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A Brace of Policy Challenges for 2050

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Abstract

Using an analytical framework of Australia's physical economy (the physical transactions which underpin the monetary economy), three scenarios of population growth were compared. These gave 20 million, 25 million and 32 million citizens by 2050. After all the analytical permutations and combinations it was concluded that all three population scenarios were physically feasible out to 2050, but that each scenario brings different rewards and risks,

The rewards for the 20 million scenario include lower trajectories of energy usage and subsequent emissions, potentially more robust employment and merchandise trade balances and the opportunity to focus on fixing up what we have rather than making more of it. The risks include that mature-aged workers may have to work longer and harder, a loss in economic confidence if the nation cannot replace population growth effects with intellect growth effects, the potential for terminal population decline after 2100 if birthrates do not recover and the problem of decline in rural areas and some regional cities.

The rewards of the 25 million scenario include continuing growth in a number of major cities and regions, the continuance of current ideologies as an aid to innovation, a steady progression to a more or less balanced population size and structure by 2050, the potential to refurbish the metabolism of our urban areas under conditions of growth, and options to enhance the transition from the old economy to the new economy. The risks of the 25 million scenario include the potential to stay with moderate measures of environmental management because they are comfortable and known, a retention of the old industries because they are profitable and historic, and possible imbalances with employment and merchandise trade if technology and imports outpace locally based activities.

The rewards of the 32 million scenario lie with a continually growing economy, a strong home base from which to mount export industries, possible synergies that come from service clusters and competition, and the formation of a number of world sized cities to act as hubs for international commerce. The risks lie with continually expanding energy use and greenhouse emissions, potential imbalances of employment opportunities and physical trade balances and a decoupling of the large urban agglomerations from the base of ecosystem services that support their lifestyle and function.

Running parallel to direct population effects are ten major issues that must be dealt with during the next human generation, whatever the population number and structure by 2050 and 2100. These include but are not limited to:

- Air emissions in city airsheds and traffic congestion
- Dependence for personal mobility on continuing supplies of oil and natural gas
- Loss of land in the agricultural heartlands and increasing salinity levels in river systems soil
- Dependence of physical trade exports on old economy manufactures and commodities
- The place of mature-aged citizens in the national workforce
- Greenhouse gas emissions from the fossil energy sector
- The per capita levels of material flow underpinning the monetary economy
- The energy and material content of personal consumption
- Incentives for large scale investment in long term natural capital
- The transition from an old 'physical' economy to a new 'brain economy'