Challenges in managing immigrant numbers under demand-driven immigration systems: The case of Singapore

Introduction

In recent years international migration has become an increasingly fraught issue across the globe: with the growth of anti-immigration parties in the U.S. and Europe and the persistent refugee crisis in the Middle East, many countries are either considering or have already begun to reform their immigration policies.

Many states that traditionally employed points-based triage systems to select candidates for economic migration are moving towards regulations that prioritise local businesses' labour demands.[1] While this approach is frequently more efficient, all immigration systems have their advantages and their disadvantages. Points-based systems tend to favour high-productivity workers. They can also function pro-cyclically, causing higher unemployment during recessions. By contrast, employer-determined systems are more responsive to market conditions, but can render the economy dependent upon cheap foreign labour.

As a country with a long history of balancing the advantages and disadvantages of an employer-driven immigration system, Singapore constitutes a useful example for countries considering a change. While immigration has constituted a major source of economic growth, controlling immigrant numbers has proved extremely difficult, leading to popular dissatisfaction expressed widely in the press, online, and at the ballot box. Part I of this case study will look at the differences between supply- and demand-driven immigration systems and their various plus and minus points (I), before describing and evaluating the two principal measures taken by the Singapore government with the goal of controlling immigrant numbers: the immigration levy (II) and the dependency ceiling (III).

Part II of this case study will look at the overall economic effects of immigration in Singapore, evaluating the methods adopted by the government in its attempts to maximise the benefits while minimising or eliminating disadvantages.

[1] Alexander, Christopher. "From Supply to Demand-driven in Immigration", *Policy Magazine*, November/December 2014.

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I. Supply- and demand-driven immigration systems: a comparison

Systems for controlling immigration can be broken down into two principal types: demand-driven or supply-driven.[2] In practical terms, the majority of states combine features from both types, while leaning more towards one type. The definitions provided here, for reference purposes, are of theoretically “pure” systems.

Supply-driven immigration

Under a supply-driven immigration system, the prospective immigrant initiates the immigration process him- or herself, via an application to a government agency in the destination country. The host government applies its own criteria (often in the form of a points system, sometimes combined with quotas) to decide whether temporary or permanent leave to remain should be granted. Having received authorisation to stay in the country, the immigrant may then look for work. Countries employing supply-driven immigration systems frequently also have policies of accepting migration for family reunions and by vetted refugees, though this is not central to the concept.

Canada and Australia are two frequently-cited examples of countries using largely supply-driven immigration systems. Canada, dependent upon immigration for growth, developed its point-based immigration system in the 1960s.[3] Canada splits incomers into four categories: family reunions, refugees, temporary workers, and “independent” applicants. The last category accounts for the majority of immigrants, with applications being assessed according to a 100-point system. Candidates are given points according to their English and/or French language ability, education, work history, age, whether they have a pre-arranged job offer, and “adaptability”.[4] According to 2013 OECD statistics, 20% of Canadian residents were born abroad.[5]

Like Canada, Australia accepts immigrants based on a points system. Applicants must speak English, be under 50 and have skills relevant to jobs on the official Skilled Occupations List. This list is decided on in collaboration between local and regional governments, trade unions, and businesses. Prospective immigrants are then awarded points based on their age, English language ability, employment experience, qualifications, and other factors such as an ability to speak other languages, willingness to move to a low-population-growth area, spouse’s (or partner’s) skills, and professional experience in Australia. Additionally, Australia accepts a certain number of refugees and family reunions, and operates a demand-driven

[2] Rahman, Md Mizanur. 2017. “Immigration and Integration Policy in Singapore” in *Bangladeshi migration to Singapore: a process-oriented approach*. Springer.

[3] Department of Citizenship and Immigration. 1998. *Building on a Strong Foundation for the 21st Century: New Directions for Immigration and Refugee Policy and Legislation*. Society for Research into Higher Education and Open University Press.

[4] O’Shea, Edwina. "Missing the Point (s): The declining fortunes of Canada’s economic immigration program." *Transatlantic Academy Paper Series* (2009): 19.

