

CORRELATION ANALYSIS OF SINGAPOREAN LAND RECLAMATION TOWARDS ITS NATIONAL POPULATION

Akmalhisham Jasni, Sharifah Munirah Alatas, Sharifah Mastura Syed Abdullah

ABSTRACT

Land reclamation is a technique that refers to sand dredging in a given location and the sand is then placed at another location by the shores to elevate the seabed surface level until it becomes a new landscape. Among the countries that actively embark into land reclamation activities in the South East Asian region is Singapore. This is because, Singapore is one of the countries which experience land insufficiency and have a limited coastal area. This study has focused the pattern of Singaporean population, and to identify its relevance to the land reclamation objectives. The collection of primary information was done through direct site observation, and through several interviews. Meanwhile, the collection of secondary materials was done using the library study method in relevant premises. The step taken by Singapore to reclaim its territories is not only because of the increased population alone. This study finds that the number of Singaporean native citizens' population has declined over the years based on the total fertility rate (TFR) of its natives. This is due to the fact that although Singapore has implemented land reclamation up until today, the latest statistics of population issued by the National Population and Talent Division, Prime Minister's Office in Singapore has recorded a drop of the TFR for its people to 1.19 point, and stays under the level of 2.10 point for the past 30 years. Thus this study has found that, there is no any relationship can be established between the land reclamation activities towards its population issues in Singapore.

Keywords: land reclamation, population, total fertility rate (TFR), native citizen, immigration

ANALISIS KORELASI PENAMBAKAN WILAYAH SINGAPURA TERHADAP POPULASI PENDUDUKNYA

ABSTRAK

Penambakan wilayah adalah satu teknik yang merujuk kepada kerja-kerja pengorekan pasir di sesuatu lokasi, dan pasir itu kemudiannya ditimbus ke lokasi tertentu di pinggir pantai bagi meninggikan aras permukaan dasar laut sehingga menjadi tapak muka bumi yang baru. Di antara negara yang sangat giat melakukan aktiviti penambakan wilayah di rantau Asia Tenggara ialah Singapura. Ini adalah kerana Singapura mempunyai bidang tanah dan kawasan pantai yang terhad. Kajian ini menumpukan analisis populasi penduduk Singapura, bagi mengenalpasti sejauhmanakah relevannya corak populasi penduduk negara tersebut terhadap tujuan penambakan wilayah di Singapura. Pengumpulan maklumat primer dilaksanakan secara pemerhatian terus di lapangan dan juga membuat beberapa temubual mendalam. Manakala maklumat sekunder diperolehi melalui kajian kepustakaan. Di dalam kajian ini, suatu andaian utama telah dibangkitkan, di mana usaha-usaha penambakan

wilayah ini bukanlah disebabkan faktor peningkatan populasi penduduknya semata-mata. Tatkala Singapura kelihatan agresif melaksanakan penambakan wilayahnya, statistik populasi terkini yang dikeluarkan oleh pihak National Population and Talent Division, Prime Minister's Office di Singapura telah merekodkan kejatuhan terendah kadar fertiliti keseluruhan bagi rakyatnya sehingga 1.20 mata, dan kekal di bawah paras 2.10 mata sejak lebih dari 30 tahun yang lalu. Justeru kajian mendapati bahawa tiada korelasi kukuh yang boleh menghubungkan aktiviti penambakan wilayah terhadap jumlah populasi penduduk Singapura.

Kata kunci: reklamasi tanah, penduduk, jumlah kadar kesuburan (TFR), warganegara asli, imigresen

INTRODUCTION

Land reclamation is a technique that refers to sand dredging in a given location and the sand is then placed at another location by the shores to elevate the seabed surface level until it becomes a new landscape. The new surface of landscape that has been reclaimed, would normally reach a level of height that cannot be re-penetrated by the sea water (Schwartz 2005). To date, there are several parts of the world which have, and are undergoing land reclamation programs which include Singapore, Hong Kong and Macau which are located in the South East Asia (Glaser, Habertzettl, and Walsh 1991). Other than that, the Netherlands is among the countries which have an abundance of lands, obtained through a large-scale reclamation process carried out along its coasts. Such a large-scale initiative does not only consider some engineering aspects like coastal engineering, structure, materials and bathymetry, but it also takes into account the physical and economic planning aspects in the territories being reclaimed. Another country that also implements land reclamation in river estuaries and low-level coastal areas is Japan, where this country has a long history of land reclamation of approximately 400 years.

Next, among the countries that actively embark into land reclamation activities in the South East Asian region is Singapore. This is because, Singapore is one of the countries which experience land insufficiency and have a limited coastal area. This country spans 710.2 sq km and is located in the north of the Malaysian Peninsula. With a total number of population recorded up until 2013 of 5,399,200 people, the population density had reached 7,540 per sq per km (Department of Statistics Singapore 2014). This means that with a span of one sq per km, there were as many as 7,540 Singaporean citizens in a given place in 2013. At the time when the overall population of Singapore was said to have increased until it exceeded 5 million people, the Singaporean government had faced problems in providing the space and land area that were sufficient for the purpose of accommodation, housing, industry and municipality. The problems that Singapore has to address have caused it to look for solutions as to how they can be in possession of lands to cater for accommodation needs and housing of the people, and further resolve the issue of overcrowding. One of the most practical alternatives that they can do is to carry out land reclamation in the borders of its own country.

