REVIEW

Population, economic growth, and inclusivity

Ernesto M. Pernia*[1] and Elena E. Pernia[2]

[1]Professor Emeritus, School of Economics, University of the Philippines, Diliman Quezon City, Philippines 1101
[2]Professor, College of Mass Communication, University of the Philippines, Diliman Quezon City, Philippines 1101

Abstract—Given that the population variable figures centrally in both labor and product markets, this paper argues that the growth rate of population, its age structure and spatial distribution should be key considerations in a country's development strategy to promote rapid and sustained economic growth, full employment, poverty reduction, and social inclusion. This represents a shift from the inordinate emphasis on the demand for labor, i.e., job creation. Significantly reducing unemployment and poverty can be achieved not solely through job generation but also by managing the quantity and quality of the work force, which is determined, with a lag, by the growth rate and structure of the population. The paper provides a perspective on population as it impacts the labor market and poverty. It then discusses issues of fertility and unmet needs for family planning and reproductive health services in relation to poverty. This is followed by a glimpse into regional experience in population policy, family planning, and poverty as exemplified by Thailand and Bangladesh. The penultimate section provides simulations and projections using different assumptions of contraceptive prevalence rates that result in various scenarios of fertility and population growth.

INTRODUCTION

The economy basically comprises two principal markets, namely, the product market and the labor market. In both markets, population evidently is at the core – as consumers and as producers. In other words, population critically figures on both the supply and demand sides of the economy. Accordingly, the growth rate of population, its age structure and spatial distribution should be key considerations in a country's development strategy to promote rapid and sustained economic growth, full employment, poverty reduction, and social inclusion.

This paper argues that a strategy for inclusive growth should reckon with both the demand and supply sides of the economy. This represents a shift from the inordinate emphasis on the demand for labor, i.e., job creation. Significantly reducing unemployment and poverty can be achieved not solely through job generation but also by managing the quantity and quality of the work force, which is determined, with a lag, by the growth rate and structure of the population. In the short run, sound population management – i.e., implementing in earnest the Responsible Parenthood and Reproductive Health Law (or RH Law, for short) – would bring about beneficial effects at the micro and macro levels.

At the individual and household levels, RH programs would enable especially poor women – unburdened of unwanted or unplanned pregnancies – to improve their well-being, acquire skills, be empowered and gainfully employed. Fewer wanted and better cared-for children would also benefit from human capital investment and, hence, a more promising future. Such micro-level poverty effects will combine with poverty reduction at the macro level as population growth falls (with lower fertility of poor women), income per capita increases, and public social spending per person rises resulting in higher-quality services. In the longer run, fewer entrants into the workforce, equipped with enhanced education and skills, would lead to closer balance between the supply of and demand for labor.

In retrospect, an important reason why the Philippines has fallen well short of its economic and social objectives has to do with the lack of population management policy. Our country actually did initiate a family planning (FP) program in 1970 but it ground to a halt in the latter part of that decade as the government deferred to the wishes of the Catholic Church hierarchy. As a consequence, the country's population growth rate has diminished glacially to just under 2.0 percent and remains among the highest in developing Asia.

It has been noted in the development literature and widely accepted by analysts as early as the 1960s through the 1980s that rapid population growth was more likely to impede than promote economic development (e.g., Coale and Hoover 1958; World Bank 1984; Pernia 1987; Mapa and Balisacan 2004). Such dynamic operates via reduced child care and human capital investment at the family level, lower private and public savings for business and government investments, and constraints on allocative efficiency, innovation, and entrepreneurship.

Population growth entails capital widening to maintain the amount of capital per worker, and the faster such growth the lesser the chances for capital deepening or raising the level and quality of capital per worker. Many Asian developing countries have taken these lessons to heart, with positive results, and have since moved forward – but, unfortunately, not the Philippines.

The next section provides a perspective on population as it impacts the labor market and poverty, and presents comparative human development indicators. The third section discusses issues of fertility and unmet needs for family planning (FP) and reproductive health (RH) services in relation to poverty. The fourth section reviews regional experience in population policy, FP, and poverty reduction as exemplified by Thailand and Bangladesh. This is followed by a listing of strategic interventions used by these countries and elsewhere in the developing world. Section six is basically an exercise in projection and simulation using different assumptions regarding contraceptive prevalence rates that result in various scenarios of fertility and population growth. The final section concludes and points to implications for policy.