[5] OECD data, retrieved 20 November 2017: https://data.oecd.org/migration/foreign-born-population.htm

Temporary Business Long Stay Visa system.[6] According to 2013 OECD statistics, 27.7% of Australia's resident population was foreign-born.[7]

Demand-driven immigration

Under a demand-driven immigration system, the immigration process is initiated within the host country. Prospective employers recruit candidates abroad and then apply to the host country's government for a visa. The government applies a set of criteria in awarding a visa. Generally, this decision is based on the likelihood that the candidates would not undercut local wages or increase domestic unemployment. Visas are generally tied to employment with the employers that applied for the visa, and immigrants must leave the country upon retrenchment. Countries employing demand-driven systems tend to limit or ban migration for family reunion purposes and by refugees, though this is not always the case.

Saudi Arabia exemplifies an extreme example of a demand-driven immigration system, insofar as that all visitors must (in theory at least) have a local sponsor, and cannot enter or leave the country without their sponsor's permission.[8] According to Saudi statistics, in 2013 32.4% of the population was born abroad, though other sources provide differing figures.[9]

A more moderate version of a demand-driven system was implemented by Sweden in 2008. Under this system, prospective economic migrants from outside the European Union are dealt with under a system that requires them to have a job offer with wages that are in-line with local industry standards before travelling to the country. However, as non-EU economic migrants constitute only a small fraction of the total (in 2016, for example, 12,526 work permits were granted, but 67,258 asylum applications were accepted[10]), the system is better described as a hybrid, rather than a purely demand-driven one. According to 2013 OECD statistics, 16% of Swedish residents were born abroad.[11]

Pros and Cons

Each system has its advantages and disadvantages. Supply-driven systems may allow governments tighter control over the number of immigrants they accept, but they also tend to suffer from bureaucratic inefficiency, with visas being subject to delays and immigrants accepted whose skill profiles do not fit those currently in demand among employers.[12] All of these factors can lead to a situation in which immigrants find themselves unemployed or

[6] Koslowski, Rey. 2014. "Selective migration policy models and changing realities of implementation." *International Migration* 52, no. 3: 26-39.
[7] OECD data, retrieved 20 November 2017: https://data.oecd.org/migration/foreign-born-population.htm
[8] Sherry, Virginia N. *Bad dreams: Exploitation and abuse of migrant workers in Saudi Arabia*. Vol. 15. Human Rights Watch, 2004.
[9] De Bel-Air, Françoise. 2014. *Demography, migration and labour market in Saudi Arabia*. Gulf Research Center.
[10] Swedish Migration Agency statistics. Retrieved 20 November 2017: https://www.migrationsverket.se/English/About-the-Migration-Agency/Facts-and-statistics-/Statistics/2016.html
[11] OECD data, retrieved 20 November 2017: https://data.oecd.org/migration/foreign-born-population.htm
[12] Picot, Garnett. 2004. "The deteriorating economic welfare of Canadian immigrants." *Canadian Journal of Urban Research* 13, no. 1: 25-45.

under-employed (having taken up jobs that may be ill-adapted to their skills).[13] Moreover, residence permits in supply-driven systems are not generally dependent upon employment, meaning that immigration can have a pro-cyclical effect upon the economy. Foreign workers who are welcomed in periods of high-growth may be among the first to be laid off in recessions, adding to unemployment.[14]

Demand-driven systems, by contrast, tend to be much more responsive to economic pressures, and allow governments to use immigration as a counter-cyclical tool. Firms import foreign workers during high growth periods and repatriate them in recessions, allowing for retrenchments without increasing domestic unemployment. However, demand-driven systems also come with disadvantages. The economy can quickly become dependent upon cheap(er) foreign labour, and limiting the overall numbers of arrivals can grow politically difficult or even impossible.[15] In the absence of minimum wage laws, foreign workers may undercut the wages of local workers, leading to unemployment, negatively impact living standards, or both. Demand-driven systems also make immigrants dependent upon the goodwill of their employers for their right to remain, producing a power-imbalance that frequently leads to abusive and exploitative practices.[16]

