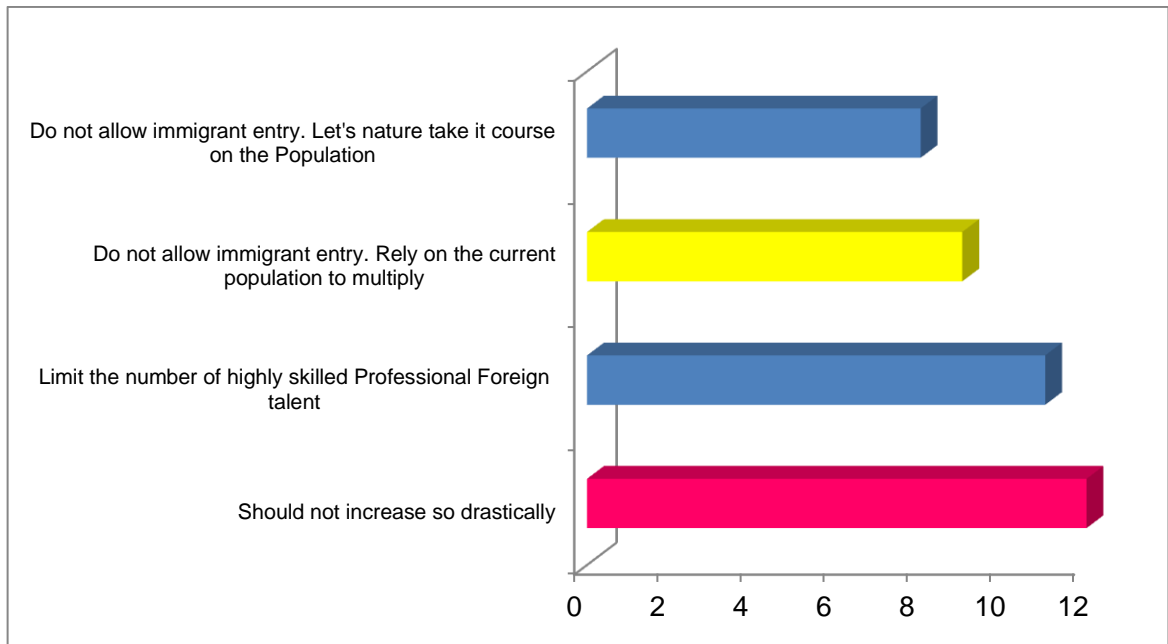
xv) Have the Government has done their best to handle the Haze Situation in June 2013?



Opinion	Quantity
Strongly Agree	0
Agree	32
Disagree	8
Strongly Disagree	0

Source: Author's Survey result compilation

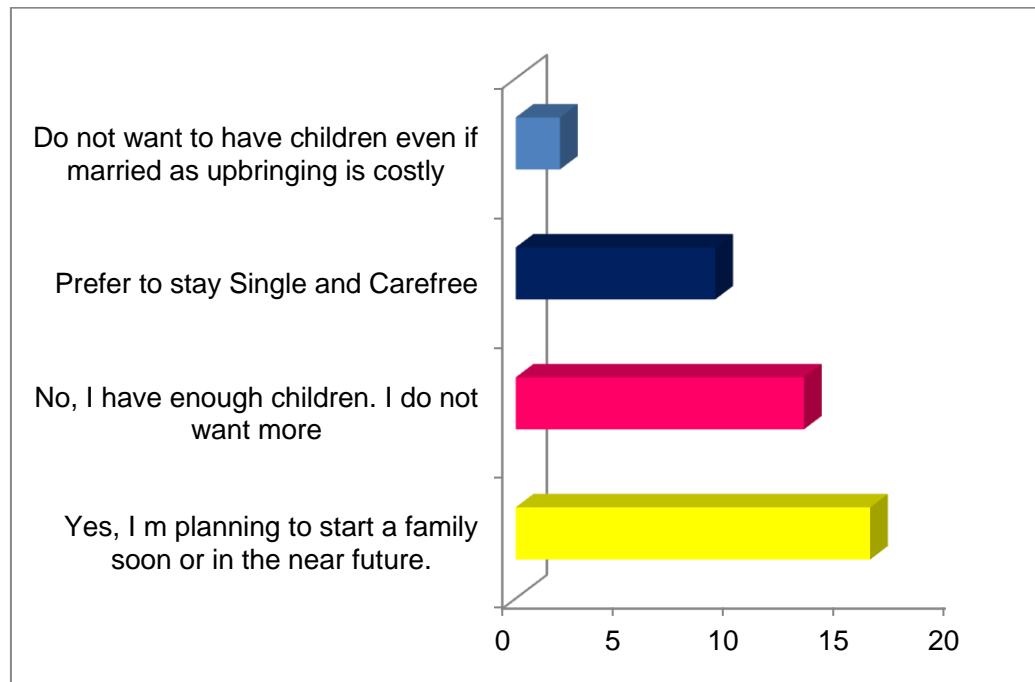
- xvi) What do you think about the 6.9 million Populations the Government is aiming to achieve by 2030?