MACRO PERSPECTIVE

The Philippines' fast-growing population has evidently had a bearing on the labor market, complicating the task of reducing unemployment and raising productivity. The pool of openly unemployed (2.99 million) and underemployed (7.51 million) total 10.5 million in 2013, up from 9.6 million in 2010 – a continuing huge challenge for job creation and poverty reduction. For instance, while the country's gross domestic product (GDP) grew 5.2 percent on average annually (2003-2012), job growth was only 2.4 percent (2006-2012), implying an employment elasticity of 0.46 – well below parity (Figure 1).
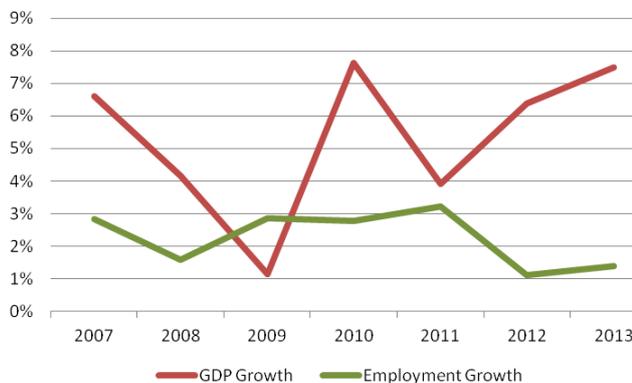
Figure 1. GDP and employment growth trends.
Source: National Statistics Office (NSO) 2007-2013

In terms of employment quality as reflected in class of workers, the contribution of salary and wage workers to employment growth has been declining since 2010. In 2012-2013, self-employed (without any paid employees) and unpaid family workers – both regarded as unsteady or "vulnerable" (ILO terminology) employment mostly in the informal sector – contributed negatively to job growth (as shown in Figure 2). A significant proportion of unpaid family workers are women, many of whom are in vulnerable employment (see Figure 7 below for the share of women in vulnerable employment).

Figure 2. Contribution to employment growth by class of workers.
Source: National Statistics Office (NSO) 2007-2013; authors' calculations

The foregoing is a snap-shot glimpse of the labor market. In terms of its dynamic, the stylized fact is that the Philippine economy somehow had taken exception to the normal stages of growth, as exemplified by the mature economies, from agriculture to manufacturing and then to services. The Philippines instead

vaulted from an underdeveloped agriculture to the service sector facilitated by the fast-growing labor supply, largely skipping the manufacturing phase – "development progeria", as Fabella (2013) calls it. Many economists regard this as a serious policy-induced mistake as agriculture and manufacturing are the key sectors for generating jobs and exports besides domestic goods. Of course, it did not help that the country's politically turbulent 1980s practically shooed away foreign direct investments (FDIs) – particularly from Japan – while its neighbors were going to town riding on the investment and export waves.

Given the robust labor supply and weak labor demand – compounded by inappropriate labor market policies – it is not surprising that high unemployment of around 7.0 percent and low productivity growth of 1.0 percent (the lowest in ASEAN, except for Thailand which suffered massive flooding around 2011 and Brunei which is among the world's richest countries) have been chronic problems (Figure 3).
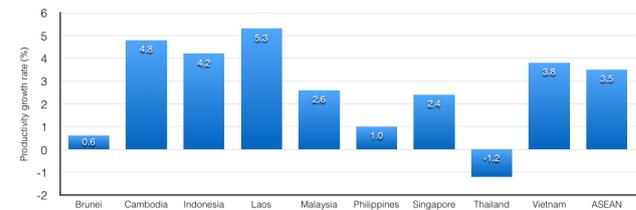
Figure 3. Southeast Asia: Growth rate of labor productivity, 2011.
Source: Johnson (2013).

