

IUSSP Scientific Panel on Population and Poverty

Expert Meeting on Demographics and Macroeconomic Performance

Paris, France, 4-5 June 2010.

REPORT

Summary:

The IUSSP Scientific Panel on Population and Poverty organized an expert meeting on Demographics and Macroeconomic Performance, in Paris, France, 4 and 5 June 2010. The meeting was organized in collaboration with the Agence Française de Développement (AFD). The overall goal of the meeting, which brought together 30 participants, was to further interaction among researchers delving into the relationship between demographic change and macroeconomic performance. The nine papers presented at this meeting focused on those demographic variables and related concepts that are the most promising candidates for inclusion in macroeconomic modelling, in particular: Population size and its rate of growth, Age structure, Urbanization, and Gender.

Background:

Nurturing economic growth and reducing poverty are widely shared goals. Macroeconomic models, which focus on the interplay of an array of factors in determining the achievement of these goals, are sophisticated and highly influential, but they appear to underplay the potential contribution of demographic processes to economic outcomes. The meeting aimed to:

- review the use of demographic variables in widely-used macroeconomic models, with attention to the evidence that demographic factors deserve more emphasis;

and

- explore promising uses of demographic concepts and data in macroeconomic modeling and related policy analysis.

The overall goal of the meeting was to further interaction among researchers delving into the relationship between demographic change and macroeconomic performance. Economists beginning with Thomas Malthus have pursued this question. Malthus, of course, predicted doom, focusing on the consequences of the “irrepressible attraction between the sexes.” Paul Ehrlich wrote in the same vein. A bit later, Simon Kuznets, Esther Boserup, and Julian Simon argued that resource shortages would stimulate human ingenuity and lead to rapid technological advancement and institutional innovation – and that these developments would spur sufficiently rapid increases in food production and living standards and avoid mass misery.

In the mid-1980s, a more neutral view came to the fore. A report by the National Research Council in the United States concluded that there was no connection between population growth and economic growth. Indeed, of the many countries in which population has grown rapidly, there is a very wide range of economic growth rates. Looking at the growth rate of a country's population as a whole, no statistically significant pattern emerges with regard to

economic growth. This view, known as "population neutralism", held sway until the late 1990s.

Now, a large body of work carried out during the last 10 years has breathed new life into this issue. The salient observation that sparked this new review (and which builds on early work by Coale and Hoover and Myrdal) stemmed from the effect of the demographic transition on the age structure of a population. Economists have ignored this pattern at their peril, as it holds crucial keys to understanding the effect of demographic change on economic growth. Some of this research finds that roughly one-third of East Asia's phenomenal economic growth between 1965 and 1990 can be accounted for by the high share of working-age individuals in the countries that experienced rapid economic growth. Although this early work did not establish a causal connection from demographic change to economic growth, the posited mechanism was clear: The historically high share of working-age people in the population meant that, if those people were employed, the share of the total population that was working would be higher than it had previously been. Concomitantly, the relatively low number of child dependents meant that countries had less need to expend resources in taking care of the young or in building schools for them. Similarly, since the elderly population had not yet risen appreciably in size, there was no significant burden of the dependent elderly. These conditions prevailed throughout East Asia. The large working-age population was productively employed, leading to rapid economic growth. Numerous well-known researchers, including David Canning, Ronald Lee, and Andrew Mason, have been aggressively pursuing this line of argument.

Meeting programme

The programme was set up to focus on those demographic variables and related concepts that are the most promising candidates for inclusion in macroeconomic modeling. Empirical papers were solicited in particular on the following issues:

- Population size and its rate of growth: The effect of rapid population growth on economic growth and development has an exceedingly long history, reflecting intellectual clashes between population pessimists (e.g., Malthus and Ehrlich), population optimists (Simon and Boserup), and population neutralists (Kuznets).
- Age structure: Falling fertility rates and increasing longevity, along with the effect of earlier changes in such phenomena, have resulted in dramatically changed age structures in both developed and developing countries. Changes in the shares of the young, working-age, and elderly populations have already affected labor supply, savings, and economic growth, and further such changes are certain to come. In particular, the demographic dividend that can result from a higher share of working-age individuals can have a major effect on economic growth and poverty reduction.
- Urbanization: As populations throughout the world move from rural to urban areas, and as urban areas expand to incorporate places that were previously rural, economic patterns are changing. Urbanization carries with it the potential for reductions in poverty but also for increasing misery.
- Gender: In response to lower fertility rates, cultural change, and economic necessity, female labor supply has increased in many countries (most notably in Latin America and the Middle East / North Africa). This development is a potential boon for economic growth and poverty reduction.