Opinion	Quantity
Should not increase so drastically	12
Limit the number of highly skilled Professional Foreign talent	11
Do not allow immigrant entry. Rely on the current population to multiply	9
Do not allow immigrant entry. Let's nature take its course on the Population	8

Source: Author's Survey result compilation

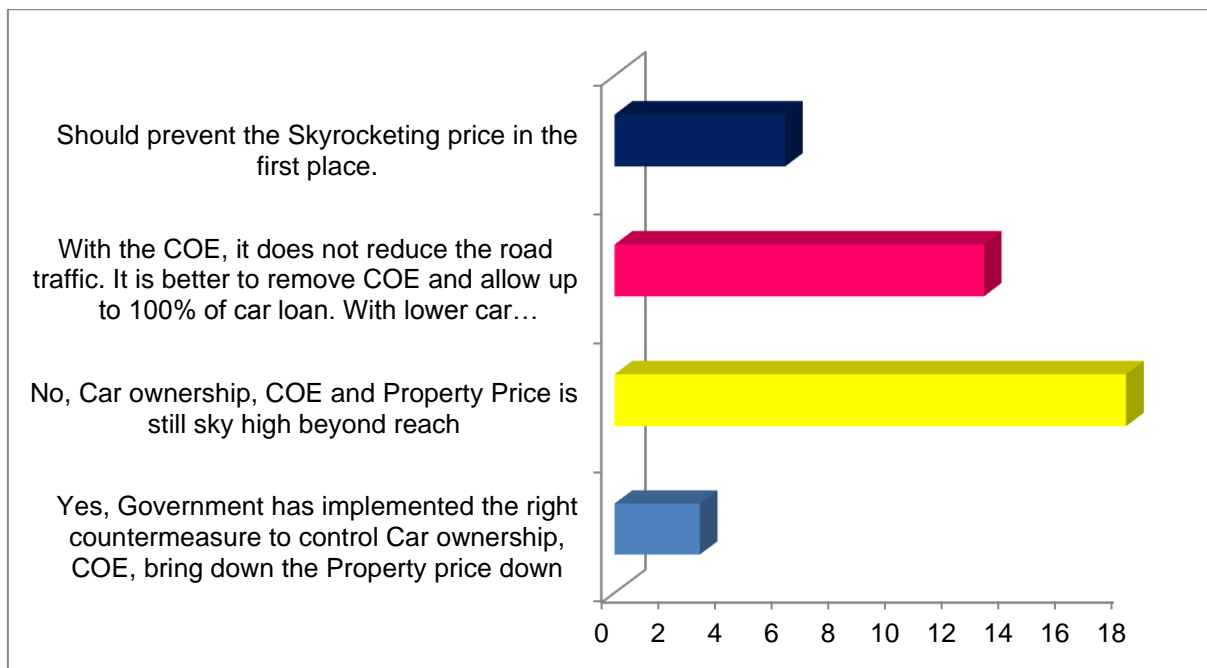
xvii) Do you think the Marriage and Parenthood Incentive is attractive?



Opinion	Quantity
Yes, I am planning to start a family soon or in the near future.	16
No, I have enough children. I do not want more	13
Prefer to stay Single and Carefree	9
Do not want to have children even if married as upbringing is costly	2

Source: Author's Survey result compilation

- xviii) Do you think the Government has done enough to manage the Car ownership, Certificate on Entitlement (COE) and Property pricing?



