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Population Policy and Economic Growth: The Case of Thailand and the Philippines

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I. Introduction

Asian countries have experienced unprecedented economic growth after 1960s. GDP per capita and other macroeconomic indicators has been improving for most countries, as well as other social indicators such as life expectancy, employment, human capital investments and poverty among others. An increasing trend is also observed in population growth rates. The rate at which the population grows by one billion got shorter and shorter. It took 127 years for the population to reach two million in 1927 from one million in 1800, and now it only took 12 years to grow from six billion in 1999 to seven billion in 2011 (UNFPA 2011). This sudden surge in population has prompted the United Nations, bilateral and multilateral donors and leaders to prioritize population programs to help curb the environmental and economic effects of population growth (Mason 2001). East Asian countries which implemented their own population control policies have already experienced economic growth at scales larger than those countries which did not.

This study looks into the cases of Thailand and the Philippines. Thailand was explicit in its implementation of population control policies in the 1970s, while the Philippines only had it on paper. The Philippines, together with India, had the so-called "model programs" back in the 1970s but ended up at the end of the pack in terms of implementation. Comparing the economic growth of the two countries, Thailand has left the Philippines trailing behind by a large margin in terms of economic growth measured by GDP per capita.

This strong link between economic growth and population growth has been evidenced in most East Asian countries. Scholars devoted to population studies have already identified the link between the two. This study aims to present the evidences of economic growth resulting from the implementation of population control policies by presenting the cases of Thailand and the Philippines. Further, this study aims to provide evidences to support the arguments in the population and economic growth discourse.

This paper will be divided into the following sections: Section II discusses the framework of the study, where the hypothesis and the variables will be identified; Section III presents the various literatures exploring the links between economic growth and population growth, as well as the politics in population control policy implementation; Section IV presents the methodology; Section V expounds on the data and analysis, and; Section VI concludes this study.

II. Literature Review

Population has been growing since the 1960s all over the world, and this can be attributed to the decrease in mortality brought about by advances in the field of medicine and continued increase in births. This continued increase in population growth rates has prompted the United Nations, multilateral institutions, bilateral foreign aid agencies and private organizations to invest in population programs (Mason 2003). They recognized the strain that this issue will be putting on the available natural resources due to increased demand.

Several Asian countries implemented population control policies in the 1970s, with Thailand, Japan, Singapore, South Korea, Taiwan, and Indonesia as forerunners. Since their implementation of such policies, these countries experienced economic growth which transformed them into economic powerhouses in the region. Their experience can be considered as evidence that population size is related to a country's economic growth.

A wide array of literature has provided evidences on the links of population growth and economic development. Most of the literature shows that population control is not directly linked to economic growth, but the enabling conditions leading to development that a smaller population creates. Jha, Deolalikar and Pernia (1993) identified four key areas of interaction between population and socioeconomic development:

(1) Economic growth

Measuring GDP per capita or income per capita will provide a good link between population growth and economic growth. Kelly and Schmidt (1995) found a large negative effect of population growth on economic growth. Further, they found that high crude birth rate decreases economic growth while decreases in crude death rate increases economic growth. Bloom and Williamson (1997) suggest that economic growth is not due to population decline per se, but due to changes in population structure. A larger working-age segment of the population will result to larger output and per capita income growth. Given this scenario, Orbeta and Pernia (1999) argue that "it seems reasonable to attribute some of this slow growth in per capita income to the drag imposed by high population growth."

Saving, on the other hand, is a primary determinant of investment, and a high savings rate contributes to economic growth. Saving is dampened by high dependency ratio and increases in birth rates (Orbeta 2003).

Employment generation is critical issue accompanying population growth. Following the law of supply and demand, the higher demand for labor will result to lower wages, as argued by Bloom and Freeman (1986, 1988). Generating employment in more productive sectors will also contribute to economic development, e.g. employment in the industry is more productive compared to employment in service sector (Orbeta 2003).