The historical time frame was essentially contemporary, meaning that, in general, researchers were to use data beginning from around 1950 to help understand the present and forecast economic trends in the next few decades.

To give the discussion some grounding and specificity, the programme also included a set of country case studies. These examined the manner in which demographic change has interacted up to the present with economic development and can be expected to bear on economic development in the future. The case studies covered Brazil, China, Nigeria, Pakistan, and a China/India comparison.

Minutes of the meeting:

by Harun Dogo (RAND Corporation)

The first session of the meeting was chaired by Dr. David Bloom of Harvard University. After a short welcome and introductions of the participants, Dr. John Casterline of Ohio State and Dr. Bloom discussed the structure and the agenda of the upcoming meetings.

Almost seamlessly the discussion transitioned to a presentation by Dr. Jocelyn Finley of Harvard University, who was presenting her work titled *Micro foundations of the demographic dividend*, conducted along with David Bloom, David Canning, and Günther Fink. In this paper Dr. Finley used pooled micro-data from 47 low and middle income countries to illustrate that a similar pattern of association between wealth, dependency ratios and human capital investment as can be found on the country level during demographic transitions can be found at the micro (household) level. Households from higher SES classes have fewer children, lower dependency ratios, and invest more into their children's education. The eight country case studies (Ghana Zambia, Dominican Republic, Peru, Bangladesh, Indonesia, Egypt and Jordan) presented were analyzed with regard to youth dependency and child school enrollment on household level through the use of a minimum of 4 household survey rounds and with two countries per region for validity purposes.

The findings suggest that in the more advanced stages of the demographic transition all socioeconomic groups experience smaller dependency ratios and increased investment in their children's education, suggesting at least some degree of convergence over time. Moreover the data shown in this paper suggests a rather robust association between absolute levels of socioeconomic status and age structure. This is important as it suggests that broad access to schooling (as successfully implemented in most Asian countries) can lead to an equally broad distribution of the demographic dividend within a country over time.

The first discussant, Dr. Charles Becker from the Economics Department at Duke University reminded everyone of the huge impact of the original work by Bloom and Williamson with over 640 citations thus far, which changed the nature of debate on the topic. Despite the impression and assumption among the members of the community that a check of how closely the dividend holds on the micro level had been done before, it had not. In particular, Dr. Becker was struck by the heterogeneity of findings and reiterated that most demographic feedback does not benefit only high groups of high socioeconomic status. His suggestions for extending the work included investigating the effects of urbanization, which he hypothesized, would reduce inequality. Also, further controls should be applied with socioeconomic status grouping as the research moves towards using panel data as those groups are not stable over

time and some of the variation may be driven by compositional effects. The second discussant, Dr. Bo Malmberg of Stockholm University echoed Dr. Becker's praise and called for further work to determine the effect of interventions to reduce fertility on economic growth through incorporating demographics into macroeconomic models.

The next paper was presented by Dr. David Weil and Joshua Wilde of Brown University and authored together with Quamrul Ashraf titled *The effect of interventions to reduce fertility on economic growth*. In this paper the authors quantitatively assessed the effect of exogenous reductions in fertility on output per capita using a simulation model that allows for effects running through schooling, the size and age-structure of the population, capital accumulation, parental time input into child rearing, and crowding of natural resources. The model was parameterized using a combination of microeconomic estimates, data on demographics, natural resource income in developing countries, and standard components of quantitative macroeconomic theory. The model was applied to the effect of an intervention that immediately reduces TFR by 1.0, using current Nigerian vital rates as a baseline. The base case set of parameters, indicated that an immediate decline in the TFR of 1.0 will raise output per capita by approximately 13.2% at a horizon of 20 years, and by 25.4% at a horizon of 50 years.