Opinion	Quantity
Yes, Government has implemented the right countermeasure to control Car ownership, COE, bring down the Property price down	3
No, Car ownership, COE and Property Price is still sky high beyond reach	18
With the COE, it does not reduce the road traffic. It is better to remove COE and allow up to 100% of car loan. With lower car ownership, I can consider starting a family	13
Should prevent the Skyrocketing price in the first place.	6

Source: Author's Survey result compilation

8. Strategies to improve Competitiveness of Singapore

8.1. Singapore's Regional Integration

Although Singapore has sound economic fundamentals, the recent financial crisis has raised concerns regarding the sustainable future as the global economy continues to weaken. There is a rising concern as to whether the structural change which Singapore adopts is vulnerable. How can Singapore keep challenges at bay and continue to manoeuvre toward successful economic growth?

As Singapore is very trade dependent on G3 demand on non-oil export, the dampening underlying growth and further intensification of US and Eurozone crisis has worsened the trade mechanism, financial conditions and global fundamental. With the economy becoming more volatile, Singapore need to look regionally as the world's balance of power is undergoing significant strategic shift of economic gravity to Asia.

Dr Aekapol Chongvilaivan from Institute of Southeast Asian Studies (ISEAS) Singapore has pointed out that the lack of leadership in ASEAN has affected the integration progress (Institute of Policy Studies and The Business Times, 2013, pp. 66). Singapore needs to establish a leadership position to co-ordinate with the rest of the ASEAN countries to facilitate the integration.

This has proliferated cross border trades with incremental consumer's demand for intra-Asian goods and services with export of top five electronic increased to 57% from 38% as showed in Figure 4 in 2007 as compared to 2000. Strong demands were seen with the increase of cross border export from Singapore to other Asian economies. Cross border trade from Singapore to other Asian economies has also increased from S\$136,568.3 million in 2001 to S\$367,364.5 million in 2011 as shown in Figure 33.

Figure 33: Export by country

Region / Country	Million Dollars						
	2001	2006	2007	2008	2009	2010	2011
Total	218,026.3	431,559.2	450,627.7	476,762.2	391,118.2	478,840.7	514,741.2
America	38,897.1	54,820.9	54,740.4	54,029.5	43,910.5	49,943.9	53,644.0
Brazil	468.2	2,026.7	1,894.2	2,314.1	1,728.5	1,988.5	1,754.1
Canada	718.6	1,299.7	2,996.3	2,763.5	3,563.6	1,981.5	1,765.1
United States	33,533.6	42,829.3	39,492.9	33,452.4	25,485.1	30,871.4	27,638.4
Asia	136,568.3	297,054.2	314,668.4	334,204.4	278,626.9	343,924.9	367,364.5
Bahrain	37.4	88.2	80.7	129.9	119.9	124.2	98.3
Bangladesh	1,516.1	1,477.8	1,409.3	1,762.3	2,046.1	2,317.9	2,854.3
Brunei Darussalam	734.6	910.8	1,048.1	1,228.1	1,257.8	1,286.2	1,978.7
Cambodia	662.6	729.8	660.5	733.7	1,038.4	3,000.3	1,140.1
China	9,545.0	42,061.0	43,549.5	43,817.9	38,125.1	49,467.9	53,650.7
Hong Kong	19,373.7	43,335.2	47,155.3	49,526.3	45,273.8	56,081.0	56,776.5
India	4,872.8	12,165.6	15,046.1	16,834.6	13,429.3	18,101.4	17,654.0
Indonesia	na	39,504.4	44,320.2	50,299.1	37,857.8	44,983.8	53,776.6
Japan	16,712.3	23,589.5	21,662.6	23,487.1	17,804.2	22,332.1	23,120.5
Korea, Republic of	8,391.7	13,876.6	15,959.7	17,317.9	18,219.4	19,547.7	19,458.7
Kuwait	119.3	191.7	373.8	366.2	254.8	245.3	185.3
Laos	47.2	65.2	59.1	35.8	52.9	31.3	43.6
Malaysia	37,821.5	56,372.1	58,099.6	57,638.5	44,808.5	57,114.2	62,834.7
Myanmar	757.5	894.5	1,171.9	1,812.6	1,290.9	1,577.7	1,524.7
Pakistan	653.5	1,223.7	1,269.0	1,651.9	1,159.7	1,591.9	2,365.1
Philippines	5,516.1	8,066.5	9,224.3	10,265.2	7,312.5	9,775.3	8,506.3
Saudi Arabia	560.1	1,178.4	1,264.5	1,315.3	1,080.9	1,109.6	1,099.6
Sri Lanka	706.4	1,463.6	1,255.6	1,392.8	1,097.0	1,630.3	1,674.7
Taiwan	11,219.5	15,065.0	13,770.7	13,411.1	12,600.3	17,441.5	18,356.1
Thailand	9,486.6	17,944.7	18,652.9	18,612.4	14,613.0	17,283.8	17,645.1
United Arab Emirates	2,055.1	5,047.5	5,256.4	5,858.3	5,388.7	5,182.5	5,829.9
Vietnam	3,769.3	8,665.4	9,802.5	12,279.7	10,113.7	10,061.1	12,834.9
Europe	32,361.6	50,958.8	50,909.0	51,353.2	40,096.4	50,262.8	51,988.3
France	2,850.8	5,029.8	6,737.9	5,845.7	5,155.4	7,530.6	7,690.0
Germany	7,690.9	10,417.6	8,951.1	9,377.8	6,012.5	8,369.7	8,416.6
Italy	760.7	927.1	1,076.6	895.4	630.0	932.1	1,223.7
Netherlands	7,225.6	8,635.0	8,626.0	10,216.8	7,203.6	8,387.8	9,487.4
Sweden	142.7	364.6	250.3	238.0	160.3	393.5	376.8
United Kingdom	5,102.5	11,540.2	12,258.7	9,284.2	7,167.5	8,333.6	8,328.0
Switzerland	1,114.6	1,433.1	1,360.7	1,070.6	1,464.3	1,573.0	1,041.0
Oceania	7,644.0	22,499.9	23,271.1	27,084.0	20,830.2	24,183.1	29,433.3
Australia	5,658.9	16,182.4	16,832.1	19,537.0	15,316.7	17,110.7	20,145.7
New Zealand	721.5	2,215.2	2,344.7	2,721.0	1,974.6	2,322.4	2,672.9
Africa	2,555.3	6,225.4	7,038.9	10,091.0	7,654.2	10,526.0	12,311.1
European Union ¹	30,673.9	48,189.0	48,175.3	48,609.2	37,168.9	47,156.9	48,129.1