(2) Human capital investment

High population will have a negative impact on education and health. More children mean lower levels of child nutrition intake, poor nutritional status, higher infant mortality, smaller per capital health and food expenditures, poorer access to preventive and curative medical care, lower schooling expenditures per child, lower grades for children enrolled in school, lower child intelligence (Jha, Deolalikar and Pernia 1993). Although Schultz (1987) observed increases in enrolment rates with higher population, per capita expenditure declines, which may affect the quality of education.

(3) Poverty

Poverty may not be directly linked to high population growth, but Ahlburg (1996) looked into the correlates of poverty to assess its negative impacts. He found that rapid population growth has led to low wages, lack of human capital such as education and health, lack of income-earning assets such as land, and income inequality and loss of economic growth. Intal (1994) also argues that there is more poverty for larger families compared to smaller ones.

(4) Environment

As for the environmental impacts of population growth, a larger population would mean larger demand for goods and services such as energy for household use, transportation, power and industry (Jha, Deolalikar and Pernia 1993). Deterioration in water quality can also be attributed as a correlate of poverty, as water pollution is proportional to the quantity of waste discharged, which is directly related

to population size. Rapid population growth, according to Panayotou (1994), is also correlated to deforestation, soil erosion, destruction of local ecosystems, and general environmental degradation.

III. Framework

i. Hypothesis

Since Thailand implemented population policies aimed at reducing its high population growth rate in the 1970s, per capita GDP is now four times that of in 1970. The Philippines, on the other hand, developed their own population policies and programs at almost the same time. But these programs and policies were not properly implemented. The Philippines' per capita GDP lagged behind that of Thailand's.

With the forgoing, the hypothesis for this study is: population control policies, together with the enabling conditions that result from its proper implementation, contribute to the economic growth of a country.

The hypothesis holds with the assumption that population control policies does not directly impact GDP per capita, but rather the consequences of a smaller population has positive impacts on economic growth. Population control policies, for the purpose of this study, are limited to programs with the aim of reducing fertility through family planning. As mentioned, consequences such as higher per capita income growth, savings rate and employment opportunities, higher human capital investment, improved living standards and enabling environment with adequate resources for the population are the requisites for the accompanying economic growth.

ii. Variables

This study aims to look at the effect of implementing a population control policy on economic growth. Although there is a vast collection of literature available that empirically proves the link between the two, this paper will look into evidences from the case study countries, Thailand and the Philippines.

Thailand and the Philippines share the same experience post World War II. Recovery efforts prompted the creation of development plans for both countries, initially focusing on infrastructure, agriculture, manufacturing and industries. The rapid increase in population growth rate, however, prompted these

countries to formulate population control policies in order to curb this issue. Thailand, however, took off with their population policies and the Philippines only had it in theory.

To analyze the hypothesis, the level of economic growth, measured in terms of GDP per capita (at constant 2000 prices) will be the dependent variable. The independent variables for this study will be the implementation of population control policies and its consequences. These factors are: savings rate of household, unemployment, life expectancy, enrolment rates, government spending for health and education, and poverty rate. The independent variables will be explained in detail in section five.

IV. Methodology

This study will look into the evidences on the links between low population growth and economic growth. This paper will attempt to compare the experiences of Thailand and the Philippines using data collected from various databases and government agencies. Secondary data on country experiences will also be used for this study.

This study will be descriptive in nature. Various data and statistics will be used to link the dependent and independent variables to arrive at a conclusion. This study does not intend to prove the link between the two variables as already established by the breadth of literature available. Instead, it aims to provide concrete evidences to ascertain the above claims in the two case study areas.