In the Singaporean case, the principal problem the government has had to deal with has been the growth in immigrant numbers. In the immediate aftermath of independence in 1965, Singapore was faced with high and rising unemployment, as the Common Market with the Malaysian hinterland was dissolved and British army bases were shut down. Official unemployment rates hit 11-12%, with the real rates probably far higher. However, with the rapid industrialisation plan implemented by the government, this situation did not last long; and by the mid-70's Singapore was once again importing workers—mostly low-skilled manual labourers coming mainly from Malaysia, but also highly qualified executives and technical professionals from more developed countries who helped with the industrialisation effort. By 2016 the total foreign population was around 1,670,000, and was forecast to continue rising.[17]

[13] Koslowski, 2014.
[14] Barrett, Alan, and Elish Kelly. 2012. "The impact of Ireland's recession on the labour market outcomes of its immigrants." *European Journal of Population/Revue européenne de Démographie* 28, no. 1: 91-111.
[15] Torofdar, Yusuf Abdul-Jobbar, and Manuel Melvyn Yunggar. 2012. "Nationalization of Manpower Resources in Saudi Arabia: A Closer View at 'Saudization'." In *International Conference on Human Resource Management and Professional Development for the Digital Age*. Proceedings, p. 50. Global Science and Technology Forum.
[16] Khan, Azfar, and Hélène Harroff-Tavel. 2011. "Reforming the kafala: Challenges and opportunities in moving forward." *Asian and Pacific Migration Journal* 20, no. 3-4: 293-313.
[17] National Population and Talent Division. 2013. *A Sustainable Population for a Dynamic Singapore: Population White Paper*.

Year	**1970**	**1980**	**1990**	**2000**	**2010**
Total population	2,074,500	2,413,900	3,047,100	4,027,900	5,067,700
Citizens	90.4%	90.9%	86.1%	74.1%	63.6%
Permanent residents	6.7%	3.6%	3.7%	7.1%	10.7%
Foreigners	2.9%	5.5%	10.2%	18.7%	25.7%

Table 1: Breakdown of Singapore's population 1970-2010, adapted from Yap Mui Teng and Christopher Gee, *Singapore Chronicles: Demography*, Straits Times Books, December 2016

In response to Singapore's growing dependence on immigration, particularly low-skilled migrant labour from less developed countries, the government introduced two policies aimed at managing and reducing this dependency: the immigration levy and the dependency ceiling system.

II. The Singapore immigration levy

Intended to allow the government to control immigration by manipulating the price of foreign labour, the levy's effect on overall numbers of foreign workers appears to have been limited.

a) The immigration levy: policy design and adaptation

During the early years of Singapore's existence as an independent state, the government saw free-market competition between local and foreign workers as healthy for all concerned. Prime Minister Lee Kuan Yew said that immigrants would "do many jobs better than the next generation Singaporean would because the next generation Singaporean will have been brought up in an easier environment that has not deprived him of enough basic necessities to make him really want to work so hard."[18]

However, this position changed over time. By the early 1980s Singapore's leaders had already decided that the country was growing too reliant upon cheap foreign labour, and that the economy would need to produce higher value-added goods if it wished to maintain current growth rates. Less tangible, but no less important, was the goal of building a cohesive sense of belonging among Singaporean citizens.[19] It was decided that low-skilled foreign workers would be phased out by 1986 except in the construction and shipbuilding sectors, and for domestic labour, as the economy was restructured to focus on high-tech

[18] Pang, Eng Fong. 1979. "Public Policy on Population, Employment and Immigration". *Public Policy and Population Change in Singapore*. Edited by P.SJ. Chen and J.T. Fawce New York: The Population Council.
[19] Pang, Eng Fong, and Linda Lim. 1982. "Foreign labor and economic development in Singapore." *International Migration Review*: 548-576.

manufacturing and service industries.[20] The long-term goal was to achieve a fully Singaporean (i.e. citizens and permanent residents) workforce by 1991. As Lee put it in his speech for the 1982 National Day:

> *Workers we want to retain beyond 1990 should be those who will raise our level of productivity. We shall give such workers permanent residence with a view to citizenship. Then we shall have a more homogenous workforce, working together as a team, because they all feel committed to Singapore… Nations which used immigrant labour to do their heavy and tough jobs have inherited grave social problems.*[21]