Source: Yearbook of Statistics 2012, Department of Statistics Singapore

Singapore Prime Minister's Mr Lee Hsien Loong has advised that the transition need to be managed wisely and prudently (Toh, 2013). Singapore needs to be responsive and sensitive to the growing strength of these Asian emerging markets and dramatically change the way of doing business with them.

Singapore should take this opportunity to ride the storm, expand its wing regionally to exploit the early mover advantage, complement and deepen symbiotic relations with these countries. This will foster better synergy, fiduciary and momentum resulting in economic growth.

As these emerging Asian economies are still developing, they need to improve their current infrastructure such as healthcare, schools, water, power, railway and roads. It is fairly straightforward prescription against the deficiency and weakness of the putative regional competitors for Singapore.

Singapore will need to carve a niche to be well ahead of the curve by fostering closer relationships with these emerging neighbouring countries. The interconnectedness will increase the export demand and flow of goods and services. Singapore can take this opportunity to diversify the source of income and to assiduously invest in these emerging markets' infrastructure which will leads to connectivity, economies of scale and profit gain.

The ascendancy of Asian economic powerhouse with remarkable growth is China who has more population, geo-economics and geopolitical landscape. China has an overwhelming foreign currency reserve accumulation of US\$3.4 trillion, which is approximately the size of Germany (EW News Desk Team, 2013). With China enjoying scale economies, it will translate into cheaper export and become head-on with Singapore in term of international trade.

Instead of competing with these behemoth economies, Singapore should leverage on the competency strength in urbanization and infrastructure building to provide guidance and consultancy to mentor these emerging markets in their nation building.

So far, Singapore is one of the early movers of free trade phenomenon. The 28 free trade agreements which Singapore has actively pursued with many countries is a commercial trade strategy that gives Singapore the competitive edge. Singapore is one of the closest allies of US for free trade agreement where they share a long term economic and strategic partnership.

The free trade agreements which comprise of preferential access and faster entry into markets, trade promotion and tariff concessions have defrayed the trading cost, making the products and services cost lower than competitors. The free trade agreements have led to increased foreign direct investment and flows of trade. This leads to pharmaceutical export tremendous growth over the few years due to the free trade agreements. However, the Pharmaceutical export is still dominated by G3 at 80% in 2007 from 77% in 2000 as shown in Figure 4.