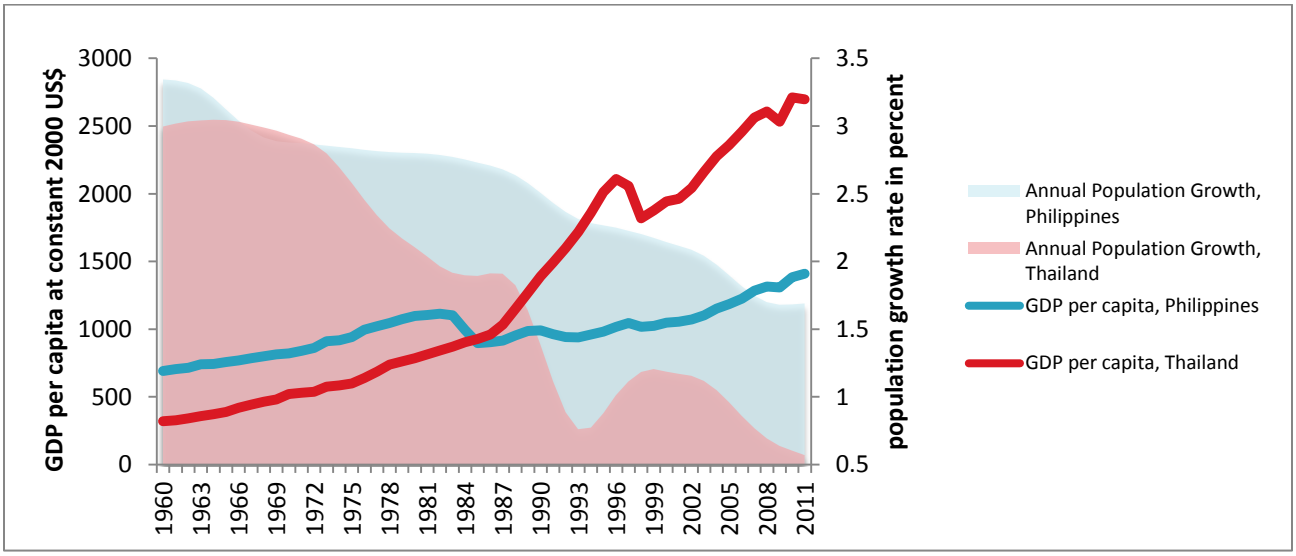
V. Data and Analysis

In the 1960's, Southeast Asian countries have started to recover since the Second World War. At that time, almost all Asian countries were growing at almost similar pace. The Philippines even had a higher GDP per capita compared to Thailand, at US$690 compared to US$321 (at constant 2000 prices). However, Thailand continued to grow in terms of per capita GDP, reaching US$2,700 in 2011 compared to the Philippines' US$1,410.

Coincidentally, population growth rates have significantly dropped for Thailand, from 3.0% in 1960 to 0.6% in 2011. The Philippines, on the other hand, has not had any significant drop in population growth. Population growth rate was at 3.3% in 1960, and was at 1.7% in 2011, one of the highest among neighboring countries in Southeast Asia.

Various literature support the argument that population control policies are linked to economic growth. As for Thailand and Philippines, Figure 1 illustrates the relationship between the two. The significant decline in population growth rate in Thailand from the 1970s has resulted to significant increase in GDP per capita in the 1980s. The Philippines, on the other hand, had a steady population growth rate decline since the 1960s, and a corresponding slow and steady increase in GDP per capita.

Figure 1. **GDP per capita and Population Growth, Thailand and Philippines, 1960-2011**



Source: World Development Indicators, The World Bank.

This study will be looking into the indicators which are correlated to population growth rate, and this section will attempt to link these indicators to economic growth. The indicators to be examined are: employment, savings and investment, health and education outputs and poverty.