Even as late as 1984, Prof S. Jayakumar (then-Minister for Labour and Second Minister for Law and Second Minister for Home Affairs) reiterated the government's position in Parliament:

> *"What every Singaporean needs to know is that there is a large number of foreign workers, 150,000, and we have to have them temporarily. But in the long-term economic and social interest, they will have to be phased out. The Government will phase them out. But while they are here, the Government will take strong measures to ensure that they do not sink roots here…"*[22] *[emphasis added]*

The tool that the government initially intended to rely upon to achieve this reduction of foreign labour was the foreign worker levy (FWL).

Prior to the introduction of the levy, low-skilled workers and their employers had contributed to the Central Provident Fund (CPF—Singapore's obligatory social security and savings scheme), in the same way as local workers.[23] These contributions were removed with the introduction of the FWL, a monthly fee paid by businesses to the Ministry of Manpower for every foreign worker employed. The levy was intended both to prevent cheap labour from abroad from undercutting local wages and to allow the government to progressively "price foreign workers out of the market" by raising the charge to a point at which it would no longer be more economical for businesses to employ foreign staff. The levy was also intended to help improve productivity, with the income raised being put into a fund to help companies pay for mechanisation—thus making capital investments cheaper and providing an additional incentive to employ fewer foreign workers.

The levy was designed to be modifiable in response to changes in external circumstances. In 1987 the levy dropped to $140 in response to tougher economic conditions, being raised again to $170 in early 1989 in response to economic recovery. In mid-1989 it was raised

[20] Obligatory medical coverage for work permit holders did not make a comeback until 1997, with the modification of the Employment of Foreign Manpower Act, obliging employers to take out a minimum of $10,000-worth of insurance on behalf of their workers.
[21] Lee Kuan Yew, National Day Speech, 9 August 1982.
[22] Singapore Parliament, "Foreign Workers (Particulars)", March 14, 1984.
[23] Though not high-skilled foreign workers, for whom CPF contributions were and remain optional.

again to $250, but only for the manufacturing and construction sectors. Employers in other sectors were only charged $220 per worker.[24]

This marked the beginning of a process of tweaking that saw the FWL system grow increasingly complex and differentiated (see Annex 1 for details). By 1997, different levies applied in the marine, construction, process, service, manufacturing, and domestic sectors. Moreover, within any given sector (except domestic labour, which has always been considered a special case), the amount paid per worker also varied based on the skill certifications of the workers and the number of foreign labourers employed by the business. For example, in 1997 an employer in the construction sector paid a monthly levy of $100 for each worker certified as skilled[25] but $470 for each unskilled worker. Similarly, businesses in the manufacturing sector paid $330 per worker if 40% or fewer of their employees were foreign workers, and $400 per worker above 40%.[26]

b) The immigration levy: outcomes

In practice, the levy's results were mixed. While the restructuring of Singapore's economy was a resounding success, it is hard to tell what part of this is attributable to the levy. Success was also limited as far as protecting local wages and improving mechanisation were concerned. Singapore has a lower wage-to-GDP share than Taiwan, Hong Kong and South Korea – countries with similar levels of *per capita* GDP. This disproportionately affects lower-paid local workers.[27]

Moreover, studies show that reliance upon foreign labour has slowed mechanisation in the sectors where it is more prevalent, as compared to the situation in other countries with more restrictive immigration systems. Japan, in particular, was regularly cited as a comparison; having a far more restrictive immigration policy than Singapore, it was obliged to substitute automation for low-skilled workers, thus achieving higher productivity rates.[28]

While estimating the precise effects of the levy would be difficult even were the data concerning its implementation available,[29] what can be said with certainty is that the FWL failed in its goal of reducing Singapore's dependence upon low-skilled foreign labour.[30] From 5.5% of the total in 1980, Singapore's foreign population (permanent residents excluded) rose to 10.2% in 1990, 18.7% in 2000 and 25.7% in 2010.[31] As targets for reducing or eliminating dependence upon foreign labour were repeatedly missed, the government began to accept that given businesses' apparently insatiable demand, eliminating

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[24] Figures from MoM documents.