As US and Singapore have shared the same trade, security relations and free and open international market trading environment, this promotes progress in liberalisation. The free trade agreements have extended the coverage to beyond cross border trade to deepening bilateral ties through skilful economic diplomacy and business delegation exchange.

With the global biomedical industry confronted with the challenges to improve R&D productivity and unmet healthcare needs in the fast-growing Asian regions, Singapore need to navigate Asia's complexities and diversity and effectively tap onto the region's markets to gain competitive edge.

8.2. Singapore's Unique Competitive Advantages

Excelling in most area of endeavours, Singapore must encapsulate and burnish the brand as a vibrant metropolis. Singapore must position as a premier hub with diversification of hubs which comprises of high technology, knowledge based, R&D, Life science, Biomedical, Pharmaceutical, Manufacturing, Logistics, Shipping, Cruise, Oil rig and repair, aviation, Wealth management, Sport, Education, Healthcare, MICE and Tourism. This will craft Singapore's distinctive identity to differentiate from the rest of the world.

As Singapore has been ranked as top in Asia and in 6th position out of 191 countries for quality and efficient healthcare infrastructure, Singapore should continue to upgrade the healthcare facilities with up to date medical equipment (World Health Organisation, 2000, pp. 154).

As creative thinking are only cultivated at Tertiary education. Instead of waiting until Tertiary education to foster creativity and innovation, the government should instilled creativity thinking into the syllabus from secondary school education to nurture the young generation to realise their full potential and capture competitive advantage earlier.

8.3. Singapore's Role in Green Renewal Energy, Corporate Social Responsibilities

With carbon emissions and fossil fuel depletion high on the agenda, Singapore, being a good corporate social citizen has embraced Green renewal energy for sustainable environment. Singapore Changi Airport Terminal 3 is an eco-friendly green airport which consumed less electricity. The airport is specially constructed to use natural sunlight to brighten the airport.

The airport authority, Civil Aviation Authority of Singapore (CAAS) has even explored and plan more efficient air traffic movement procedure which leads to shorter flight route. Singapore Airline (SIA) has also use fuel efficient aircraft for the air route. This leads to fuel saving and cutting down on CO2 emission. For this green initiative, Changi Airport Terminal 3 has been awarded Green Mark Gold award as the inaugural best green service provider.

While advancing on aviation, Singapore is currently engaging in R&D of alternative fuel for aviation fleets to mitigate the industry's impact on environment. In close collaboration with European Aeronautics Defense and Space Company (EADS), Singapore is set on a mission to push beyond boundaries to develop alternative fuel derived from microalgae, jatropha and camelina to reduce carbon's footprint by 80%.

There are also some good initiatives of government encouraging the residents to recycle with several recycling bins found in Housing estates, Libraries and even Government's offices. The government should continue the effort through strong delivery of message in campaigns to motivate the local residents to be environmental conscious and engage in recycling efforts. The government can consider giving out voucher in a campaign to motivate the residents to recycle for a sustainable environment.

Currently, most of the housing and commercial buildings are matured estate. Although, there are some initiatives by the government to install energy efficient lighting, but it is only done

on some of the buildings. The government should expedite this effort to upgrade more lighting to energy efficient ones.

As private developer, City Development Limited (CDL) is the early mover of Green Eco housing and commercial buildings, most of their projects are equipped with renewal energy into the architecture and infrastructure. These buildings are built with eco-friendly restrooms, energy efficient auto power on and off sensor lighting and energy efficient air-conditioning. City Development Limited (CDL) has further encouraged the green initiative by offering parking lots for Electric, hybrid and compressed natural gas (CNG) vehicles.

The government should consider working hand in hand with City Development Limited (CDL) and leverage on their expertise to build more eco-friendly Public housing, Commercial building and Shopping malls. The government should consider offering tax rebates to couples or families who are first time buyer or looking for upgrade to encourage them to purchase Eco housing. This will prevent these families from under the siege of developers who will skyrocket the housing prices. With more affordable housing, families will be able to afford their living expenses and may consider another new addition to their family. This will address greying population.