Comments by Dr. Alexia Furnkranz of the Institute for Mathematical Methods in Economics at the Vienna University of Technology started by praising the rigor of the work and placed it within context in the literature. She emphasized that the goal of the research was to understand how the population–economy link will evolve, and the effects of policy changes. The fundamental problem is that economics works on short run effects and demographics adds long run effects – nonetheless the simple economic demographic interaction assumes exogenous, immediate, costless, reductions in fertility which are limited in their reality. She further suggested that a feedback channel from economy to demography should be introduced in the model and that the action channels should be disentangled. She reminded us that while the most important questions facing policy makers are essentially macro-demographic in terms of conditional predictions and good policy formation, the analysis needs to be firmly grounded in micro foundations. Her comments closed by highlighting some issues for further analysis in particular the necessity of capturing the broad range of general equilibrium effects (e.g. capital market, labor market, endogenous technology, etc.) and suggested considering an evolution towards agent –based models like those of Schelling or Axelrod. In particular, the current work could be strengthened by considering micro foundation of savings, labor force participation of women and the postponement of birth

The next discussant was Dr. Günther Fink of Harvard University and his comments focused on questioning the reality of the assumptions, in particular whether using a stable population is a good starting point, and whether the model population's (Nigeria) rather substantial improvement in health were missed. He wondered if the long-term trajectory was realistic – i.e. are we really expecting 1 billion Nigerians in 100 years. He praised the second part of the paper as a nice addition to the literature and for making simulations more realistic, however he cautioned that absolute change likely to have very different effects in countries with lower fertility. The model as it is restricts feedback mechanisms: mortality is not affected, fertility preferences are not affected, there is no feedback effect even though education, wealth, and land rents are also likely to affect fertility outcomes. Incorporating the “productivity” effects would strengthen the work, but it is unclear what the direction of this effect is.

Finally in the Q&A session, an additional question was asked as to why the scenarios were deterministic and not stochastic – and it was inferred that people would anticipate the shocks of the magnitude presented in the model. Dr. Weil and Dr. Wilde answered this question and the discussant comments in a row, stating that there is room in the model for including feedback channels, but as with all research they were limited by time and the tradeoff between lots of feedback channels and a simple model. They chose to lean towards a simple model rather than one with many feedbacks. The role of technology was hard to parametrize, but even though they discussed including it was determined that it was too hard to determine its impact. Similarly, including forward looking behavior, would have been very difficult.

After a productive networking lunch break, the next presenter was Dr. Anju Malhotra of the International Center for Research on Women who presented the results of her work with Jeffrey Edmeades and Janna McDougall on *Gender Inequality and the Demographic Dividend*. This work points out that despite the fact that much attention in the development field has focused in recent years on research on the “demographic dividend,” there is an equally impressive and growing body of work on gender inequities and the effects of efforts to overcome them for economic development. Nonetheless the connections between these two fields have not been explored in detail. In this paper they provide a theoretical framework for modeling the relationships between gender and the demographic dividend and test these relationships using comparative macro-level data. They estimate a random-effects model of economic growth using ordinary least squares for the 1965-1999 period that includes a series of interaction terms between gender inequality in educational attainment and other determinants of growth, including a measure of the dividend. Their results indicate that higher levels of inequality both lower growth directly and by reducing the effectiveness of the dividend, reinforcing the importance of investing in girl’s education, particularly for countries who have yet to enter their dividend period.

This work was discussed by Dr. Dennis Ahlburg of Trinity University and Dr. Philomena Nyarko of the University of Ghana. Dr. Ahlburg’s scathing comments pointed out his belief that the measures used in the regression were non-consistent and noisy. In particular he would have expected that the analysis show sensitivity around the inequality measure, which it does not. Moreover, the analysis excludes Ghana and South Africa as outliers which is something that other growth models don’t do and thus this work does not have direct comparability with them. He felt that the paper does not show strong empirical results, and that the authors should be more guarded in stating their implications and recommendations. In particular he is nervous because strong indirect effects are found during the analysis –their dominance makes the findings difficult to believe. While Dr. Nyarko was more positive on the findings of the paper, she wondered about multicollinearity in the data, the exclusion of working age population and the question of the quality of measures.