According to Tommy Koh, a law professor in Singapore who is directly involved in handling the Malaysian case of protest toward Singapore with regard to the latter's land reclamation activities at the International Marine Legislation Tribunal, owing to Singapore's small size, the reclamation of the territories had started since the colonial era (Koh and Lin

2006), (Koh 2005). Following the incident, Singapore has implemented land reclamation along its coasts for four decades and claimed that this activity adheres to international law provisions. Several reclamation projects along the coasts have been planned and done by Singapore including several islands under its care such as the Ubin Island, Jurong Island, and Sentosa Island, up until the critical level (Finch, A., MacDonald, M., Hulme 2000). Reclamation is also actively carried out near the Lebam River, the Cape of Pengelih in Tekong Island, and the Piai Strait in Tuas, Changi.

According to past studies, land reclamation activities in Singapore have been introduced since the 1950s. As shown in Figure 1, the difference of the coastal line due to reclamation activities along the Singaporean coasts was extremely remarkable before the 1950s, right until after the 1950s. In the early years of the 1980s, land reclamation executed by Singapore only concentrated on the southern part of the country and it did not pose any threat to Malaysia (Nik Anuar Nik Mahmud, Mohd Fuad Jali, and Mohammad Agus Yusoff 2004). However, Malaysia has started to give specific attention towards the reclamation activity progress when from the 1980 up until now, Singapore has taken to broadening the areas of reclamation to the surrounding Straits of Johore that is characterized as too close to the Malaysian marine borders. Quite a number of previous studies have shown that the land reclamation activities by Singapore have brought about various negative implications not only to the natural environment in the island, but also left an impact to the environment in the waters of the Johor Straits, where the quality of the sea water and river estuaries has deteriorated, the marine and benthic life beings have been under threat and the deposition of sediment plum occurs around the reclamation areas (Lim 2003). The interpretation to the mapping information shows that land reclamation activities carried out in the north-eastern part on Singapore and Tekong Island clearly narrow the route of the commercial ships to the Pasir Gudang Port. In response to this issue, the Malaysian government has opened another international port which is Pelepas Cape Port in the south-western part of Johor, to bring back the balance of the commercial ships' route activities to Malaysia which has clearly been affected by Singapore's land reclamation projects (Lembaga Pelabuhan Johor 2012).

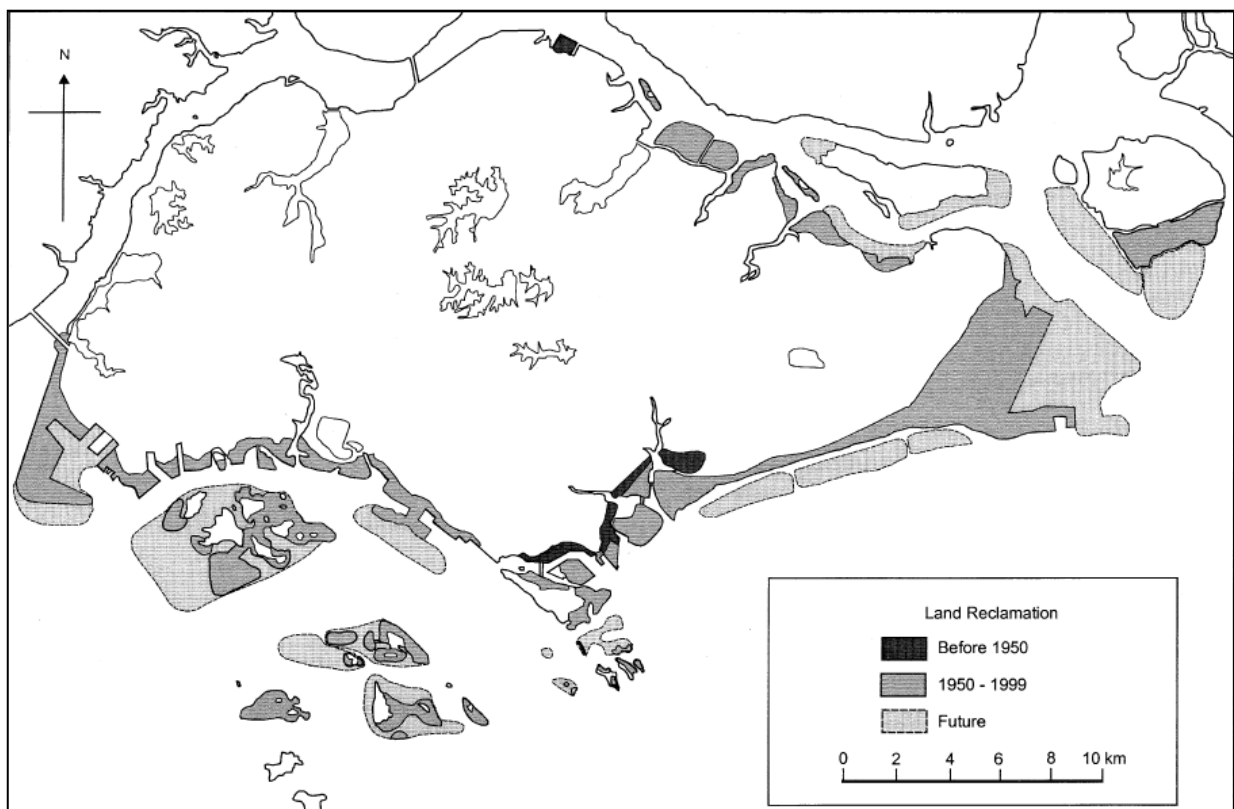


Figure 1: Coastal line map of Singapore, due to reclamation activities. Source: (Schwartz, 2005).