As a consequence, the country's (official) poverty incidence has not come down palpably, staying stubbornly at around a quarter of the population – which is one of the highest in Southeast Asia. Family Income and Expenditure Survey (FIES) data from 1985 to 2009 consistently show that the larger the number of children, the higher the likelihood of a family falling into poverty (Pernia and Orbeta 2010; Figure 4 shows data for 2009).
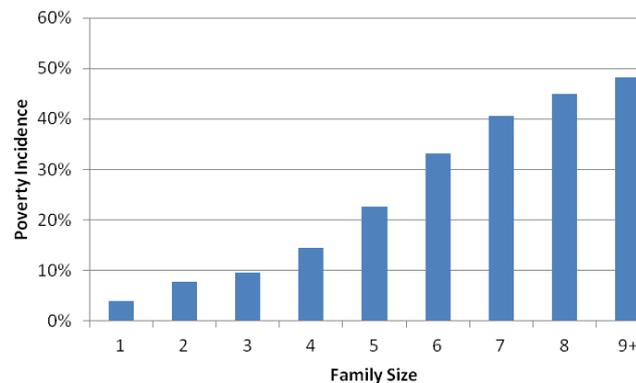
Figure 4. Poverty incidence distribution by family size, 2009.
Source: FIES 2009; authors' calculations.

More disturbing than poverty incidence is the absolute number of poor people, given continuing rapid population growth. In 2009 poor people numbered 23.1 million, up from 19.8 million in 2003. The corresponding numbers for families were 3.9 million and 3.3 million, respectively. The poorest 20 percent of families are increasing at roughly 1.6 times the national norm and 2.7 times the richest quintile.

Social inequality – both an effect and a cause of high fertility – is another critical concern. The Philippines' income inequality remains high with Gini index at 46 (0 = perfect equality to 100 = perfect inequality) compared with Thailand's 40 (also as of 2009), Indonesia's 34 (2005), and Vietnam's 36 (2008).

Research suggests that overseas remittances exacerbate inequality as they directly benefit the richer households more than the poorer ones (Pernia 2011; Pernia et al. 2014 pp22-29). Figure 5 presents data on remittance-receiving households, showing that the poorest quintile (Q1) receives the lowest share of remittances. The remittance share goes up consistently for the higher quintiles. While the impact of remittances on household incomes appears significant for all income groups, it is clearly larger for the richer households than for the poorer ones.

Another study finds that the higher the inequality, the more muted is the effect of economic growth in terms of poverty reduction (Balisacan and Pernia 2003). For instance, the growth elasticity of poverty is just about 0.55 percent for the Philippines compared with 0.7 percent for Indonesia, and closer to 1.0 percent for Vietnam. These imply that, say, a 10 percent increase in overall per capita GDP raises the per capita income or expenditure of the poorest by only 5.5 percent in the Philippines, 7.0 percent in Indonesia, and close to 10 percent in Vietnam. This

partly explains why the Philippines' relatively high GDP growth rates in some years have hardly dented poverty. Moreover, other studies show that high inequality (particularly inequality of opportunity), to begin with, tempers economic growth itself (Roemer 1998; Pernia and Quibria 1999). In short, inequality is bad for both economic growth and poverty reduction.
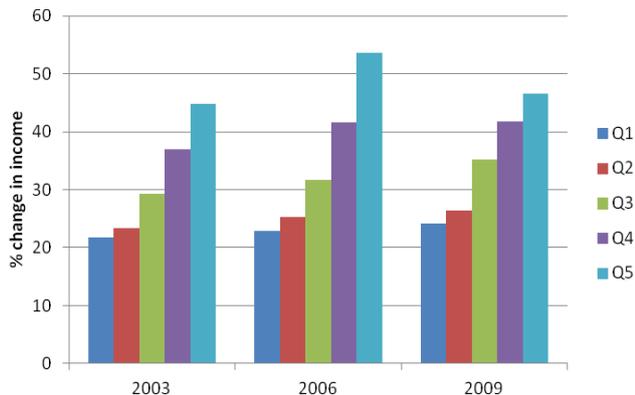
Figure 5. Percentage change in household income due to remittances by quintile, 2003-2009.
Source: Pernia et al. (2014)