During the Q&A session a number of issues were raised on this paper. Dr. DaVanzo of RAND wondered about the definition of variable educational schooling and the reason for logging the number of years of schooling during estimation. David Bloom suggested that the only variable of significance was the log of education (according to Berrol and Lee), to which Dr. Ahlburg wondered about where the missing log came from, since it was not presented in the paper. The answer from the authors implied that the log controls for the correlation between education and female education, and is an attempt to intuitively get at a relative measure - quality of women’s schooling matters and the environment matters. |Dr. Becker suggested that the findings would be more believable if the authors identified pathways for the effect, such as the elimination of inefficiencies. Dr. Bloom closed the discussion by bringing up the rich pathways indicated through the work of Esther Duflo: exogenous

placement of women as district administrators, democratization, election success by women and how those effect a women's decision to invest in education.

The following presentation was by Thomas Lindh of the Institute for Futures Studies and Växjö University, who presented his work titled National Transfer Accounts and macroeconomic forecasting. The National Transfer Accounts in question trace the intergenerational transfer flows within the framework of National Accounts. In previous research, demographic structure has turned out to have quite a strong correlation with macroeconomic variables, in particular economic growth and there is evidence that these correlations can contribute to improve long-term forecasts. This paper studied to what extent NTA data can help explain these correlations and how that can be of help to further improve long-term forecasts. Using Swedish NTA data 1985-2003 to evaluate demographically based forecast models for Swedish GDP it investigated to what extent the variation in intergenerational resource flows may help to explain forecasted performance over this period. The focus of the research was on the behavior of life cycle wealth where a hypothesis derived from Willis (1988) indicated that structural change in age composition, combined with changes in the intergenerational transfer flows can have a fundamental influence on the growth path of an economy by restricting savings and investment behaviors. The tentative results indicated that there may be scope for using life cycle deficits to improve on demographically based long-run forecasts.

In his comments, the first discussant Dr. Joshua Wilde of Brown University wondered if regressing growth on the age structure is really a useful way to predict growth rates. He pointed out that there are all sorts of endogeneity in this approach with institutions and initial income as two most obviously omitted variables. Similarly he wondered if there was some overfitting of data in the sample - since with enough variables we can fit anything. He wondered in particular why asset bubbles and other economic elements seem to have a very small impact. To prove his point he demonstrated that popularity of the name William in the United States was a significant determinant when fitted to the data, yet it obviously made no economic sense. He suggested that an alternative explanation might be that recessions in most developed world lower investment and growth everywhere. Similarly he pointed out that it is easy to think that Sweden does not fit the closed economy model and as such the capital inflows would mitigate the life cycle savings effect.

In his comments, Dr. David Weil reminded us that demographics must matter in terms of economics. It is obvious that there is an economic life cycle of working, saving, transfers to and from the government. The macroeconomic equilibrium depends on the number of people in different age groups. Demographic changes are predictable so we should be able to predict their macro effects. He thus saw three approaches to forecasting in macroeconomics and demographics. The first being the free form approach, which nonetheless has issues with identification and the ease of fit. One potential remedy to these issues is to look at savings rates, tax rates and innovation rates instead of growth rates. The second approach is micro-structured regression, using micro data to measure age specific behavior and non-growth as independent variable – an example is the Mankiw/Weil paper on demographics and housing prices. Final approach is adding the NTA/LCD into Macro-Demographic Forecasting toolbox.

Dr. Lindh responded by saying that the charge of overfitting is valid, but they have been doing this for a while. He thanked Dr. Wilde for his suggestion on using other accounts as well but was not sure that it would be easier to go to components. Savings are dominated by the public sector, so they do not work very well in Sweden. Additional question from the

audience included questions about why the age of the capital owner was a better measure, how the authors treat pension reform and what effects it has on private savings. The author responded that capital owner's age would not be a good predictor, because capital market is part of the intergenerational transfer system. Regarding pension reform, Sweden is halfway into the transition, and the effects won't show up in the figures for another 20-30 years.