Specific research to identify the impact left by the land reclamation activities by Singapore towards the ecosystem and the environment has been conducted by local and international scholars. The land reclamation activities have clearly given negative impacts to the health and security of the environmental ecosystem, the complex system of the marine navigation and the socio-economic impact of the Johor Straits residents. Some diplomatic tension has sparked, following land reclamation activities that have been done aggressively along the coasts in the Singapore Islands. It has become a regional issue as this Singaporean project has gained the attention and protests of environmentalists from the neighbouring countries, specifically Malaysia and Indonesia. Despite the fact that Singapore has given its word that the reclamation project would not give any negative implications to the environmental ecosystem, what happens in the Malaysian and Indonesian waters has proven otherwise. In the Malaysian waters, the quality of sea water and river also the marine life's natural habitat which is close to the reclamation site had been affected very badly. The land deposition in the estuaries of the Johor River and Lebam River has taken place, and a lot of the habitats for the coral reef have been destroyed and there is an increased sediment concentration in the sea water. Threat posed towards marine life such as fish, which becomes the main source of income for fishermen in the Straits of Johor has also been observed. Apart from the higher costs of fish following cases of torn and ruined nets and purses in the reclamation areas, the generated sound pollution has driven the fishes away caused by the planting of piles (Nik Anuar Nik Mahmud, Mohd Fuad Jali, & Mohammad Agus Yusoff, 2004). Indonesia is also subjected to some bad implications like land and beach erosion after two decades of exporting rocks and sand to Singapore to enable the works of reclaiming the coasts and seas to be carried out (Syamsidik 2003).

Other than that, other impacts that have indirectly been received due to the reclamation is, the affected Malaysia-Singapore border, especially in Tuas. It involves Point 20, a border-point area that has become a coveted area between the two countries. In a Malaysian map issued in 1979, Point 20 is included under Malaysia, but Singapore had rejected the 1979 map of Malaysia and claimed that Point 20 was located within its borders and thus, it had continued with the land reclamation activities in the area. Therefore, Malaysia had filed an official complaint against Singapore. Then Singaporean Development Minister, Mah Bow Tan had stated in the Parliament dated 5 April 2002 that the land reclamation committed by Singapore did not violate the international laws as it was done in Singapore and that it did not alter the borders of the two countries. With ample literature which looks into the land reclamation implications towards the environment, and accounting for the rights and sovereignty of Malaysia in regard of the Point 20 concerned, the Malaysian government has filed this case with the United Nations Convention on the Law of the Sea (UNCLOS) in 2003.

THE BACKGROUND OF THE SINGAPOREAN POPULATION

In Singapore, the population is divided into two categories namely residents, and non-residents. All native citizens of Singapore and citizens already granted permanent residence are included in the first category. Meanwhile, immigrants who come to Singapore as workers

and students are in the non-resident category. In this context, although the permanent residents are also part of the immigrants who had travelled to Singapore, what distinguishes them with the non-resident immigrants is that the former can reside permanently in Singapore. Similar to other Singaporean native citizens, they are also given the same space to fulfill their rights and responsibilities as Singaporean citizens, and they are also allowed to take part in housing programs sponsored by the Singaporean government, and made compulsory to enrol military services if they are qualified, as well as follow the requirements that have been dictated by the government. However, citizens who are already permanent residents are not entitled the right to cast a vote in the Singaporean elections (Yeoh and Lin 2012).

Table 1: Number of countries and territories all over the world which have population density of more than 1,000 people per sq km right to the year 2012. Source: (Department of Economic and Social Affairs United Nations 2012).

Ranking	Country / Territory	Population	Area (km²)	Volume (km²)
1	Macau (China)	582,000	29	20,069
2	Monaco	36,136	2	18,068
3	Singapore	5,399,200	716	7,669
4	Hong Kong (China)	7,173,900	1,101	6,516
5	Gibraltar (UK)	29,752	7	4,250
6	Vatican City	800	0.44	1,818
7	Bahrain	1,234,571	757	1,631
8	Malta	416,055	315	1,321
9	Bermuda (UK)	64,237	53	1,212
10	St. Maarten (Netherlands)	37,429	34	1,101
11	Maldives	317,280	298	1,065

This study finds that the number of Singaporean native citizens' population has declined over the years based on the total fertility rate (TFR) of its natives. Nonetheless, the total population of Singapore has been added every year due to the government's planning to bring in more immigrants into Singapore on a grand scale. This move is very much related to its aim to continue the development and economic activities, part of which has been primarily fueled by foreign labours in the country. Therefore, the presence of the immigrants has contributed to the population growth in Singapore as a whole, so much so that the issue of the inadequate number of its native citizens is not really publicised. In Table 1, we are presented with a number of countries and territories all over the world which have population density of more than 1,000 people per sq km right to the year 2012. Based on the record, Singapore with a total number of population 5,399,200 people has a density of 7,669 residents for every one sq km.

Following the influx of immigrants to Singapore, native citizens of Singapore have to compete among themselves to gain job opportunities, and also have to compete with professional, skilled and semi-skilled workers from foreign countries. The much more difficult, and challenging economic situations also high rates of unemployment have become the reason why some parties are quick to put the blame on the government who is seen to have failed in forecasting the effects of the influx of the immigrants into the country. Finally, this gradually leads into the issue of emigration- Singaporean native citizens moving out of

the country to look for job opportunities (Ahmad 2003). This problem has exacerbated the already existing issue concerning the 'shortage' of Singaporean native citizens, whereby the solution to it should be on top of the priority list and addressed the soonest possible.