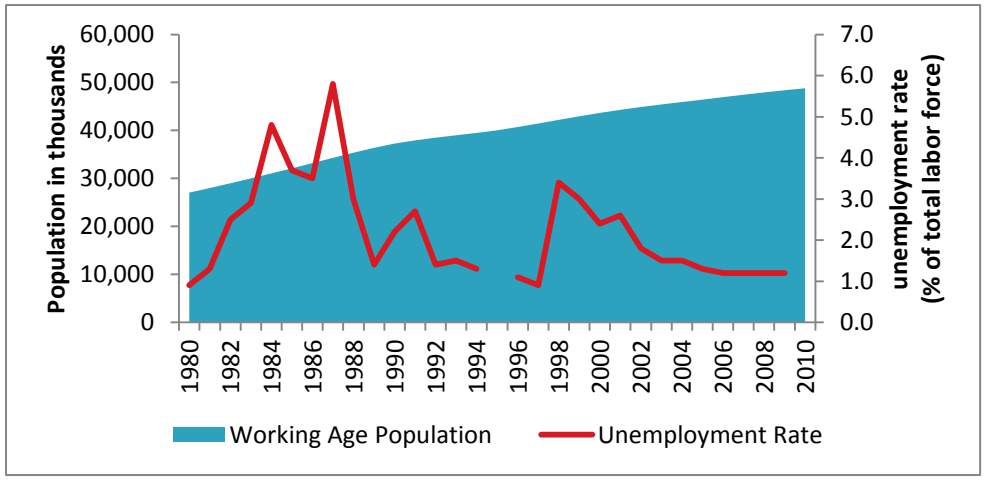
Employment

As population grows, a natural increase in demand for labor follows. The larger employment brought about by the increase in population should increase national output, thus contributing to economic growth. To achieve this, countries need to generate adequate employment to provide to the growing labor force. To make full potential of this population growth, employment in the most productive sectors should be made available.

The working age population in Thailand has been steadily increasing (Figure 2). The growth path, however, is becoming flatter, which can be attributed to the implementation of population control policies. Unemployment rate, on the other hand, has maintained its below-4% level since late 1980s. The decline in unemployment rate is noticeable in the late 1980s, less than 20 years since the implementation of the population control strategies, which corresponds to the minimum working age.

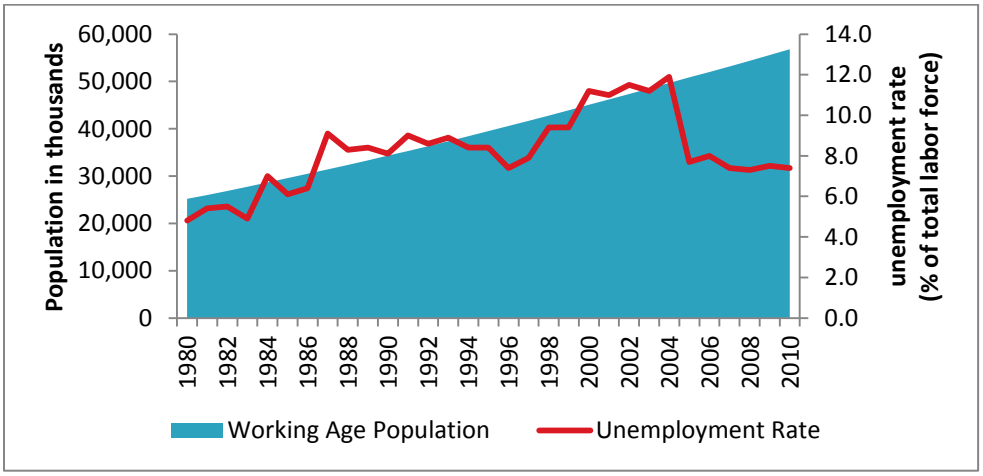
The Philippines, on the other hand, has an ever increasing working age population, as illustrated in Figure 3. Similarly, unemployment rates also appear to be on an increasing trend. The Philippines has not experienced any significant drop in unemployment rates until 2004. However, this decrease is still far from Thailand's drop from 3.4% in 1998 during the Asian Financial Crisis to the current 1.2%. The Philippines has a steady unemployment rate of 7.3% since 2006.

Figure 2. **Working Age Population and Unemployment Rate, Thailand (1980-2010)**



*working age population: 15-64 years old
Source: World Development Indicators, The World Bank.

Figure 3. **Working Age Population and Unemployment Rate, Philippines (1980-2010)**



*working age population: 15-64 years old
Source: World Development Indicators, The World Bank.

Employment generation may contribute directly to economic growth, but employment in productive sectors has more weight on economic growth. Figure 4 shows the employment pattern for both Thailand and Philippines in the key sectors. The share of employment for agriculture has been declining for both countries, while employment share for the services has been increasing.