The human development index (HDI) is the composite outcome of health, education and income, and is also reflective of equality (or inequality) of opportunity. The Philippines and Malaysia had nearly identical HDI values of around 0.561 (or 56%) in 1980, but Malaysia experienced sharply faster strides in HDI (Figure 6). By 2012, the Philippines' HDI was just 0.654, already well below Malaysia's and Thailand's though still higher than Indonesia's. The Philippines' HDI is also still above the average in the medium HDI category but lower than the mean in the East Asia and the Pacific region.
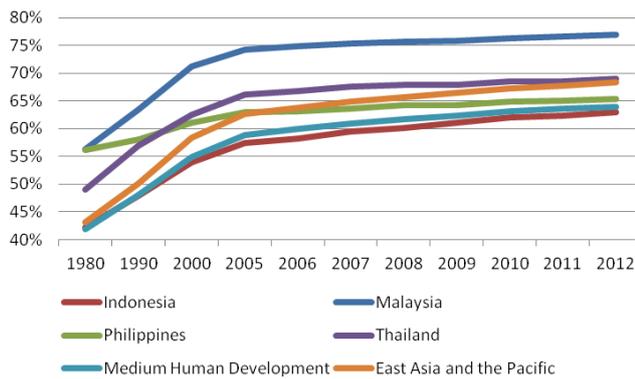
Figure 6. Philippines's HDI vis-a-vis select ASEAN neighbors and groups.

After adjusting for sub-national inequality, the Philippines' HDI drops to 0.524 in 2012, compared with Thailand's 0.543 and Indonesia's 0.514 (adjusted Medium HDI = 0.485; East Asia and Pacific = 0.537). The country's gender inequality index (GII) – which reflects gender-based inequalities in reproductive health, empowerment, and economic activity is 0.418 (as of 2012), compared with Thailand's 0.360 and Indonesia's 0.494 (Medium GII = 0.457; East Asia and Pacific = 0.333). This ranks the Philippines at 77 out of 148 countries in the 2012.

MICRO PERSPECTIVE

The foregoing section discussed why there is a real need for population management at the macro level. The following discourse reinforces the rationale for FP/RH programs at the household level.

TABLE I. Wanted vs actual total fertility rates.

Wealth Quintile	Wanted TFR	Actual TFR
Lowest	3.3	5.2
Second	2.9	4.2
Middle	2.4	3.3
Fourth	2.2	2.7
Highest	1.6	1.9
Total	**2.4**	**3.3**

Source: NDHS 2008.

The Philippines's latest average total fertility rate (TFR)[1] at 3.1 children (National Demographic and Health Survey [NDHS] 2013) remains the highest in all of Southeast Asia. Excluding the Philippines, the range is from Thailand's 1.6 to Lao PDR's 2.7. It seems clear that this has to do with the Philippines being the only country in the region that has not had an official family planning (FP) program before the enactment of the RH Law. Ironically, this has been the case despite the fact there is considerable unwanted fertility in practically all but the top two wealth-quintile households, as can be seen in Table 1. For instance, the bottom quintile's (poorest 20 percent) TFR is 5.2 though wanted fertility is only 3.3 children, compared with the top quintile's (richest 20 percent) at 1.9 and 1.6, respectively.

High actual and unwanted TFRs, especially among poor women, are binding constraints on continuing education and/or skills training for gainful employment. If at all, they are likely to be under-unemployed in the informal sector, thereby making up the majority of those in vulnerable employment. Figure 7 shows that while the share of total vulnerable employment has been trending downward, the total numbers remain large.
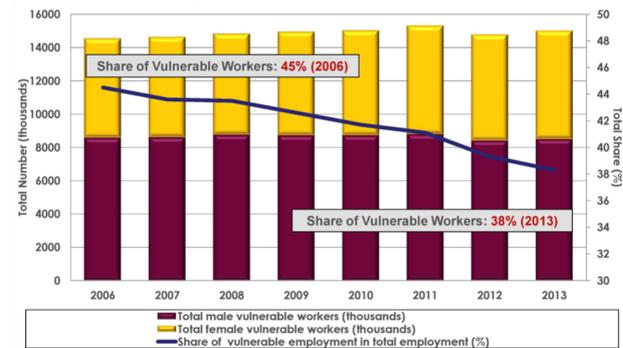
Figure 7. Vulnerable employment: Philippines, 2006-2013.
Source: ILO Philippines Office

There has also been an alarming rise in teenage pregnancies, resulting in higher proportion of young mothers. Among girls aged 15-19, live births per 1000 women rose to 54 (Family Planning Survey [FPS] 2011) from 39 (FPS 2006); among those aged 20-24, the corresponding numbers are 159 and 149. The more recent 4th Young Adult Fertility and Sexuality Survey 2013, conducted by the UP Population Institute, reveals that teenage mothers (15-19 years of age) had ballooned to 13.6 percent (683,000 in number) in 2013 from 6.3 percent (262,000) in 2002.