Based on the information derived, there are at least 9,000 Singaporean native citizens who have been permitted every year to take residence in four countries and they are Australia, Canada, New Zealand and the United States of America (Castles and Miller 2009). From this number, as many as 1200 had removed their respective Singaporean citizenship every year throughout the past five years (Han 2012). The Deputy Prime Minister Teo Chee Hean states that, the pattern for the decision made by few Singaporean citizens is different and difficult to be interpreted accurately. This is because there are some of them who state their preference to stay abroad, and they are also influenced by factors of career, wedding and family. Furthermore, Alvin Yeo who is a Singaporean parliamentary member opines that the number of the citizenship removal is not as great as the status of citizenship that has been granted by the Singaporean government to about 20,000 immigrants every year (Tan and Chiang 2012).

However, this study concludes that although the number of Singaporean citizens who removes the citizenship status is low, in terms of the percentage, the effect of the ratio towards the increasing drop of the TFR of the Singaporean citizens will impede the planning and effort of the Singaporean government to improve and add to the number of the population of the native citizens at present time and in the future. Through a closer observation, Lee Kuan Yew explains that the government has strived to prepare higher learning opportunities which have high quality using the English Language, and it encourages its citizens to further studies and work overseas, so that they will gain wider exposure and experience. However, when the time comes, few of them did not return to their hometowns (Asiaweek 1999). In turn, those who finally do return, have brought in different experiences and cultures (Asiaweek 2000). He asserts that these people need to return to the actual reality of the Singaporean lifestyle, although it is also subject to change from time to time.

METHODOLOGY

At the initial stage, the collection of qualitative materials was done using the library study method in relevant premises like the Tun Sri Lanang Library, Universiti Kebangsaan Malaysia (PTSL UKM), Resource Center in the Center of Historical, Politics and Strategy Studies (PPSPS), The Faculty of Social Science and Humanity, UKM (FSSK UKM), the Institute of Strategic and International Studies (ISIS) Library, Wisma Putra Library in the Foreign Ministry, the National Library (PNM) and the National Archive (ANM). Visits to the premises in Singapore were also made including to the Library of the National University Singapore (NUS) the Institute of Strategic and International Studies (ISIS) Library, Singapore. The list of libraries and archives proposed has been identified as having a lot of secondary referenced materials like books, journal articles, research reports and theses that are very much related to the study being done, encompassing the history and background of Singapore, statistical materials related to the republic of Singapore and documents containing national policies. Other printed secondary materials such as newspapers and magazines are also considered, including the collection of information from websites that are relevant to this study and which fulfill the requirements of this study.

The collection of primary information was done through direct site observation, and through several interviews done with the respondents who are directly involved with the topic of study, comprising of local residents and fishermen in the Straits of Johor who are subjected to the impact of the land reclamation in Singapore. Other than that, interviews had also been planned to obtain some additional information among the secondary respondents such as academic members, government officers, and the citizens themselves. With this kind of initiative, it is expected that this study is capable of obtaining important information that has not yet been published by any other parties.

FINDINGS AND DISCUSSION

This study establishes that the number of the native citizens of Singapore in 2013 was 3.31 million people as illustrated in Table 2. With a total number of 0.53 million people with the permanent resident status, the total number of local residents amounted to 3.84 million people. Next, by considering the influx of 1.55 million foreigners to Singapore in the same year, as many as 5.40 million residents had occupied this small island with the density recorded to have been 7540 people for every one sq km. It is clear here that there was a very remarkable increase for all the records since 1970 until 2013. The documentation revision from the Singapore Statistical Department also shows that the factor behind the increased number of foreigners travelling into Singapore is due to the government’s policy which seeks for the immigration process to help balance the total number of ideal population that caters for the requirement of the country. As the TFR had undergone reduction every year, the population of the native citizens had to be increased by way of granting full citizenship to foreigners who had obtained the permanent resident status, which is around 20,000 people every year. Meanwhile, the number of foreigners who are entitled with the same status has reached 30,000 people every year.

Table 2: Population size in Singapore between years 1970 - 2013. Source: (Department of Statistics Singapore 2014).

Year		1970	1980	1990	2000	2010	2012	2013
Total overall ('000)		2074.5	2413.9	3047.1	4027.9	5076.7	5312.4	5399.2
Local categories ('000)	Natives	1874.8	2194.3	2623.7	2985.9	3046.3	3085.1	3106.5
	Natives (oversea)	-	-	-	-	184.4	200	207
	Permanent residences	138.8	87.8	112.1	287.5	541	533.1	531.2
Total local citizens ('000)		2013.6	2282.1	2735.9	3273.4	3771.7	3818.2	3844.8
Foreigner ('000)		60.9	131.8	311.3	754.5	1305	1494.2	1554.4
Volume (per km²)		3538	3907	4814	5900	7146	7429	7540

Next, Figure 2 shows the movement of the TFR chart against the total live birth in Singapore throughout the year 1970 up to 2012. This chart has concluded that the TFR

movement is very closely related to the live birth of the babies being born. For instance, the increase of 7.9% live births out of 39,654 people in 2011 to 42,663 people in 2012 was consistent with the slight increase of the TFR from 1.20% in 2011 to 1.29% in 2012. The same is shown in Figure 3, where the increase of the TFR applied to all major ethnic groups in Singapore, where the Malay ethnic group stayed to be the largest group as compared to the Chinese and Indians. However, the overall TFR up until today is still below the reference level of 2.1% for the past three decades. It is concluded that, the difference of attitude of the Singaporean residents has a slight connection with the national identity, and it is primarily related to the citizens' class of income (Drakakis-smith and Graham 1996).