[25] "Skilled" in this case refers mainly to industry-specific skills such as welding and scaffolding, as well as high-school diplomas or equivalent qualifications from the workers' home countries, rather than the "white collar" skills expected of workers applying for an EP.

[26] Figures from MoM documents and website.

[27] Chia, Siow Yue. 2011. *Foreign labor in Singapore: Trends, policies, impacts, and challenges*. No. 2011-24. PIDS Discussion Paper Series.

[28] Ibid.

[29] Low, Linda, Soon Teck Wong, and Toh Mun Heng. 1989. "The Foreign Worker Levy in Singapore's Industrial Sector: Efficacy and Issues." *Southeast Asian Journal of Social Science*: 1-20.

[30] Ibid.

[31] Yap Mui Teng and Gee, Christopher. 2016. *Singapore Chronicles: Demography*, Straits Times Press.

dependence upon foreign labour would not be a feasible policy goal. A 1986 report that reviewed Singapore's economic strategies wrote that:

> *[T]o be realistic, our industries will require foreign workers to overcome temporary shortages, and to work in jobs where it has proven difficult to employ Singaporeans. We should therefore continue to allow a revolving pool of foreign workers on short-term work permits. In addition, we should provide for the retention of skilled workers who can be assimiliated [sic] as part of our permanent workforce.*[32]

Rather than being a tool to reduce dependency on foreign labour and encourage greater investment in skills and capital, the Ministry of Manpower (MoM) now described the levy as "a pricing mechanism to regulate the number of foreign workers in Singapore".[33]

There is some statistical evidence to show that the levy is indeed successful in its function as a cyclical buffer. However, an exception came following the 1997 Asian Financial Crisis, where there was a brief spike in Work Permit cancellations because of employers hit by the crisis defaulting on their levy payments.[34] In the wake of these cancellations, the government declared that there would be no mass repatriations.[35]

The government made a conscious decision not to prioritise foreign workers for layoffs, hoping that increased competition would give local workers an incentive to improve their skills, via various training schemes offered by the state. Then-Minister for Home Affairs, Wong Kan Seng, declared that while Singaporeans would always have priority when it came to training and redistribution, they had to face open competition on the job market.[36] Similarly, then-Minister Without Portfolio and Secretary-General of the National Trades Union Congress, Lim Boon Heng, said "If the better worker is a foreigner, the Singaporean is retrenched. If the better worker is Singaporean, then the foreign worker goes. If both are equally good, then the Singaporean stays and the foreign worker goes."[37]

Interestingly, the use of the levy and dependency ceiling as cyclical buffers provoked much less irritation among Singapore's neighbours than the practice of mass repatriations did, though both have the same goal. Presumably this was because the levy was seen as an automatic stabiliser rather than an active decision on the part of the leadership.[38]

Various reasons have been proffered for the levy's failure to achieve its original goals. It is difficult to establish a clear picture of the level and elasticity of demand for foreign labour,

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[32] Singapore Economic Committee. 1986. *The Singapore Economy: New Directions*, Ministry of Trade and industry.

[33] Source: MoM website, http://www.mom.gov.sg/passes-and-permits/work-permit-for-foreign-worker/foreign-worker-levy/what-is-the-foreign-worker-levy, retrieved 8 November 2017.

[34] Ibid.

[35] Yeoh, Brenda SA. 2006. "Bifurcated labour: the unequal incorporation of transmigrants in Singapore." *Tijdschrift voor economische en sociale geografie* 97, no. 1: 26-37.

36 Leong, Ching Ching, "Singaporeans will not be able to compete without foreign talent", Straits Times, 13 September 1997.

[37] Singapore Parliamentary Report (1996, January 16), Vol. 68, cols 187.

[38] Low, Wong and Heng, 1989.

and the government appears to have underestimated the former and overestimated the latter, thus setting the levy too low to meaningfully change business behaviour.[39] Moreover, it seems probable that employers and recruitment agencies have succeeded in transferring a part of the burden of the levy to employees, in the form of reduced wages and increased fees/kickbacks. Employees who cannot afford to have their contracts cancelled (as this would lead to repatriation) are in poor position to protest against such practices.[40] This reduces the disincentive on employers hiring abroad.