Typically, these teenage girls, mostly from the poorest households, are likely to drop out of school, perhaps become pregnant again subsequently and, hence, face a grim future. On the heels of their parents' poverty, the cycle of intergenerational poverty is thus perpetuated. Teenage pregnancies can be avoided by a provision in the RH Law for age-appropriate sexuality education in schools. Parents typically keep mum with their children on sexuality matters, driving children to learn haphazardly from peers or magazines.

While contraceptive prevalence rate (CPR, i.e., use of any method) among currently married women of reproductive age (CMWRA) appeared to be on the uptrend, albeit on a roller-coaster pattern, from 46.5 percent in 1998 to 50.7 percent in 2008, it fell off to 48.9 percent by 2011 (Figure 8). Besides wanting to have children, difficulty in access to methods and fear of side effects (presumably due to lack of adequate education/information) were the most commonly cited reasons for non-use of any FP method among CMWRA.
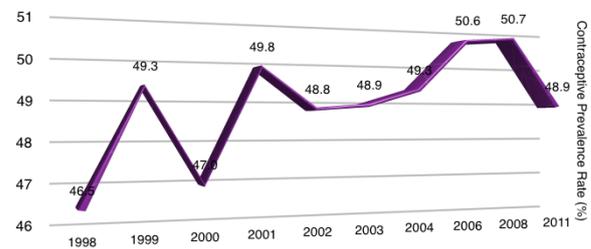
Figure 8. Contraceptive prevalence rate among CMWRA.
Sources: FPS 1999, 2000, 2001, 2002, 2004, 2006; NDHS 1998, 2003, 2008; FHS 2011 (http://census.gov.ph/content/contraceptive-use-among-filipino-women-based-results-2011-family-health-survey-0).

Disaggregating CMWRA into poor and non-poor groups reveals that the fall-off in CPR was appreciably steeper among the former than the latter group. It is, therefore, not surprising that poor women have much higher unmet need for FP services than the non-poor. The decline in CPR is reflected in increased unmet need for spacing and limiting children in 2006-2011 across socioeconomic classes. Among the poor CMWRA only 43.1 percent used any FP method in 2011 while it

---

[1] TFR is technically defined as the total number of children completed by a woman over her reproductive years, typically ages 15-49, if she were subject to the current schedule of age-specific fertility rates.

was 51.3 percent among the non-poor, down from 47.3 percent and 52.4 percent, respectively, in 2006 (Figure 9).
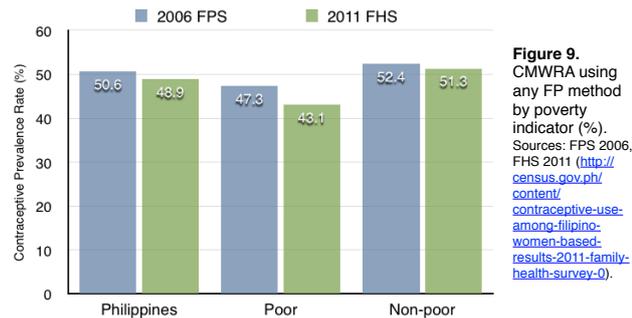
Figure 9. CMWRA using any FP method by poverty indicator (%). Sources: FPS 2006, FHS 2011 (http://census.gov.ph/content/contraceptive-use-among-filipino-women-based-results-2011-family-health-survey-0).

REGIONAL EXPERIENCE

Had the implementation of Philippine government's FP program that begun in 1970 been sustained in the same manner as, say, Thailand (which had a similar population size [37 million] and growth rate [3.2 percent] as the Philippines in the early 70s), our country's current demographic and economic situations would probably be the not too far off from Thailand's, as indicated below. The case of Thailand is particularly interesting and instructive because it was commonly regarded as the Philippines' quasi-twin in the 1970s through the mid-1980s.

The Thai government's national population policy launched in 1971 increased contraceptive use from 15 percent (1971) to 70 percent (1986), reduced average TFR from 3.4 children (1980) to 1.6 (2012), slowed population growth from 3.2 percent (1971) to 1.5 percent (1986) and to 0.5 percent (2012). Thus, Thailand's population expanded only 1.8 times from 1971 to a more manageable 68 million currently, compared with the Philippines's 100 million, up 2.7 times also in just over four decades.