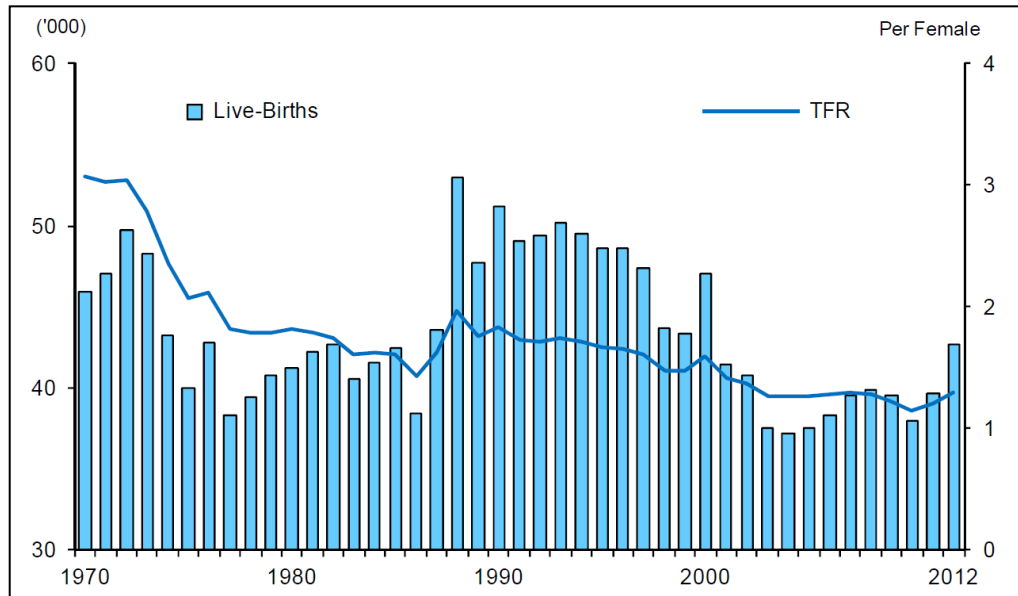


Figure 2: TFR chart against the total live birth in Singapore throughout the year 1970 up to 2012. Source: (Department of Statistics Singapore 2014).

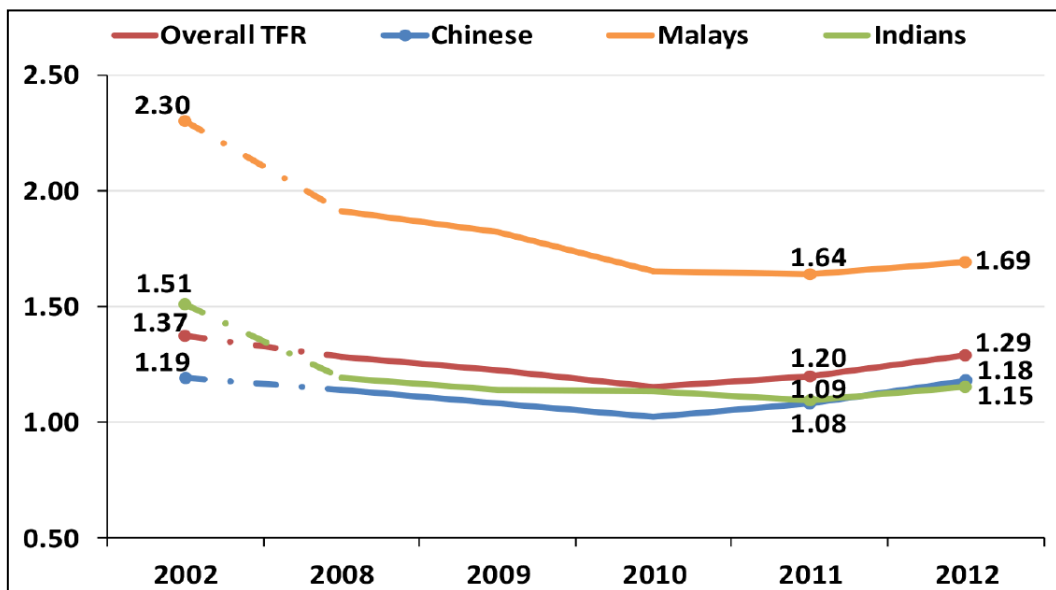


Figure 3: TFR movement by ethnic groups in Singapore from year 1970 - 2012. Source: (Department of Statistics Singapore 2014).

From the antenatal government to the pro-natal government

The land reclamation planning by Singapore is also often attached to the population growth planning and the economic development planning of the republic (Glaser, Habertzettl, and Walsh 1991). With a limited span and the non-existent raw resources from the natural environment, Singapore has to take some precautions in outlining its plans about the physical development and economy so that they are in tandem with the capacity of the population. After the World War Two ended, the total number of population in Singapore was estimated to be one million people. During that time, the migration process to Singapore had slowly diminished after Singapore had been separated from Malaysia in 1965, as was the rate of birth following the success of the family planning programs carried out by the government. During the Consensus in the year 1970 in Singapore, this number had increased to double the amount caused by the birth rates, less deaths and residents' migrations from the Peninsula to Singapore (Field 1999). Referring to the previous historical notes, the Singaporean government under the leadership of Lee Kuan Yew in the middle of the 1960s had begun to control the population rate aggressively through awareness campaigns, coaxing and incentives so that every citizen at the time would receive openly the idea that the population growth in Singapore was a threat to their quality of life due to the limitation imposed on healthcare service access, schools and jobs, and that if it was not curbed, the political stability in Singapore would be jeopardised.