It is, however, interesting to note that the Singapore government—frequently willing to exercise strict interventionist control of the economy—chose to back down and accept this state of affairs rather than ratcheting up levy prices to have a greater effect on demand. The implication is that it either concluded that the economic benefits provided by a certain level of low-skilled immigration outweighed the costs, or that being overly strident in reducing the amount of foreign labour could harm Singapore's pro-business image.

III. The dependency ceiling system

In 1987, having taken stock of the levy's failure to achieve numerical targets, the government introduced a second, complementary immigration control policy in the form of the dependency ceiling: a soft quota on the number of foreign workers that could be employed by any given business.

a) Dependency ceilings: policy design and adaptation

In its original (and simplest) form, the dependency ceiling regulations stipulated that no more than 50% of the workers in any given company could be from abroad. Much like the FWL, dependency ceiling levels were designed both to function as an automatic stabiliser and to be adjusted by the authorities according to economic conditions, and grew more complex over time. In 1998 different dependency ceilings were set for different sectors: 83.3% in construction, for example, but only 30% in service industries.

At the same time, the man-year entitlement (MYE) system was introduced in the construction sector, to enable companies to better manage long term projects with multiple subcontractors. Under this system, the amount of foreign labour[41] allowed on any given construction project was determined via a formula and awarded to the main contractor in the form of "man-years". The main contractor could then to share out its assigned man-years among its subcontractors. These subcontractors could then convert the man-years allotted to them into Work Permits. In theory, a subcontractor with an allocation of 100 man-years could convert this into 100 one-year Work Permits or 50 two-year Work Permits, according to its needs.

Much like the levy, the dependency ceiling has been tweaked over the years (see Annex 2 for details). Following the 2007 financial crisis, for example, the dependency ceiling was

[39] Ibid.

[40] Bal, Charanpal. 2013. *The politics of obedience: Bangladeshi construction workers and the migrant labour regime in Singapore*. PhD diss., Murdoch University.

[41] Except Malaysians, who have always benefited from special provisions for historical reasons.

raised across the board as a counter-cyclical measure, though by different amounts in each sector—by 5% in manufacturing, but by 8.3% in marine industries, for example.

b) Outcomes

There is some evidence that the introduction of the dependency ceiling system led the proliferation of new forms of immigration fraud. Notably, strategies to trick the administration into allowing employers to import more foreign workers than permitted have been uncovered by the authorities. In July 2017, for example, an criminal syndicate was found to be creating local shell companies staffed with "phantom workers" (locals listed as employees without actually working there)[42] in order to bring in foreign staff who were then re-deployed illegally elsewhere. In this case, the traffickers received kickbacks from the workers themselves, who were then left to find their own work in Singapore. Other companies have been discovered hiding phantom workers in complex subcontracting structures made possible by the MYE system.[43]

Despite the presence of illegal immigrants, however, it is possible to estimate the concrete effects of changes in the dependency ceiling rates relatively easily, in contrast with the FWL. A given reduction in the dependency ceiling for a given industry will lead to a corresponding reduction in the number of immigrant workers in that sector. However, even though the government has this lever at its disposal, immigrant numbers have continued to rise, implying that while the government is willing to moderate the growth of immigrant numbers somewhat, it has no wish to induce a reduction. Once again, this is likely to be recognition of the critical contribution by foreign labour to economic growth and an unwillingness to antagonise the businesses that depend upon them.

Conclusion: walking the line between economic growth and reducing dependence upon immigration

The Singapore's government has always staked its claim to rule based upon the performance legitimacy conferred by its capacity to foster economic growth and development. Likewise, voters traditionally accorded their support based upon the same criteria, with elections effectively serving as referenda on the performance of the PAP.[44]

For many years large-scale immigration constituted one of the key drivers of economic success. A 2011 study showed that a 1% increase in the number of Work Permit holders supported employment for 2.4% of skilled and 1.4% of unskilled Singaporeans, while a 1% increase in the number of EP holders supports employment for 1.9% of skilled and 0.2% of unskilled Singaporeans.[45] This has led to criticisms of efforts to restrict immigrant numbers, with local economist Tan Hak Bin asserting that the policy of moderating foreign labour