Following a short break the conference transitioned to the applied session chaired by John Casterline of Ohio State University. The first paper in this session was the work by Dr. David Bloom of Harvard, Dr. Salal Humair of the LUMS School of Science & Engineering, Pakistan, and others titled *Prospects for economic growth in Nigeria: A demographic perspective*. The work was presented by Dr. Humair. In the paper, the authors quantify the economic growth opportunity created by Nigeria's demographic transition and make policy recommendations on how to realize this growth, focusing particularly on investment in Nigeria's human capital. Using a cross-country growth model, they first estimate the size of the demographic dividend Nigeria could enjoy; how it might be increased by health and institutional improvements; and how it might affect poverty. Using an original analysis of Nigeria's economic lifecycle, they further investigate the conditions needed to realize the dividend, focusing particularly on the challenges and opportunities in increasing Nigeria's labor productivity, and investments in health and education, and conclude with policy recommendations. The recommendations particularly focus on the need to reduce fertility, minimize unemployment and carefully consider migration as an option for human capital development, while channeling gains from demographic dividend into savings and investment.

The first discussant was Dr. Peter Heller, formerly of the IMF and currently with the Johns Hopkins School of Advanced International Studies. He pointed out that there are considerable challenges in exploiting the dividend, in particular the fact that oil constitutes 40% of Nigerian GDP and that the currency (naira) is overvalued slightly with the current state of the economy. If the papers policy recommendations are to be followed and all of those jobs need to be generated, then the naira is vastly overvalued. The Nigerian government is indeed consistently threatened with Dutch disease and there are two main options that can be used to deal with that threat. The first is to set up a sovereign wealth fund with excess assets. However, the Nigerian government is over dependent on oil income. The alternative is to use the oil to finance infrastructure and education, but the government is vastly inefficient. He then asked the question of whether the Nigerian political economy can handle these changes. Does it have a robust strategy for decline in oil demand? Finally, he called for a strengthening of governance and of the financial sector as a possible strategy to increase the number of options available to the Nigerian government.

In her comments, Dr. Rachel Nugent of the Center for Global Development praised the work and indicated her hope that Nigeria is able to address the political economy issues and reminded us that the main question of the meeting was what countries need to do to capture the demographic dividend. In terms of the paper she thought that institutional and health improvements were nicely indicated and showed how GDP growth would affect poverty. Nonetheless, from the age structure point of view it is not a pretty picture. She indicated that the work could have been strengthened by discussing the gender issues.

During the Q&A session, Harun Dogo from the RAND Corporation wondered why the authors did not use the GDP figures without the income from gas & oil, as those are dependent on exogenous prices and not on the demographics of Nigeria. David Weil

wondered why brain drain is good for Nigeria and also cautioned that fertility decline may lift people from poverty but also “lifts” other people from even being born. The answer provided was that when you have 27% percent unemployment for graduates, anything works. The author believed that due to kinship ties remittances will follow.

During the second day of the conference, work continued on the more applied pieces under the chairmanship of John Casterline. The first piece was on Pakistan’s unique demographic and economic trajectories and an exploration of interlinkages between them by presented by Batool Zaidi and written in in cooperation with Zeba Sathar, both of the Population Council in Islamabad. Their work first reviewed the trends in demographic and economic performance and the changes in age structure. It questioned whether the poor benefited from the transition and whether it had been more favorable for non-poor households. It examined future scenarios based around further fertility decline, the building of human capital and absorbing the youth and female labor force. The work concluded that based on the trends presented, the recent decline in the dependency ratio is about the only thing Pakistan has in common with the conditions that enabled the demographic dividend to materialize in East Asia. In all other aspects, social, demographic or political, Pakistan is far from being in the position to reap the benefits that this particular phase of the demographic transition has to offer. Unless the government takes immediate steps to invest heavily in the social sector, the bulge in the youth population is more likely to lead to a demographic disaster rather than dividend.

The first discussant of this paper was Dr. Julie DaVanzo of the RAND Corporation. She pointed out an interesting similarity of the data compared to Bangladesh through 1970, but with important differences, religion, density of population, ethnic homogeneity. She suggested that given the recent change in fertility, the authors should keep in mind that employment of women in non-formal sectors can still boost GDP by freeing up men. The second discussant Dr. Humair, thought that the authors did an interesting in expansion of labor force structure per sector in the paper. He wished they had compared the economy regionally.