Thus, in 1965 the government of Singapore had set up a Board of Population and Family Planning functioning as the center of clinical and public education services in family planning. Throughout 1965 until 1987, the Singaporean government had made effective the 'Two Children Are Enough' policy, where all married couples are restricted to have only two children, in support of the economic development planning that had been arranged by the government. The soon as it attained independence from Malaysia, the step of the Singaporean government in restricting the growth of the population is seen as a necessity for the people to be able to enjoy a more quality life and to build a stable nation country. Singapore is regarded as a model to the third countries' economic development and birth control programs at the time, and this lasted for two decades. However, approaching the 1980s, the Singaporean government started to have a concern on the slowing down of its population growth, and the failure or inability of most of its highly educated couples to bear children as had been planned earlier. In fact, the opposite had taken place, when female university graduates did not get married and give birth, further becoming the reason why the male university graduates had to choose partners who were less educated. In 1983 Lee Kuan Yew did mention that this was a serious problem to the country.

After two decades, as Singapore has been seen as a country of an antenatal model which pioneers the economic development and birth control programs, the government then terminates the program to stimulate the growth of the population. Therefore, by introducing an eugenic-based program in 1984, the Singaporean government has worked to fabricate its people by increasing the fertility rate among the highly educated Singaporean women, prioritizing children whose mothers are university graduates when it comes to enrolling the children in schools, and allocating subsidies of S\$10,000 for the sterilization process (birth

control) voluntarily to poor, uneducated parents after the birth of the second child (Teo 1995), (Palen 1986), (Teo 1995), (Lily Zubaidah Rahim 1998). The government has also decided to abolish the Board of Population and Family Planning, also reformulate the existing policies of the Housing Development Board (HDB) in order to support the effort exercised by the Singaporean government (Palen 1986). Then, the government also establishes the Social Development Unit which acts as a consultant to the still-unmarried university graduates to look for partners.

Despite the truth that Singapore does experience 25% population growth in recent years, the increased percentage is largely contributed by the influx of foreign workers (Palatino 2011). In reality, a lot of the native Singaporeans who have been married, and still reluctant to bear children as they are thinking about the increasingly high cost of living. To ensure that they will get a better job, they have delayed or cancelled the plan to raise their families as they have to concentrate more on competing with foreign talents who come to the country (Jones 2007). The government's steps of promoting pro-marriage and pro-birth campaigns are still unsuccessful due to their attitude of being really careful about planning their lives. The initiative of the Singaporean government fabricating the demographic structure with ethnic group division and the influx of foreign workers the past several decades, now provokes a new problem to Singapore (Jones 2012). However, Lee Kuan Yew has the stance that he is not supposed to be blamed, and denies the 'Two Children Are Enough' policy as the reason why the birth rate is very low and the fertility rate is decreased (Reuters 2013).

With the booming foreign immigration to Singapore and further causing the suspicion among the locals towards the government's policies, in 1986 the government of Singapore has decided to re-examine its family planning program. The 'Two Children Are Enough' policy campaigned for quite a while previously, has been replaced with the promotional campaign 'Can have 3 or More, If You are Capable'. The incentive package given to the target group is also created with the main concentration on the medical field, education and housing. Among them are the tax exemption incentive for the third child, subsidy at the childcare centers, school registration with priority on families with a lot of children, priority in the entitlement to obtain a bigger and more comfortable housing unit, and unpaid maternal leave facility for four years for government staff. Other than that, pregnant mothers are also offered a free counseling session to encourage birth, and to curb this group from continuing the voluntary sterilization program after the birth of the second child.

Furthermore, to encourage married couples to have more children, the Singaporean government has implemented the Baby Bonus Scheme, where qualified families will receive cash contributions up to \$6,000 for every child that they have. This scheme will be terminated as soon as the child reaches twelve years of age following the latest stimulation package, for the year 2013, as compared to the termination when the child reaches six years of age as contained in the 2011 package. The Children Development Account Incentive is introduced by the government with the allocation as much as \$6,000 for the first-born and the second-born, \$12,000 for the third and the fourth, and \$18,000 for the fifth child and so on.

Immigration Stimulation

Part of the globalization phenomenon that is expanding is the transmigration process which transcends the continents and borders. This happens following the global demand on skilled labour (Lam and Yeoh 2004). In Singapore, during the Japanese occupation between 1942

and 1945, the immigration process was terminated temporarily. This termination continued until the government, in the 1960s, had endorsed a new ordinance which restricted the immigration process only to foreign citizens who had the capacity to contribute to the Singapore's socio-economic development at the time. Then, a more stringent law regarding citizenship and immigration was gazetted following the separation of Singapore from Malaysia in 1965, and subsequently it saw the declining number of non-resident population in this island-country. When Singapore rose to the occasion as an industrial country in the 1980s, the number of the non-resident population whose majority comprised of foreign workers, had simply accumulated, and the process continues to this very day (Yeoh and Lin 2012). The sectors involved were infrastructural development, education, construction, finance, manufacturing and services. For Singapore which is naturally deprived of natural resources, the domination in the fields of technology, engineering, professional workers, information system, as well as research and development can become an important platform and a sound basis for its advancement and modernization (Edwards 1992). However, the influx of foreign workers to Singapore has become more and more questioned by some of the Singaporeans themselves, who have claimed that the government is making a big mistake when it decides on and implements the immigration policy, which causes further drop in the country's birth rate and TFR (Palatino 2011). Such a move has actually become a central issue for most of the Singaporeans when the massive number of foreign workers invites various other problems and presents a new set of challenges to Singapore.