[42] Ong, Y. 2014. Singapore's phantom workers. *Journal of Contemporary Asia*, 44(3), 443-463.
[43] *Straits Times*, "MOM busts illegal employment syndicate, arrests 13", 13 July 2017. Retrieved 22 November 2017. http://www.channelnewsasia.com/news/singapore/mom-busts-illegal-employment-syndicate-arrests-13-9027686
[44] Wong, Benjamin, and Xunming Huang. 2011. "The Political Legitimacy of the PAP Government in Singapore." In *Political Legitimacy in Asia*, pp. 127-147. Palgrave Macmillan, New York.
[45] Chia, 2011.

growth had cut growth by half in 2012, which potentially deprived the government of $1.1 billion in tax revenues.[46] This negative impact on tax revenues was likely to increase in the following years as the birth-rate continued to fall and baby boomers retired.

However, in recent years voters' perspectives and priorities have evolved. While economic growth was still seen as important, they have increasingly begun to prioritise quality-of-life issues.[47] Notably, the public has grown increasingly worried about the effects of immigration on the island's infrastructure, as well as the country's nascent sense of shared culture, and the possible negative impact on their own jobs and wages.[48] In the general election of 2011, PAP achieved a record low vote-share of 60.14%, a setback attributed to public anger at the government's "open-door" immigration policies among other things.[49] The government responded by promising to strictly control population growth, and in 2013 released a Population White Paper that planed for a population increase of only around 100,000 people per year, with new permanent residents and naturalisations being used to counterbalance Singapore's declining birth rate.[50] Rather than appeasing public sentiment, however, this merely aggravated it, as media and members of the public, shocked by the headline population projection of 6.9 million in 2030 (up from the 5.6 million in 2013), expressed outrage at the government's plans. The document provoked criticism that was expressed in social media, in letters to local papers, and even in Parliament. The unhappiness culminating in a rare incident of public protest, as several thousand locals staged a demonstration against the white paper.[51]

The result has been that the government, rather than merely exercising its own discretion regarding the policies most likely to induce economic growth, is now expected to balance the two competing imperatives of high growth and reduced immigration. As a Singapore Management University faculty and former Nominated Member of Parliament, Eugene K. B. Tan, put it: "While Singaporeans can, by and large accept the economic logic of an open-door immigration policy, the emotions resist. The head understands but the heart does not quite accept."[52]

Part II of this case study will look more closely at the other part of the equation that the government must consider: the economic costs and benefits of immigration. **Part II** evaluates the overall economic boost provided by immigration in Singapore, compares this with other countries, and analyses the measures taken by the government in its attempts to

[46] Yahya, Yasmine. "Tighter foreign labour rules led to the Government having to forgo $1.1 billion of potential tax revenue, says Dr Chua", *Straits Times*, 28 October 2012.
[47] Asher, Mukul. "Singapore in 2011: the emergence of quality-of-life concerns", *East Asia Forum*, 17 January 2012.
[48] Tunon, Max, and Nilim Baruah. 2012. "Public attitudes towards migrant workers in Asia." *Migration and Development* 1, no. 1: 149-162.
[49] Yeoh, Brenda SA, and Weiqiang Lin. 2013. "Chinese migration to Singapore: Discourses and discontents in a globalizing nation-state." *Asian and Pacific Migration Journal* 22, no. 1: 31-54.
[50] National Population and Talent Division, 2013.
[51] *The Economist*, "To the sodden field!", 19 February 2013.
[52] Singapore Management University. 2017. "Better than bread and butter: Singapore's general election 2011", Knowledge@SMU.

maximise the benefits, minimise the negative aspects, and deal with unforeseen consequences.