During the QA the questions started with the focus on the reliability of data, to which Ms. Zaidi replied that she was not sure herself on economics, but that she can speak for demographics – with the annual demographic survey (annual), historically you get a difference of 1. Dr Fink commented on the correlation of economics and demography and wondered how much of this really is the effect, as many of these things are mechanical in nature. Dr. Becker suggested looking at the border regions to explore fertility, and reminded the authors not to think of Pakistan as a monolith. Ms. Zaidi replied that there is a limitation in the data – e.g. Baluchistan data is terrible and a number of clusters had to be dropped.

The following paper was presented by Harun Dogo of RAND and was titled the *Demographic dividend or demographic drag?: A net assessment of population trends in China and India, 2020-2025, and their implications*, and written in collaboration with Dr. Julie DaVanzo and Dr. Clifford Grammich, both of RAND. In their work they breakdown the structure of both populations on a range of demographic measures and project their evolution out to 2025. They point out that in both countries, increasing populations, together with increasing income and affluence, will increase demands on world resources and place strains on the environment. Whereas China has since the mid-1970s had a larger percentage of its population of working age than India; this difference is projected to persist through our period of interest, 2020-2025, until 2030. However, the percentage of China’s population that is of working age will peak in the next two years and generally decline thereafter, while this percentage will be

increasing in India. Because more women work participate in the labor force in China than in India, the cross-over point for the proportion that actually works may occur somewhat later. They point out that the opportunity to reap a “demographic dividend” is limited in time. Eventually the working-age population decreases in relative size as its retiring members are replaced by smaller cohorts resulting from lower fertility rates. While China has two decades before its total dependency ratio is projected to exceed India's, it has only one more year before the population of older people starts increasing more rapidly. While analyzing the structural conditions and policies for taking advantage of the dividend it becomes apparent that when compared to India, in the short term China seems to have more of the preconditions to take advantage of its demographic window of opportunity and to deal with demographics when they become a potential drag. These include more flexible labor markets; higher rates of female labor force participation, more highly educated women, and more open attitudes about women working; less illiteracy in general (and especially for women); better infrastructure; more internal migration (though much of it “illegal”); and a higher degree of urbanization, more openness to foreign trade, and slightly higher rates of coverage by public pensions.

It is for these reasons that the authors feel that, on balance, China will remain “ahead” of India during the 2020-2025 assessment period. Nonetheless, the authors indicated that in the long term, China’s prospects may be hindered by its demographics. An aging population without an established safety net will create demands for new types of services, particularly for health care, reducing disposable income of the working population through wealth transfers to the elderly, and laying claim on the large national savings pool that China has built up during the boom years. On the whole, China’s projected demographics are creating a challenge for its economic development -- a potential demographic drag – that may be more complex to manage compared to the situation of India. While very successful in controlling the size of its population through anti-natalist policies in the late 1970s and early 1980s, it is unclear whether China can successfully implement pro-natalist policies to avoid a long-term decrease in its population. Not only has the social environment changed, but the goals of these policies are more difficult to achieve, since both democratic and authoritarian regimes in Europe found that such policies mostly result in changing in the timing for child-bearing rather than the overall number of children. India is perhaps facing a more straightforward task, since its primary challenges are improving infrastructure, health care and education, and the role of women rather than altering the behavior of individuals. However, China has a good head start on development, and given its centralized decision-making governance structure, has an easier time implementing socioeconomic policies required for change, but the methods by which it could successfully increase fertility are not obvious. In the future, India will have more favorable demographics than China, but whether it is able to reap a demographic dividend will depend on successful government implementation of an ambitious economic development agenda - Improving infrastructure, health, education, and the role of women while maintaining social peace in a society that is increasingly stratifying by income requires national consensus with a long-term outlook. Whether such a course is possible in a large, diverse parliamentary democracy like India is difficult to predict. China’s experiences indicate that such policies are feasible, but direct comparison between the two remains difficult.