Moreover, Thailand's imaginative FP program empowered women to engage in agriculture-based income-generating projects. These contributed to the drop in poverty incidence from 12.5 percent (1998) to 7.8 percent (2009), an increase in GDP per capita (in purchasing-power-parity [PPP] terms) from US$1,090 (1980) to US$9,221 (2010), and a fall in youth (15-24 years of age) unemployment from 5.4 percent (1998) to 0.7 percent (2011).

The case of Bangladesh is also instructive. Following its independence in 1971, the government implemented a FP program that raised contraceptive use from 8 percent (1975) to 61 percent (2011), brought down average TFR from 6.3 children (1975) to 2.3 (2011), cut maternal deaths from 800 per 100,000 live births (1991) to 194 per 100,000 live births (2011), and population growth has slowed to 1.3 percent (as of 2009-2011).

Motivated by the boom in the textile industry and microcredit availability (through the Grameen Bank and BRAC), Bangladeshi women availed themselves of FP services that unburdened them of unwanted pregnancies and improved their general well-being. In turn, this enabled women to be employed in the textile industry, empowered and accorded them greater autonomy. Female youth (15-24 years of age) literacy rate rose from 38 percent (1991) to 77 percent (2009). The overall outcome was a marked reduction in unemployment and poverty, and overall income per capita (PPP) rose from US$54 (1991) to US$1,909 (2009).

STRATEGIC INTERVENTIONS

Lessons from regional experience in terms of FP/RH, in combination with employment programs implementation, point to community intervention approaches that could be applied to the Philippines with the following short- to medium-term objectives:

a. To enhance the literacy and numeracy of the community, particularly the poor and marginalized.

b. To improve the skills and employability of families and communities, especially the poor and the young.

c. To improve the delivery of quality reproductive health information and services by the LGUs, the private sector, and community-based organizations toward enhancing the well-being of poor women, empowering, and enabling them to be gainfully employed.

d. To make the RH and Conditional Cash Transfer (CCT) programs complementary, mutually supportive and reinforcing.

e. To increase livelihood assets and raise the productivity of poor households and communities.

f. To enhance their capacities to value and guard the environment, and to anticipate, mitigate, adapt and respond to climate-change-induced disasters

Interventions by type of communities

a. Agriculture-based (e.g., Bondoc Local Economic Development)

   (i) Agricultural and fisheries productivity improvement

   (ii) Literacy and numeracy skills enhancement

   (iii) Entrepreneurship skills training

b. Rural-based tourism

   (i) Tourism-related skills training

   (ii) Non-agricultural economic activities, including small and medium enterprises (SMEs)

c. Urban and/or manufacturing-based activities

   (i) Industry-related skills training
   (ii) SMEs development

   (iii) Disaster risk management

   (iv) Disaster response capacity and resiliency

Interventions across all types of communities

a. Literacy and numeracy skills enhancement

b. Organizational capacity strengthening, policy development, and community planning

c. Micro-credit facilities and SMEs

d. Maternal and child health care (MCHC): training of RH service providers, improvement of health facilities; ASRH service provision

e. Family planning program: provision of modern FP information and commodities, training of FP service providers, FP demand creation (following the economic principle of 'supply creates its own demand'), and youth peer education; linking FP-RH with CCT

f. Awareness about climate change and capabilities to be proactive, adaptive, and responsive to – and be resilient from – environmental disasters.

SIMULATIONS AND PROJECTIONS

CPR, TFR, and population. Applying the random-effects regression technique to World Bank panel data of 153 countries covering the period 2000-2011, contraceptive prevalence rates (CPRs) of 60 percent (Bangladesh in 2011) and 70 percent (Thailand in 1986) result in a total fertility rate (TFR) of 2.9 and 2.6, respectively ($R2 = 0.655$ implies a relatively good regression fit).

The above suggests that for the Philippines to bring down its current TFR from 3.1 children to 2.9 or 2.6 by, say, 2016, would require a CPR of 60 percent or 70 percent, respectively. Both scenarios would entail urgent and vigorous implementation (preferably starting in 2013) of the RH law. Otherwise, such fertility reductions could occur later, or perhaps even after 2020.