Currently, there are not many strong initiatives of promoting the use of eco-friendly vehicle. The government should implement the use of eco-friendly buses and encourage taxi operators and the residents to use eco-friendly vehicles. The current tax rebate for eco-friendly vehicle is not substantial. The car prices are extremely expensive with the need to bid and purchase the certificate of entitlement (COE) to own the vehicle, which cost around the same value as the car. This car pricing equates to a landed freehold property in Malaysia.

Apart from offering tax rebate on the car's market value, the government should offer tax concession on the certificate of entitlement (COE). It is important for Singapore to pursue Green initiative as it will change the way Singapore use resources and inputs productively.

From the input process of raw material and labour, it will reduce of environmental load and cost. This will help Singapore gain competitive advantages and earn recognition. This good value creation will attract other countries, firms and consumers to trade and associate with this corporate social responsible society (Porter, 2008, pp. 348).

8.4. Singapore's Role in Space Innovation

The regional rising affluence of the Asian consumer increased usage in sophisticated satellite technologies has fuel the demand for satellite services. Together with other ministries and space agencies, Singapore Economic Development Board (EDB) has setup Office for Space Technology and Industry (OSTIn) to capture this economic opportunities.

With Singapore's political neutrality, friendly business environment and existing technical capabilities, Singapore has witnessed a robust expansion of 12.2% with US\$ 290 billion in 2011 in the thriving space industry (Chua, 2013). The growth has been quite constant with annual increase at 10.9% since 2006 (Chua, 2013).

With the new space innovation research centre, it has create more high paying jobs opportunity in space, R&D, transportation, precision engineering, electronics and info-communication sector for the mathematicians, machinists, electrical and mechanical engineers, IT and software systems experts and business development managers. However, the skill limitation and expertise within Singapore make it difficult to pursue this ambition.

Hence, the government need to provide education or training in this aspect to better prepare the residents toward this innovation and reap competitive advantage from this aspiring project.

8.5. Countermeasures to prevent Property bubble

The sharp escalation of property pricing was a result of the foreigner taking advantage of the low interest rate which leads to high credit growth and housing inflation.

The global low interest rate environment has depressed the interest rate in Singapore. The low interest rate and asset misallocation will lead to asset reflation and rapid increase in property pricing. In addition to Monetary Authority of Singapore (MAS) implementation of additional buyer stamp duty and capping the loan amount as cooling measures, this issue

can be further address by tightening of the monetary exchange rate along with macro-prudential measures.

9. Conclusion

Over the years, Singapore has ride through many storms during nation building. As a small island confronted with land scarcity with no natural resources as compared to other bigger neighbouring countries with rich resources, the challenges faced by Singapore was intense.

Situation was tough when Singapore was forced to leave the Federation of Malaya in 1965 by the Sultan of Malaya at that time. However, Singapore was not intimidated by the challenges. Armed with great aspirations, strong execution and determination to move ahead has driven the nation to where it is today.

In contrary, Singapore cannot be internationally competitive and try to be a leader in most of the industries such as Electronics, Life sciences, Biomedical, Pharmaceutical, Healthcare, Education, Financial services and Tourism all at the same time. The talent and rising costs are the nation's limitation. However, Singapore could still engage all these ambitions but at different timeframe for better resource allocation.

The current contemporary and social issues may be severe but if the nation continues to make constant progress through the mentioned initiatives and strategies, it will leads to competency, new ideas and technology that will insulate this nation to stay forefront in this globalised world.

Although, Singapore has become a developed nation today, the city state should never be complacent and slow down any effort to progress. The nation should continue to take prudent approach to build a stronger foundation by adopting the mentioned strategies to weather off any future financial storms. Only through efforts, the nation will remain resilient, sustainable and gain competitive advantage to stay relevant in the changing strategic landscape.

Survey Questionnaire

Public Opinion on Singapore's Macroeconomic Policies, Immigration Policy and Competitiveness

Name: _____

Position: _____

Place of Birth: _____

Age Group:

- ☐ 20 – 24 year old
- ☐ 25 – 30 year old
- ☐ 31 – 35 year old
- ☐ 36 – 40 year old
- ☐ 41 – 45 year old
- ☐ 46 – 50 year old
- ☐ 51 – 55 year old
- ☐ 56 – 60 year old
- ☐ 61 – 65 year old