Table 3: Foreign labour in Singapore from year 1970 - 2010. Source: (National Population and Talent Division - Prime Minister's Office 2011).

Year	Total labour force	No. of foreign workers	% of total labour force
1970	650,892	20,828	3.2
1980	1,077,090	119,483	7.4
1990	1,537,000	248,200	16.1
2000	2,192,300	615,700	28.1
2010	3,135,900	1,088,600	34.7

For Gerald Giam who was a political activists from the Labour Party in Singapore, he explained that the latest situation in regard of the grand-scale arrival of foreign labour in Singapore throughout the decade, as shown in Table 3, has led to the local workers having to compete and work more to secure their respective careers. This, in turn curtails the quality time that they should spend with their families and it builds a bigger gap in their relationship as a family. To add, political activists from the opposition parties state that the parties which they advocate are not anti-foreigners, but the demands they make aim to get the PAP to be more prepared to prioritize the local citizens in terms of preparing job opportunities for them (Hyslop 2011). He also states that people's demands to reduce the cost of living must be given due attention including the consideration to modify the Baby Bonus Scheme. This is topped by the trend where older citizens also seek for jobs and this gives a hint that pension is not something favorable, to ensure that the source of income of the people affected by the globalization is sustained (Clark 1999). Clearly, up until today, the immigration policy set by the Singaporean government will continue to be a public debate and a massive agenda in the country's election. The emotions that accompany the protestation are also demonstrated openly, and it has created a controversy when once, a student from the Singapore National University had made a statement that there were more dogs than humans in Singapore (AsiaOne 2012). What causes the concern among most people is that, if the fertility rate continues to drop in Singapore, it is feared that the Singaporean citizens will be at the brink

of 'extinction' (Palatino 2011), (National Population and Talent Division - Prime Minister's Office 2011).

Nonetheless, most of the foreigners residing in Singapore rather have a consistent stand with regard to this immigration issue. According to them, if the demand of the opposition parties of reducing the influx of foreign workers is met, then it is characterized as a step backward since without these foreigners' 'services', it would be impossible for Singapore to achieve a progressive status of its economy and education. Singapore needs to have an inclusive viewpoint on the privileges that they benefit from the services, and not making the foreigners their competitors and even a dangerous threat. There are even some of them who wish that Singapore realizes the crux of the issue, which boils down to its low birth rate and declining TFR. The influx of foreign workers has long aided Singapore in its supply of skilled and semi-skilled workers, as well as buffering Singapore's economic downturn at the same time when the economies of other world countries had taken a nosedive during the global economic crisis.

Next, the Singaporean government does not seem to be able to control the outflow of young talents to foreign countries. It is estimated that up until 2013, there were about 200,000 Singaporeans who resided abroad. Among the countries that have become the main choices are Australia, Britain, the United States of America and China. Most of them, other than comprising of higher learning students overseas, are also professional labour in engineering, banking, information technology, science and technological sectors. What worries the government now is the tendency of the majority of the students to become reluctant to return to Singapore, and their preference to reside and work abroad. There are studies which show that the average of 1,200 educated Singapore have abolished their citizenships. This is termed the 'brain-drain crisis' (Yeoh and Lin 2012). This scenario is accompanied by several signs that have been identified by the government as reported in 2010, when there were about 1,000 Singaporeans who applied 'Certificate of No Criminal Conviction' every month, a basic requirement to obtain the permanent residence status in foreign countries.

CONCLUSION

In sum, the step taken by Singapore to reclaim its territories is not only because of the increased population alone. This is due to the fact that although Singapore has implemented land reclamation up until today, the latest statistics of population issued by the National Population and Talent Division, Prime Minister's Office in Singapore has recorded a drop of the TFR for its people to 1.19 point, and stays under the level of 2.10 point for the past 30 years (National Population and Talent Division - Prime Minister's Office 2013). The plan for the arrival of the foreigners to balance other interests, such as the economic sector was also refused by its citizens who saw this as a direct pressure to the job opportunities that should be reserved for the locals, to the point that it had posed a problem owing to the increased cost of living. On the government's side, the effort to reduce the number of foreign workers at this time would prove to be complicated, as long as the local citizen population target has yet to be achieved.