To make estimates of Philippine population, the TFRs of 2.9 and 2.6 are fed into the DemProj policy model (a USAID-funded project). With a 2013 Philippine baseline population of 97.7 million, the corresponding population projections are: 103.5 million (higher TFR of 2.9) and 102.9 million (lower TFR of 2.6) by 2016; alternatively, 112.3 million (higher TFR) and 111.1 million (lower TFR) by 2020. For comparison, the former National Statistical Coordination Board's (NSCB's) medium assumptions for TFR is 2.76 from 2016 onwards to 2020 resulting in a projected population of 103.5 million in 2016 and 111.8 million by 2020 – which are pretty close to this paper's numbers. This suggests that for the Philippines to achieve even just the NSCB's population projections would require a marked reduction in TFRs through equally higher CPRs with the implementation of the RH law. Otherwise, mere incremental increases in CPRs or, worse yet, a business-as-usual regime would likely result in population numbers easily overshooting the government's targets.

Fertility and poverty. Official survey data have shown time and again that poor women have considerably more children than they want and can afford to support. A primary objective of the RH law is to address unmet needs for FP information and services that have resulted in considerable unplanned, mistimed, and unwanted fertility among poor women. Given that the poor are increasing significantly faster than the national norm and even faster still than the upper-income groups, as mentioned above, it follows that simply reducing unwanted fertility would, ceteris paribus, lower poverty rates.

To illustrate, consider the following counter-factual simulation. If currently married women of reproductive age (CMWRA) in the poorest quintile (Q1), by availing themselves of FP/RH services, had achieved their wanted TFR (i.e., total

TABLE II. Actual vs. estimated poverty rates if CMWRAs had met wanted TFRs.

Year	Unit	Actual poverty		Estimated poverty if only Q1 CMWRA meet wanted TFR		Estimated poverty if both Q1 &Q2 CMWRA meet wanted TFR	
		Rate %	Number '000s	Rate %	% point drop (number '000s)	Rate %	% point drop (number '000s)
2006	Family	21.1	3,671	20.0	-1.1 (-187)	18.4	-2.7 (-465)
	Population	26.4	22,173	25.3	-1.1 (-899)	23.2	-3.1 (-2,644)
2009	Family	20.9	3,856	19.1	-1.8 (-336)	17.6	-3.3 (-609)
	Population	26.5	23,143	24.9	-1.6 (-1,414)	23.0	-3.5 (-3,020)

Sources: NSCB 2006 and 2009, FIES 2006 and 2009, authors' calculations

number of children), the country's poverty incidence would have gone down significantly from the actual 26.5 percent in 2009 to 24.9 percent, and further down to 23 percent if CMWRA in both Q1 and Q2 had achieved their desired TFRs (Table 2). Similar reductions can be inferred from the latest NDHS.

In terms of population growth effect, total population would be appreciably smaller at 100.3 million or 97.2 million instead of 103 million by 2016 if Q1 CMWRA or both Q1 and Q2 CMWRA, respectively, would meet their wanted TFRs. The corresponding numbers by 2020 would be 106.3 million or 103.1 million instead of 111.8 million (Table 3).

TABLE III. Projected vs estimated population if CMWRA meet desired TFRs.

	2006	2009	2016/f	2020/f
Population (actual & forecast)	**87.0**	**92.2**	**103.0**	**111.8**
Q1 CMWRA meet wanted TFR	85.3	90.5	100.3	106.3
Q1 & Q2 CMWRAs meet wanted TFR	82.8	87.8	97.2	103.1

Sources: NSCB 2006 and 2009, FIES 2006 and 2009, authors' calculations.

Note that the above estimates are conservative because, for one, they exclude unmarried women and teenagers whose pregnancy rates have been rising. For another, they are purely demographic effects and do not account for demographic-economic dynamics. For instance, as poor women are relieved of unwanted pregnancies, they could find work or participate in continuing education and skills training, leading in turn to smaller desired family size. Fewer and better cared-for children can then look to a brighter future, and so on.

CONCLUSION

The population variable is central in both labor and product markets comprising the economy. It follows that its growth rate, age structure, and spatial distribution are critical considerations in a country's development strategy designed to achieve rapid and sustained economic growth that is job-generating, and poverty- and inequality-reducing, i.e., a socially inclusive development, or inclusivity for short.