1. Do you think the Government has done their best to bring Singapore to where it is today?

- ☐ Strongly Agree
- ☐ Agree
- ☐ Disagree
- ☐ Strongly Disagree

2. Do you think the Government has done enough to help the residents cope up with the high cost of living and inflation?

- ☐ Strongly Agree
- ☐ Agree
- ☐ Disagree
- ☐ Strongly Disagree

3. Are you able to cope up with the current living, medical cost and inflation?

- ☐ Strongly Agree
- ☐ Agree
- ☐ Disagree
- ☐ Strongly Disagree

4. Are you concerned if your next generation can cope up with the future living cost and standard?

- ☐ Yes
- ☐ No
- ☐ This does not apply to me as I have not or do not intend to marry or start a family

5. Will you migrate to other country if citizenship or permanent residency is granted to you and your family when money is not an issue?

- ☐ Yes, Drop Singapore citizenship and leave
- ☐ No, I will not leave Singapore
- ☐ Maintain Singapore Citizenship but take Permanent residency in other country. Return as and when I like

6. Citizenship or permanent residency was granted to wealthy foreigner who placed at least S\$5 million in any of the Singapore bank. Do you think this is necessary to boost the wealth and GDP growth in Singapore?

- ☐ Strongly Agree
- ☐ Agree
- ☐ Disagree
- ☐ Strongly Disagree

7. Do you think the foreign talents are necessary to boost the economy?

- ☐ Strongly Agree
- ☐ Agree
- ☐ Disagree
- ☐ Strongly Disagree

8. Do you think it is necessary to allow cheap foreign workers to take up the low income job to boost the economy?

- ☐ Strongly Agree
- ☐ Agree
- ☐ Disagree
- ☐ Strongly Disagree

9. If foreign talents do not come in, do you think Singapore will be sustainable and grow?

- ☐ Strongly Agree
- ☐ Agree
- ☐ Disagree
- ☐ Strongly Disagree

10. Do you think Casino is a right choice to boost the economy growth?

- ☐ Strongly Agree
- ☐ Agree
- ☐ Disagree
- ☐ Strongly Disagree

11. What are the strategies the Government should adopt to gain competitive advantage over other emerging neighboring countries? (Choose up to a few choices)

- ☐ Use low cost strategy to remain competitive. Continue to manufacture, export to compete with other countries in price war.
- ☐ Leverage on Life Sciences, Biomedical, Pharmaceutical Manufacturing, Healthcare, Education, Financial services, Township planning and Export to prosper. Use these core competencies to mentor other emerging countries in their nation building and takes an opportunity to invest in their countries.
- ☐ Open a Silicon Valley to engage R&D and derive innovation. Create Singapore Brand Products and Services to market at premium, gain market share, competitive edge, profit and growth to boost the economy.
- ☐ Engage in Space Innovation and Underground Space development
- ☐ Leverage on Tourism, Casino and Singapore's Attraction

12. In the next General Election in 2016, what do you hope to see?

- ☐ Ruling Party continues to gain major votes to remain in ruling power
- ☐ More Opposition winning the seats but work hand-in hand with the major ruling party to shape Singapore
- ☐ A new ruling government

13. Has the Government done their best to handle the Haze Situation in June 2013?

- ☐ Strongly Agree
- ☐ Agree
- ☐ Disagree
- ☐ Strongly Disagree

14. What do you think about the 6.9 million Populations the Government is aiming to achieve by 2030?

- ☐ Should not increase so drastically
- ☐ Limit the number of highly skilled Professional Foreign talent
- ☐ Do not allow immigrant entry. Rely on the current population to multiply
- ☐ Do not allow immigrant entry. Let's nature take its course on the Population

15. Do you think the Marriage and Parenthood Incentive is attractive?

- ☐ Yes, I am planning to start a family soon or in the near future
- ☐ No, I have enough children. I do not want more
- ☐ Prefer to stay Single and Carefree
- ☐ Do not want to have children even if married as upbringing is costly

16. Do you think the Government has done enough to manage the Car ownership, Certificate on Entitlement (COE) and Property pricing?

- ☐ Yes, Government has implemented the right countermeasures to control Car ownership, COE and bring the Property price down
- ☐ No, Car ownership, COE and Property price is still very sky-high beyond reach
- ☐ No, with the COE, it does not reduce the road traffic. It is better to remove the COE and allow up to 100% of car loan. With lower car ownership, I can consider starting a family
- ☐ Should prevent the Skyrocketing price in the first place

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