Demographic Transition: Positioning the Age-structural Change Perspective

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Autumn 2011 has been pinpointed as the time in which the world population reaches 7 billion, a psychological moment, a time to pause and consider. While there is still some debate over the progress of the demographic transition, its process and form across the Less Developed World, and whether it will occur throughout the African continent, as the world achieves a population of 7 billion, the role of the demographic transition in both simultaneously *increasing* and *ageing* the world is widely acknowledged. It is thus also a moot time to consider moving away from the notion of “ageing populations” per se to a more useful notion of the age-structural shift.

Taking an age structural change perspective allows us to view population change in terms of a shift between providers and dependents – the dependency ratio - and how this will typically move from a large percentage of young to large percentage of old dependents during the demographic transition.

These ratios comprise Elderly Dependency Ratios (EDR), the number of persons of working age (aged 15 to 64) per person aged 65 or over; Youth Dependency Ratios (YDR), the number of persons of working age (aged 15 to 64) per person aged 15 or under; and Total Dependency Ratios, number of those 15–64 with those outside this age range. It must of course be noted that these accepted broad age categories are in practice a mere proxy for productivity/non-productivity. Some authors have taken the shift in EDR from 7% to 14% as a measure of the move of a population into an aged population, others propose that the shift in TDR from YDR to EDR may be useful in determine when a population reached demographic maturity. Europe became mature by this measure in 2000, Asia is predicted to reach maturity by 2045.

The next decade will thus see a rapid shift towards increased EDRs in most industrialised countries. The EU-25 Elderly Dependency Ratio is set to double and reach 51% by 2050, as the working-age population (15–64 years), decreases by 48

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million between now and 2050, and the EU-25 will change from having four to only two persons of working age for each citizen aged 65 and above (European Commission 2006). Italy, for example, will see its EDR double between now and 2050 to reach 70:100 workers. In contrast the UK will increase only slightly, reaching 67:100. By 2050, the EDR will also exceed 70:100 in Spain and Japan, while remaining below 40:100 in Denmark, Iceland, Luxembourg, Mexico, Turkey and the United States. In addition, in some countries the fall in YDRs is such that overall TDRs will actually fall. China's overall TDR, for example, will decrease, from a peak of 80 dependents for every 100 workers in the youth driven 1960s and 70s to 60 per 100 by 2050.

The Potential Support Ratio (PSR) is an alternative way of expressing the numerical relationship between those more likely to be economically productive and those more likely to be dependants. It is the inverse of the Elderly Dependency Ratio. This measure does not include children. This is often used in conjunction with the term Working Age Population (WAP) particularly in the migration literature. Most countries in Europe have a PSR under 5, while in Germany, Italy and Japan, the PSR is already under 3.5. A decrease in the PSR implies a rise in the EDR, is a useful measure of the proportion of older beneficiaries of pension systems and long term care and support systems, which have to be supported by persons of working age. This implies a change in the intergenerational flow of resources from young adults to older adults usually via some form of taxation system and/or through private household and kin transfers. A key debate here is whether a fall decline in YDRs, such as the one in China indicated above, will be sufficient to offset the costs of the increase in EDRs. Some argue that the costs related to supporting older people is higher than those supporting children. Others point out that the calculations often neglect private intergenerational transfers, and that the cost to the household may remain the same.

It should also be noted that a variety of more subtle measures have been developed. The Economic Elderly Support Ratio (EESR) is the ratio of the whole economically active population aged 15 years or more to the inactive population in the retirement age (65 years or more). This is a proxy for the economic burden of inactive pensioners on the working population, and an important indicator of the sustainability of the pension systems. This is also referred to as the System Dependency Ratio (SDR). The Labour Market Support Ratio (LMSR) is the ratio of the whole economically active population to the whole inactive population aged over 14 where both the nominator and the denominator consider people of 15 years or more. This is a proxy of the overall economic burden of the inactive population on the labour market. This is also referred to as the Economic Support Ratio (ESR).

We clearly have an array of technical tools with which to estimate and model these relationships. We are, however, still lacking the theoretical development which will address some of the above questions as to what these shifting dependencies really mean for our growing and age-shifting world.