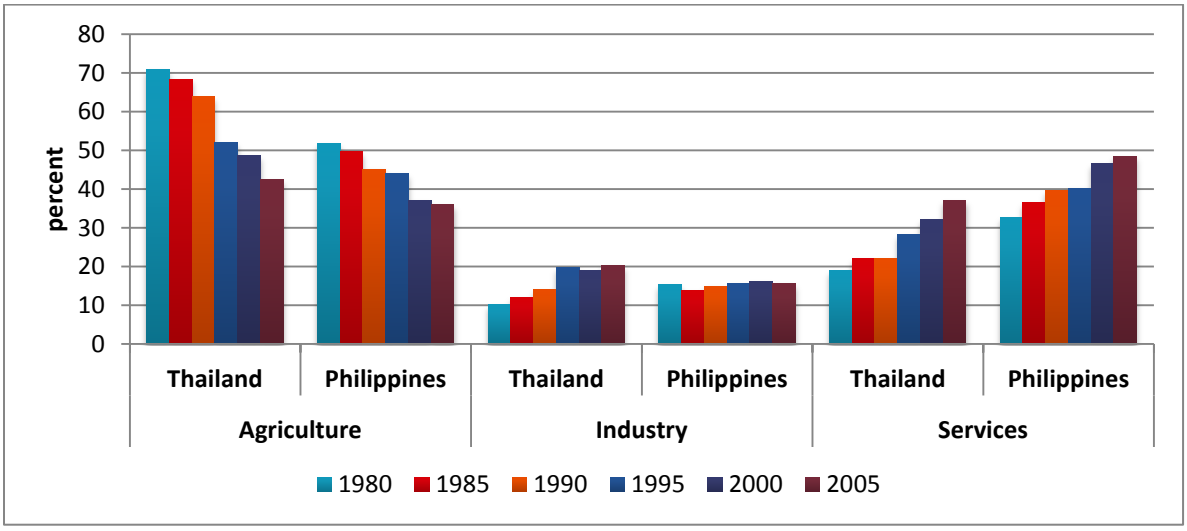
The employment share of Thailand for agriculture is the largest in 2005 at 42.6%, with the services sector trailing at 38.1%. The industry sector has had a significant leap from 10.3% in 1980 to 20.2% in 2005. This entails that some of the surplus agricultural labor were absorbed by the industry, wherein its value added constitutes a significant chunk of GDP.

The Philippines, on the other hand, experienced a different story. The share of employment in agriculture has been declining, to the point that the services sector takes a majority of the share of employment in the country. Agriculture employed 36% in 2005, compared to 49% for the services sector. The industry sector, on the other hand, had a constant employment share of around 16% since 1980. It is clear that the surplus agricultural labor is being absorbed by less-productive services sector.

Employment alone is not enough as an indicator of efficient employment generation. Employment in sectors with higher value will be more beneficial for an economy. Figures 5 and 6 present the value added per sector as percentage of GDP. This represents the net output of the sectors after adding up all the outputs and subtracting intermediate outputs. For Thailand, a noticeable increase in value added

for the industrial sector is observed, while the services sector is observed to have an increasing trend for the Philippines. ADB (2005) pointed out that the industrial sector is the "engine of growth" for an economy due to the increasing returns to scale in the industry (due to large-scale production and lower costs and its effect on capital accumulation; labor productivity also increases as output grows due to "learning by doing"). The expansion of Thailand's industrial sector relative to the services sector might have prompted its economic growth, compared to the Philippines' growing services sector.

Figure 4. **Employment in Key Sectors for Thailand and Philippines, 1980-2005**



Source: World Development Indicators, The World Bank.

