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Decomposing economic gains from population age structure transition in the Philippines ☆

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ABSTRACT

The secular decline in fertility throughout the world has provided countries with demographic dividends from population age structures that are increasingly concentrated towards productive ages. However, it is widely recognized that realizing the demographic dividend is policy dependent. In this paper, we document how economic conditions are able to either negate or amplify the gains from demographic dividends by looking at the case of the Philippines in separate periods of boom and bust. Recent evidence suggests that the Philippines has been benefitting from a favorable population age structure transition. It is expected, however, that the experience is not uniform among different population groups in the country. Some population groups are farther along in the demographic transition while others lag behind given the documented differentials in their fertility levels. Additionally, different groups could have different economic lifecycle schedules. We analyze how different population groups contributed to the overall economic growth experienced by the Philippines over different economic conditions in the past two decades.

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Introduction

In the last century, the world has seen unprecedented changes in population age structures that have important implications for economic growth. While much of the developed world has aged significantly, developing economies by and large are benefitting from a population that is more concentrated towards the working ages as a consequence of falling fertility. But this demographic bonus is just transitory. With increasing longevity, populations in developing economies would eventually age like that being experienced in more developed countries. Developing economies thus face an important challenge of sustaining economic growth to finance an eventually ageing population.

At the aggregate level, fertility has been declining throughout the world. The timing, however, varies substantially across and within economies. Although such inequality in timing could potentially extend the length of the demographic dividend, it does pose a threat not just to lowering income inequality but also to encouraging economic growth (e.g., Chayanov, 1966; de la Croix and Doepke, 2003; DeGraff et al., 1996; Orbeta, 2006). In any case, countries experiencing demographic transition are presented with the possibility of more rapid and even sustained economic growth (Bloom et al., 2010; Lee and Mason, 2010; Mason, 2001, 2005; Mason and Lee, 2007). But as Mason (2005) reiterates, the economic outcome from demographic change is policy dependent. In the absence of complementary economic policy, the potential economic gain from the demographic dividend may not be realized.

In this paper, we document the contribution of both economic and demographic factors to the economic growth that had been experienced by the Philippines in the past two decades. In the 1990s, the Philippines, like much of the countries in Southeast Asia, suffered from weak growth as a result of various compounding domestic and international influences. The succeeding decade, on the other hand, saw the country experiencing a more robust

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growth leading to the eventual escape from a decades-old under-performance. We decompose the gains and losses during these two economic periods based on new multi-year National Transfer Account (NTA) estimates for the Philippines. We also attempt to quantify the contribution of different population groups to the overall economic growth using subnational NTA estimates by dividing the population by area of residence and by terciles of income.

Overall we find evidence that a country's underlying economic conditions could either negate or amplify the gains from a demographic dividend. While the gains and losses from economic booms and busts are not equally shared in the economy, we document encouraging indications of resilience among poorer segments of the economy during an economic downswing, as well as evidence of trickle-down effects from an episode of economic upswing.

Although we limit our analysis to the case of a specific developing economy, the Philippines' experience is not unique. The country's experience, however, provides a useful case study to analyze how economic conditions can complement gains from population age structure transition that is being experienced by many developing countries. In addition, the Philippines' recent spectacular growth, in part fueled by tapping directly into foreign labor markets, may be relevant to policymakers in developing regions who are interested in a similar economic trajectory.