The first discussant, Dr. Judith Bannister of the Conference Board discussed the fact that China and India are big economic success stories in terms of rapid economic growth and dramatic reductions in poverty rates even during global downturn. She reemphasized that the older workers in China (50-64) in 2025, who are currently 35-49, have little education. Whereas they add to the labor force now, it may be necessary to re-train and have continuing

education for older workers in the future. India is a similar story, but in the future the labor force will on average be considerably more educated than it is now. Though China's educational quality is better than India's, much of it is abysmal. She pointed out that China has taken much greater advantage of its demographic dividend than India is likely to by the time it is in the same position. Lastly, she added some additional detail on changes in the family planning policy and how that helps describe the current and future structure of the population.

Dr. Alex Herrin pointed out that the second demographic dividend depends on institutions and reminded us that on certain indicators China was behind India in the past but has now surpassed it. He suggested that it would be interesting to look at regional differences and how migration has affected age structure. In the Q&A session Dr. Heller wondered if the export-oriented growth model sustainable and whether China is likely to bump against external demand constraints. Moreover, he pointed out that China has a very high savings rate, but it is unclear how it is being utilized. Dr. Bannister also pointed out that there are additional structural barriers to internal migration: India has around 100 different languages and China has the hukou, household registration system, which is supposed to limit migration. Dr. Becker pointed out that a Soviet-type of retirement system exists in urban areas of China, but that life expectancy is much higher in China than in the former USSR creating a potentially huge pension burden.

Following an excellent lunch, Dr. Bannister presented her work, done in collaboration with Dr. Bloom and Larry Rosenberg of Harvard University, on Population Aging and Economic Growth in China. Their work was motivated by the widespread concern about the possible effects on economic growth and on the ability of countries to provide support for their elderly populations. These concerns have found resonance in China, where more than 30% of the population is expected to be age 60 or older in 2050 and motivated the development of measures that could serve to counteract any negative economic effects of population aging - policies that seek to raise the age of retirement, spur higher savings, facilitate work for those caring for children, increase the labor force participation of women, liberalize immigration, and give more incentives for education. China's economic growth rate is nonetheless expected to gradually slowdown in the future, in comparison to the breakneck pace of economic development from 1978 to today. The bottom line is that population aging is unlikely to cause significant economic problems for China. Its highly productive economy is awash with skilled workers and with those seeking to join the labor force. There is little prospect of a lack of workers leading to a marked slowing of growth in GDP or GDP per capita. To the extent that older workers are retiring, there are more than enough working-age people to fill their shoes and to support the daily needs of China's elderly population. Nevertheless, policy reforms – in education, health, pensions, labor policy, and internal migration – could make China's economic future all the more secure.

Dr. Alburgh's comments started by highlighting that the authors offered a large buffet of suggestions, but mixed together they don't taste well. He wondered why we maintain the assumption that the elderly really cost more and whether that is coming from the rising cost of U.S. health care in the last few years. According to Glass and Spectre the empirical evidence leaves it uncertain that the young are more productive. Dr. Heller wondered out loud how to minimize the impact of shift from agriculture and whether those farmers have the skills to move in to the industrial labor force.

The last paper of the conference was presented by Drs. Bernardo Lanza Queiroz and Cassio Turra of CEDEPLAR/UFMG and was titled *Window of opportunity?: economic consequences of population changes in Brazil*. In discussing the last few decades of major demographic change in Brazil, the paper shows how the population is shifting from a young age structure in the 1970 to an older distribution. Such a transformation in the population age structure can have important impacts on economic growth. The authors estimates the demographic dividends in Brazil and show that demographic changes could have positive impacts on economic growth, but lack of investments in human capital and poor institution could lead to a slower growth than what could be expected from the population change. They also analyze two components of the first demographic dividend: private and public, and that high public transfers to the elderly reduce the magnitude and duration of the fiscal dividend and could also harm the realization of the second dividend.