Figure 5. **Value added per sector (% of GDP), Thailand (1960-2011)**

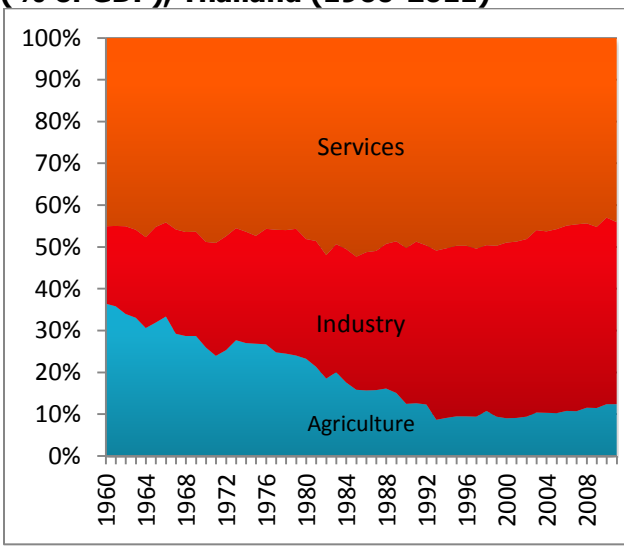
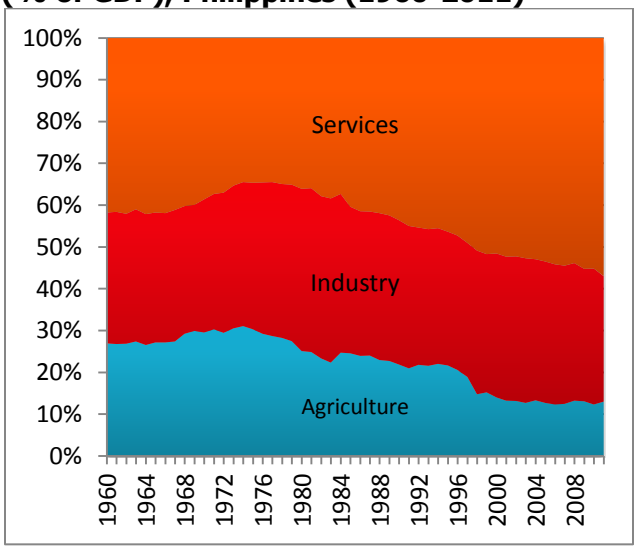


Figure 6. **Value added per sector (% of GDP), Philippines (1960-2011)**



Source: World Development Indicators, The World Bank

Health and Education

A smaller population means more resources for social service provision. As for health and education, the higher spending per capita means quality services. Improvements in access to health care, provision of basic preventive and curative services, health financing and overall wellbeing of individuals are expected. Figures 7 and 8 present the government's health and education spending as percent of GDP for Thailand and Philippines. For both sectors, Thailand has provided more to these sectors compared to that of the Philippines.

A practical indicator for improvements in health services is life expectancy, which is the number of years a person is expected to live. Figure 9 compares the life expectancy at birth for Thailand and Philippines. In the 1950s, the Philippines had a better life expectancy at 55 compared to 51 for Thailand. However, as Thailand's population grew at a smaller rate, their expected life expectancy for 2010-2015 is at 74, compared to the Philippines' 69.