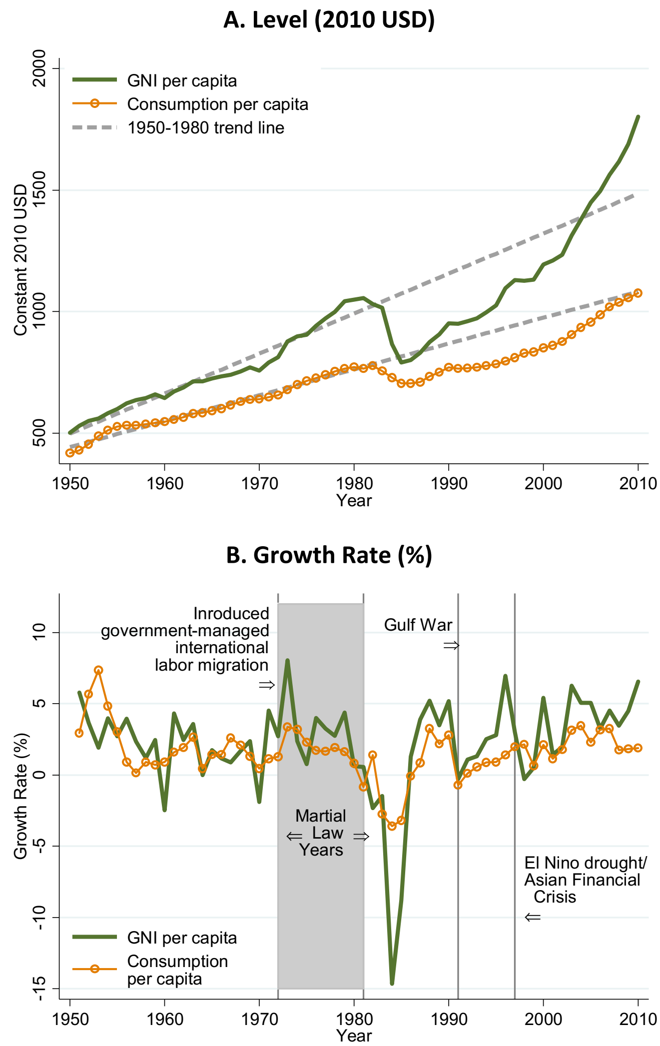
The rest of the paper is organized as follows. In the next section, we provide a brief outline of the economic and demographic context of the Philippines in the past half-century. Then we zero-in on the last two decades, and introduce our extension of Mason' (Mason, 2001, 2005; Mason and Lee, 2007) growth accounting framework to analyze the contributions of various factors to overall growth. We conclude with a summary of our key findings and implications for policy.

Booms, bust and demographic transition in postwar Philippines

Postwar growth

The great wars at the turn of the 20th century had left the Philippines in shambles. In 1950, in the immediate aftermath of World War II, the Philippines' per capita gross national income (GNI) stood at about 500USD using 2010 standards. During the 1950s until the 1970s, income per capita increased by 2.8 percent annually on average, even increasing during the oil price and energy crises of the 1970s. To some extent, the large-scale, government-managed international labor migration program introduced in the early 1970s to ease the growing domestic unemployment helped keeping the country's growth afloat. During this period, the country enjoys one of the most robust economies in the region in per capita terms (Canlas et al., 2009). By 1980, per capita GNI stood at 1049 USD, i.e., a lower middle-income country in today's benchmarks. The global recession in the early 1980s, however, had the Philippines tumbling back to low-income country status, with post-reconstruction per capita GNI at its lowest at 790 USD in 1985. The tumultuous years towards the end of the Marcos dictatorship and the military adventurism that had plagued the new government in 1986–1992 did not help in buoying the country back into its previous economic vitality. The country would not recover until the mid-1990s, and would not be back on-track its pre-1980s trend until after another decade. Fig. 1 traces the trend in the country's per capita income, as well as per capita consumption, in the last half-century.

The economic recovery in the 1990s had been beset with many difficulties, many of which did not originally arise domestically. The international oil price shock in the early 1990s contributed to the then looming domestic energy crisis, affecting not just



Note: Based on National Account estimates by the Philippine Statistics Authority, and 2010 average USD-PhP exchange rate figure by the Bangko Sentral ng Pilipinas.

Fig. 1. Trends in consumption and GNI per capita: Philippines, 1950–2010.

households but also industries. Economic uncertainty brought about by political insecurity likewise contributed to the sluggish growth. The 1997–1998 drought caused by the El Nino Southern Oscillation devastated vast swathes of crops, resulting in a seven percent drop in agricultural production during that period. The 1997 Asian financial crisis further dampened the country's recovery. Per capita GNI in the Philippines grew by only 1.7 percent annually during this decade, growing sluggishly behind its neighbors Singapore (3.7 percent), Thailand (2.8 percent) and Indonesia (1.9 percent)

The beginning of the 21st century proved to be more favorable for the Philippines. The services sector, which absorbs much of the highly educated workers, grew annually by fiver percent on average, which is faster than the three percentage annual growth registered in agriculture and in industries. Out-sourced technology jobs from developed countries, including back-office operations, started to boom. International labor migration from the Philippines continued to flourish, with the country sending more than a million workers annually since 2005 to virtually all countries in the world. Taken together, income from the outsourcing industry and international labor remittances accounts for as much as 17 percent

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