The final two discussants were Dr. John Casterline and Dr. Peter Heller. Dr Casterline for one was rather disillusioned with the results because he likes Brazil and they seem to be squandering their demographic dividend. If we look at the division between public and private investment, question becomes whether together they form sufficient investment for the elderly? His opinion was that the reason to invest heavily into the elderly is to maximize the second dividend. Moreover the estimate of the demographic dividend by year is quite erratic and he has trouble understanding the plunge at 2005. As an improvement strategy he suggested an analysis by social class, which would be useful in highly stratified society like Brazil. Dr. Heller's comments started by pointing out that it seems like a lot more growth could have taken place with right policy compared to China's experience. This leads to the question of whether a second dividend will materialize if you invest in the right things. What if you invested in foreign bonds for example? His second observation was that we are here presented with two different setups of pensions in emerging markets: China and India have no pension system (interesting questions of design, should it be defined contribution scheme or what, how do you avoid European style bankruptcy), whereas on the other hand we have the case of Brazil which has overly generous promises. How do you sensibly reform that?

In their response the authors sided with Dr. Duflo's work on why transfers are bad for children. In particular, the work looking at investing directly in children's health represents an interesting alternative. The work they did on socio-economic status changes showed that the majority of losses for the poor children come through the schooling and health, but that benefits come from public transfer – nonetheless they lock an individual into a particular socio-economic status for life. They concluded by stating that retirement is most likely a 20th century behavior and that in the future the new norm might be that you work until you die. Brazilian history in particular does not give reason to be optimistic – for example in 1990s the president froze current account savings.

With this the meeting closed with a few comments by Dr. David Bloom and a reminder that Dr. Jocelyn Finley has been tasked with writing the paper summarizing the policy findings of the meeting.

IUSSP SEMINAR
“Demographics and Macroeconomic Performance”

Paris, 4-5 June 2010

PROGRAMME

<u>Friday, June 4</u>	Sessions chaired by David Bloom at <u>AFD (Agence française de développement)</u>
9:00 – 9:30	Opening by John Casterline and David Bloom: Welcome, Introductions, and Agenda
9:30 – 10:45	David Bloom, David Canning, Günther Fink, and Jocelyn Finlay "Micro foundations of the demographic dividend" <i>Discussants:</i> Charles Becker and Bo Malmberg
10:45 – 11:00	Break
11:00 – 12:15	Quamrul Ashraf, David Weil, and Joshua Wilde "The effect of interventions to reduce fertility on economic growth" <i>Discussants:</i> Günther Fink and Alexia Fürnkranz-Prskawetz
12:15 – 1:15	Lunch
1:15 – 2:30	Anju Malhotra "Gender and economic growth" <i>Discussants:</i> Dennis Ahlburg and Philomena Nyarko
2:30 – 2:45	Break
2:45 – 4:00	Thomas Lindh "National transfer accounts and macroeconomic forecasting" <i>Discussants:</i> David Weil and Joshua Wilde
4:00 – 4:15	Break
	Session chaired by John Casterline
4:15 – 5:30	David Bloom, Salal Humair, Andrew Mason, Olanrewaju Olaniyan, and Adedoyin Soyibo "Prospects for economic growth in Nigeria: A demographic perspective" <i>Discussants:</i> Peter Heller and Rachel Nugent
7:00	Cocktail

NOTE: Each presentation will last 30 minutes, to be followed by a 10-minute response from each discussant and 25 minutes of general discussion.

Saturday, June 5 **Sessions chaired by John Casterline at Novotel Paris-Gare de Lyon**

9:00 – 10:15

Batool Zaidi and Zeba Sathar
"Pakistan's unique demographic and economic trajectories: An exploration of interlinkages"
Discussants: Julie DaVanzo and Salal Humair

10:15 – 10:30

Break

10:30 – 11:45

Julie DaVanzo, Harun Dogo, and Clifford Grammich
"Demographic dividend or demographic drag?: A net assessment of population trends in China and India, 2020-2025, and their implications"
Discussants: Judith Banister and Alejandro Herrin

11:45 – 12:45

Lunch

12:45 – 2:00

Judith Banister, David Bloom, and Larry Rosenberg
"Population Aging and Economic Growth in China"
Discussants: Dennis Ahlburg and Bo Malmberg

2:00 – 2:15

Break

2:15 – 3:30

Bernardo Lanza Queiroz and Cassio Turra
"Window of opportunity?: economic consequences of population changes in Brazil"
Discussants: John Casterline and Peter Heller



IUSSP Seminar

Demographics and Macroeconomic Performance

Paris, France, 4-5 June 2010



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