Figure 7. **Health Expenditure (% of GDP) 1995-2010**

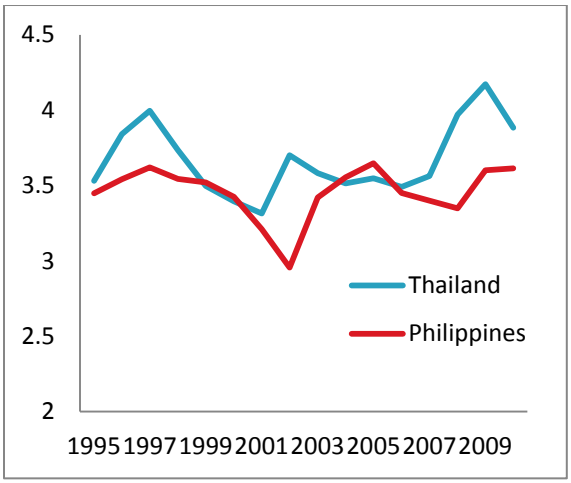
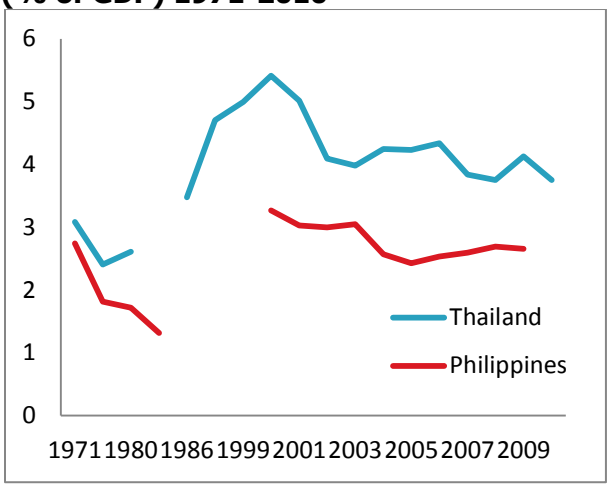
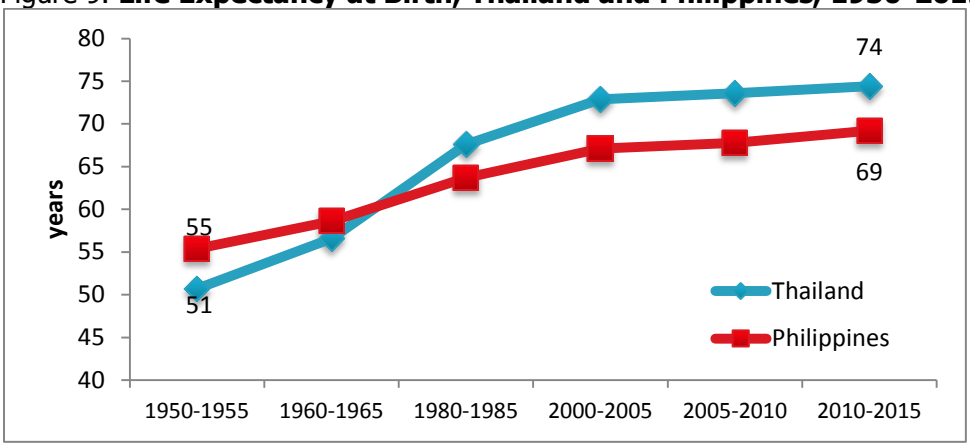


Figure 8. **Public Spending on Education (% of GDP) 1971-2010**



Source: World Development Indicators, The World Bank.

Figure 9. **Life Expectancy at Birth, Thailand and Philippines, 1950-2015**



Source: World Development Indicators, The World Bank.

Savings

As mentioned, the impact on savings of the change in population growth is the key in the analysis of the link between economic growth and population growth. The dependency ratios play an important part in this aspect. Dependency ratio is defined as the proportion of dependents (too young or too old to work) to those who are economically active. The higher the proportion of dependents means the higher the household expenditure, and therefore savings are less.

Dependency ratios for Thailand and the Philippines show two different stories. Thailand has reduced its total dependency ratio (child and old age dependency ratio combined) from 83% in 1950 to 42% in 2010. The Philippines, on the other hand, only reduced its total dependency ratio from 89% to 64% during the same time period. These are presented in Figures 8 and 9, respectively. It is also worth noting that the dependency ratio for Thailand started to decline in the 1970s, when the population control policies were implemented. The Philippines, on the other hand, experienced a steady decline due to the natural rate of decline of fertility and population growth rate experienced by countries.