At the macro level, the relationship between population and poverty seems pretty much established (e.g., UPSE 2004). Between the two, employment is typically the intermediate variable, which is exemplified in the Philippines by persistently high unemployment and underemployment and manifested by vulnerable employment particularly of women and children.

Micro-level data further substantiate the population-poverty nexus with the consistent positive association over nearly three decades between family size and poverty rate. This, in turn, can be explained by the lower contraceptive prevalence rates or higher unmet needs for family planning (FP) or, more broadly, responsible parenthood and reproductive health (RP-RH) services particularly among the poor. Based on the experience of other countries, RP-RH programs capacitate women with their well-being enhanced to be empowered, to acquire skills, and participate in the workforce. Fewer wanted and better cared-for children will also benefit from investment in human capital leading to a brighter future, thereby breaking the vicious circle of intergenerational poverty.

There are cogent arguments and a compelling rationale for a vigorous and sustained implementation of RP-RH programs at the local level in the context of a national population policy that complements economic policy. The strategic framework proposed here also points to the importance of key interventions at the community level under different settings, as can be gleaned from successful global/regional experiences (e.g., Thailand and Bangladesh). Simulations and projections suggest there is much to gain from implementing the RH law, especially in combination with other strategic interventions, such as skills training,

entrepreneurship, micro credit, small and medium enterprises (SMEs), and of course the ongoing conditional cash transfer (CCT) program.

CONFLICTS OF INTEREST

There is no conflict of interest among authors, institutions, and individuals mentioned in this paper.

CONTRIBUTION OF INDIVIDUAL AUTHORS

The research was conceptualized by Dr. Ernesto M. Pernia, who was principally responsible for the analysis and discussion of the data. Dr. Elena E. Pernia assisted in the writing of the initial draft and carried out much of the revisions for the final manuscript.

REFERENCES

Coale A, Hoover J. Population and Economic Development in Low Income Countries. Princeton: Princeton University Press, 1958.

Balisacan AM, Pernia EM. Poverty, inequality, and growth in the Philippines. In: Pernia EM and Deolalikar AB, (eds.), Poverty, Growth, and Institutions in Developing Asia. London: Palgrave Macmillan, 2003: 219-246.

Fabella RV. Development progeria: genesis and healing. Second BSP-UP Professorial Lectures. Manila: Banco Sentral ng Pilipinas, 2013.

Johnson LJ (2013). Employment, productivity and poverty reduction in the Philippines. Presentation at 34th National Conference of Employers, 24 May 2013, Manila, Philippines. (Available at: www.ilo.org/wcmsp5/groups/public/---asia/---ro-bangkok/---ilo-manila/documents/statement/wcms_214088.pdf).

Mapa DS, Balisacan AM. Quantifying the impact of population on economic growth and poverty: The Philippines in an Asian context. Paper presented at the 9th Convention of the East Asian Economic Association, 13-14 November 2014, Hong Kong.

Pernia, EM. A demographic perspective on developing Asia and its relevance to the Bank. Economics Office Report Series No. 40. Manila: Asian Development Bank, 1987.

Pernia, EM, Quibria MG. Poverty in developing countries. In: Mills ES and Cheshire P, (eds.), Handbook of Regional and Urban Economics, Vol. 3. Amsterdam and NY: Elsevier , 1999: 1865-1934.

Pernia, EM, A.C. Orbeta Jr. Why population policy remains an imperative in the Philippines. In: Medalla, FM, ed. Public Issues Casebook (in process). Pasig: National Economic and Development Authority, to appear.

Pernia, EM. Is labor export good development policy? The Philippine Review of Economics 2011; XLVIII (1): 13-34.

Pernia, EM. Pernia EE, Ubias JL, San Pascual MR. International Migration, Remittances, and Economic Development in the Philippines. Manila: De La Salle University Publishing House, 2014: 22-29.

Philippine Statistics Authority. 2012. (Available at: http://census.gov.ph/content/contraceptive-use-among-filipino-women-based-results-2011-family-health-survey-0)

Roemer JE. Equality of Opportunity. Cambridge: Harvard University Press, 1998.

University of the Philippines School of Economics. Population and poverty: the real score. Discussion Paper No. 0415, UP School of Economics: 2004.

World Bank. World Development Report 1984. New York: Oxford University Press, 1984.