Annex 1: Foreign worker levy changes over the years

Year	1982	1987	1988	1989	1995	1997	1998	1999	2003	2004	2005	2006
S Pass	NA	NA	NA	NA	NA	NA	NA	NA	NA	$50.00	$80.00	
Construction	30% of wages or $150	$140	$170	$250	$200-$370	$200-$440	$100-$470	$30-$470	$30-$470	$30-470		
Manufacturing	30% of wages or $150	$140	$170	$250		$200-$440	$100-$400	$30-$470	$30-$470	$50		$100-$450
Marine	30% of wages or $150	$140	$170	$220			$100-$385	$30-$470	$30-$470	$50		
Process	30% of wages or $150	$140	$170	$220			$100-$470	$30-$470	$30-$470	$50		
Services	30% of wages or $150	$140	$170	$220		$200-$330	$100-$330	$30-$470	$30-$470	$50		$100-$450
Domestic	30% of wages or $150	$140	$170	$220		$330	$345	$345	$345	$345 (normal rate) $250 (concessionary rate)	$295 (normal rate) $250 (concessionary rate)	$295 (normal rate) $200 (concessionary rate)

Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
S Pass	$50.00		$50.00	$110-150	$120-$180	$250-$390	$300-$450	$315-$550	$315-$550	$330-650	$330-$650
Construction	$150-$470		$150-$470	$160-$470	$180-$380	$250-$500	$300-$600	$300-$950	$300-$950	$300-$950	$300-$950
Manufacturing	$150-$450		$150-$450	$170-$450	$180-$450	$230-$500	$250-$550	$250-$650	$250-$650	$250-$650	$300-$800
Marine	$150-$295		$150-$295	$170-$300	$180-$300	$210-$310	$250-$350	$300-$400	$300-$400	$350-$500	$300-500
Process	$150-$310		$450-$300	$160-$310	$180-$380	$210-$470	$250-$550	$300-$750	$300-$750	$300-$800	$300-$800
Services	$150-$450		$150-$450	$170-$450	$180-$450	$240-$500	$300-$600	$300-$750	$300-$750	$300-800	$300-$800
Domestic	$295 (normal rate) $200 (concessionary rate)	$265 (normal rate) $170 (concessionary rate)	$265 (normal rate) $170 (concessionary rate)	$265 (normal rate) $170 (concessionary rate)	$265 (normal rate) $170 (concessionary rate)	$265 (normal rate) $170 (concessionary rate)	$265 (normal rate) $120 (concessionary rate)	$265 (normal rate) $120 (concessionary rate)	$265 (normal rate) $60 (concessionary rate)	$265 (normal rate) $60 (concessionary rate)	$265 (normal rate) $60 (concessionary rate)

Figures taken from: MoM website, Low, Wong and Heng (1989), Hui (1998), Chia (2011). Empty cells indicate years/sectors for which no data is available.

Annex 2 : Dependency Ceiling Changes over the years

Year	1987	1988	1989	1998	2004	2005	2006	2007	2009	2010	2011	2012	2013	2014	2015	2016	2017
S Pass	-	-	-		5.0%	5.0%	10.0%	10.0%	25.0%	25.0%	25.0%	25.0%	20.0%	15.0% (service sector) 20.0% (other sectors)	15.0% (service sector) 20.0% (other sectors)	15.0% (service sector) 20.0% (other sectors)	15.0% (service sector) 20.0% (other sectors)
Construction	50.0%	50.0%	40.0%	83.3%				80.0%	87.5%	87.5%	87.5%	87.5%	87.5%	87.5%	87.5%	87.5%	87.5%
Manufacturing	50.0%	50.0%	40.0%	50.0%	50.0%	60.0%	60.0%	60.0%	65.0%	65.0%	65.0%	60.0%	60.0%	60.0%	60.0%	60.0%	60.0%
Marine	50.0%	50.0%	40.0%	75.0%	75.0%			75.0%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	81.8%	81.8%
Process	50.0%	50.0%	40.0%					80.0%	87.5%	87.5%	87.5%	87.5%	87.5%	87.5%	87.5%	87.5%	87.5%
Services	50.0%	50.0%	40.0%	30.0%	30.0%	40.0%	40.0%	45.0%	50.0%	50.0%	50.0%	50.0%	45.0%	40.0%	40.0%	40.0%	40.0%

Figures taken from: MoM website, Hui (1998). Empty cells indicate years/sectors for which no data is available.

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