Figure 8. **Child and Old-Age Dependency Ratio, Thailand (1950-2010)**

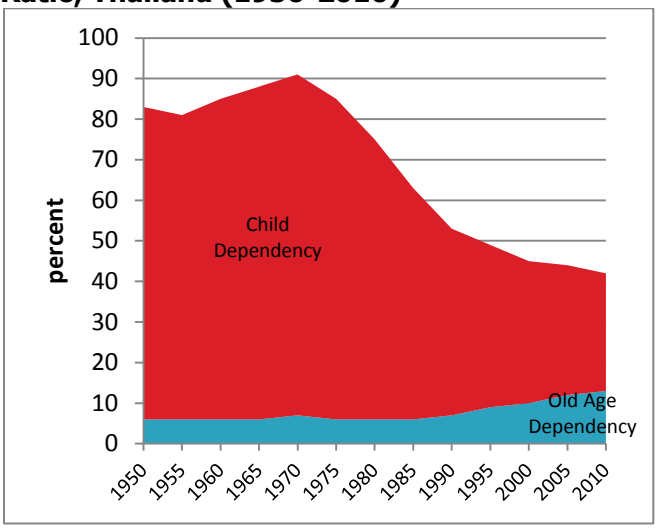
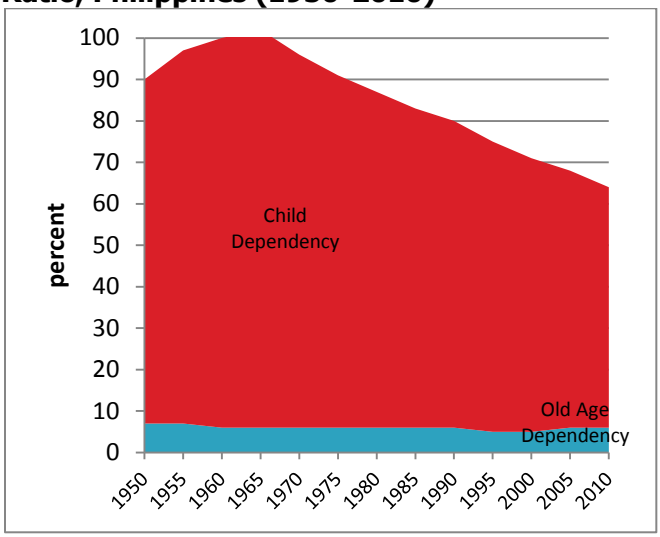


Figure 9. **Child and Old-Age Dependency Ratio, Philippines (1950-2010)**



Source: United Nations Population Division

Poverty

As mentioned, there is a negative relationship between population growth and the correlates of poverty. Lower wages, lack of human capital in terms of education and health, lack of income-earning assets such as land, income inequality and loss of economic growth, and gender, race and ethnicity are some of the correlates identified by Ahlburg (1996). Looking at the poverty headcount ratio based on national poverty line, the portion of Thailand's population under the poverty line is far less than that of the Philippines', at 8.1% compared to more than one-fourth for the Philippines in 2009 (Table 1). As mentioned by Orbeta (2003), "high poverty incidence cannot be attributed to rapid population growth alone, it is clearly more difficult to reduce poverty when population grows faster than slower."

Table 1. **Poverty headcount ratio at national poverty line (% of population)**

	1990	1994	1997	1998	2000	2002	2003	2006	2009
Thailand	33.7	19		17.5		21	14.9	9.6	8.1
Philippines		40.6	36.8		33		24.9	26.4	26.5

Source: World Development Indicators, The World Bank.

VI. Summary and Conclusion

The cases presented above are clear indications of the contrasts resulting from the implementation of population control policies. Thailand had the political will to implement such population control policies since they were able to anticipate the negative impacts of population boom based on their studies. The Philippines, on the other hand, had the best policies in theory but was not able to implement them. A crucial factor in its implementation is the role of the Catholic Church, which is against the practice of artificial family planning.

Thailand is now an economic powerhouse in the region, while the Philippines is still in its "emerging" stage. Can this be attributed to Thailand's population control policies?

Employment, government spending on human capital, savings and investment and poverty have all improved for Thailand since the implementation of the policies. These have created an environment that prepared its economy for growth. Essentially, smaller population means less natural resources consumed, higher resource allocation per capita, higher labor productivity and higher income and output. Although improvements in GDP per capita are also experienced by the Philippines, its growth rate is not at par with that of Thailand's and other neighboring countries.

This study presented evidences that support the population control-economic growth discourse. To reiterate, there is no direct link between population control and economic growth, but it is the enabling conditions that result from its implementation that result to economic growth.

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