References

- Ahmad, Yusman. 2003. "Singapore Must Be More Flexible." *New Straits Times*.
- AsiaOne. 2012. "PM Lee Worried About Growing Divide In." *Singapore Press Holdings Ltd.*
- Asiaweek. 1999. "Lee Kuan Yew on Asean, the Economy and S'pore."
- . 2000. "Lee Sr: The Sage of Singapore."
- Castles, Stephen, and Mark J. Miller. 2009. *Migration in the Asia-Pacific Region*.
- Clark, Robert L. 1999. "Labor Force Status Transitions at Older Ages in the Philippines , Singapore , Asia - Economy - Elderly - Labor Force Participation - Retirement - Social Security Full-Text Journals Online." *Journal of Cross-Cultural Gerontology* 14 (3): 221–244. doi:10.1023/A.
- Department of Economic and Social Affairs United Nations. 2012. "World Population Prospect: The 2012 Revision." *Excel Table - Population Data*.
- Department of Statistics Singapore. 2014. *Population Trends 2014*.
- Drakakis-smith, David, and Elspeth Graham. 1996. "Shaping the Nation State : Ethnicity , Class and the New." *International Journal of Population Geography* 2 (1): 69–89. doi:10.1002/(SICI)1099-1220(199603)2.
- Edwards, Clive T. 1992. "A Vision for Australia: Indicators from Singapore." *The Australian Economic Review* 25 (2) (April): 16–30. doi:10.1111/j.1467-8462.1992.tb00580.x. <http://doi.wiley.com/10.1111/j.1467-8462.1992.tb00580.x>.
- Field, Brian G. 1999. "The Morphology of Planning in an Urban Laboratory." *Property Management* 17 (2): 139–156.
- Finch, A., MacDonald, M., Hulme, T. 2000. "Singapore - Past, Present and Future." *Tunnels and Tunnelling International* 32 (3): 26–28.
- Glaser, R., P. Habertzettl, and R. P. D. Walsh. 1991. "Land Reclamation in Singapore, Hong Kong and Macau." *GeoJournal* 24 (4): 365–373.
- Han, Yingyue. 2012. "Singapore as a Global City." *The Diplomat*.
- Hyslop, Leah. 2011. *Singapore Opposition Stirs up Anti-foreigner Sentiment*.
- Jones, Gavin W. 2007. "Delayed Marriage and Very Low Fertility in Pacific Asia." *Population and Development Review* 33 (3): 453–478. doi:10.1111/j.1728-4457.2007.00180.x.

- Jones, Gavin W. 2012. "Population Policy in a Prosperous City-State: Dilemmas for Singapore." *Population and Development Review* 38 (2) (June 27): 311–336. doi:10.1111/j.1728-4457.2012.00494.x. <http://doi.wiley.com/10.1111/j.1728-4457.2012.00494.x>.
- Koh, Tommy. 2005. "Talk to NUS Law Students on the Land Reclamation Case."
- Koh, Tommy, and Jolene Lin. 2006. "The Land Reclamation Case: Thoughts and Reflections." *Singapore Year Book of International Law and Contributors (SYBIL)* X (10) (October 27): 1–7. doi:10.1126/science.202.4366.409. <http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=3160768&tool=pmcentrez&rendertype=abstract>.
- Lam, Theodora, and Brenda S.a. Yeoh. 2004. "Negotiating 'home' and 'national Identity': Chinese-Malaysian Transmigrants in Singapore." *Asia Pacific Viewpoint* 45 (2) (August): 141–164. doi:10.1111/j.1467-8373.2004.00235.x. <http://doi.wiley.com/10.1111/j.1467-8373.2004.00235.x>.
- Lembaga Pelabuhan Johor. 2012. "Lembaga Pelabuhan Johor - Sejarah Penubuhan." <http://www.lpj.gov.my/index.php/ms/maklumat-korporat/sejarah-penubuhan>.
- Lily Zubaidah Rahim. 1998. *The Singapore Dilemma - The Political and Educational Marginality of the Malay Community*. Oxford University Press.
- Lim, Lydia. 2003. "KL Argues Reclamation Case." *Straits Times*.
- National Population and Talent Division - Prime Minister's Office. 2011. *Population in Brief 2011*.
- . 2013. *A Sustainable Population for a Dynamic Singapore*.
- Nik Anuar Nik Mahmud, Mohd Fuad Jali, and Mohammad Agus Yusoff. 2004. *Penambakan Laut Oleh Singapura Dan Kesannya Ke Atas Sempadan Wilayah Dan Sosio Ekonomi Malaysia, Laporan Akhir Penyelidikan SK0052002*.
- Palatino, Mong. 2011. "Singapore Needs More Babies." *The Diplomat*.
- Palen, J. John. 1986. "Fertility and Eugenics: Singapore's Population Policies." *Population Research and Policy Review* 5 (1): 3–14. doi:10.1007/BF00124875. <http://www.springerlink.com/index/10.1007/BF00124875>.
- Reuters. 2013. "Kurang Penduduk Bukan Salah Saya: Lee." *Harian Metro*.
- Schwartz, Maurice L. 2005. *Encyclopedia of Coastal Sciences*. Springer.
- Syamsidik. 2003. "Singapore Coastal Reclamation: History and Problems."
- Tan, Amanda, and Tay Suan Chiang. 2012. "300 New Citizens Give up Their Status Each Year." *Straits Times*.

Teo, Peggy. 1995. "Population Planning and Change in Singapore." *Population and Environment* 16 (3) (January): 237–251. doi:10.1007/BF02331919.
<http://www.springerlink.com/index/10.1007/BF02331919>.

Yeoh, Brend S. A., and Weiqiang Lin. 2012. *Rapid Growth in Singapore's Immigrant Population Brings Policy Challenges*.

Akmalhisham Jasni¹, Sharifah Munirah Alatas¹, Sharifah Mastura Syed Abdullah²
¹School of History, Politics and Strategy, FSSK UKM
²Institute of Climate Change, UKM
akmal_rs@yahoo.com