Literature Review Until 30 November 2023

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1 Introduction

This report provides a summary of the following papers, followed by some conclusions and main takeaways of studying them as part of my Honours Project. The papers in questions are the following:

- *The Effect of Population Growth on Economic Growth: A Meta Regression Analysis of the Macroeconomic Literature*, by Derek D. Heady and Andrew Hodge

- *Six Ways Population change will affect the Global Economy*, by Andrew Mason, Ronald Lee, and members of the NTA Network

- *An Econometric Model Of Integration Growth Dynamics for Long-horizon forecast*, by Ulrich K. Müller, James H. Stock, Mark W. Watson

2 Summaries of the papers

2.1 The Effect of Population Growth on Economic Growth: A Meta Regression Analysis of the Macroeconomic Literature

The paper's main goal is to assess the results of previous literature and derive conclusions on the effectiveness of the methods used. For these evaluations, the technique of Meta-Regression Analysis(MRA) is used. MRA allows the researchers to assess the inclusion of different measures of both population (i.e. working age population, crude birth rates) and economic growth. Furthermore, this analysis examines the effect of other parameters, such as the education levels of the population or conditions like land scarcity. The main conclusions of this paper can be summarized as follows:

- When the population growth consists mostly in growth of adult population, it has a significantly positive effect on the economic growth. In contrast, when the population growth is mostly related to young population, it has a significantly negative effect.

- When the regression models used account for measures of investment, education, health and quality of policies and institutions, they will indicate that population growth has a more positive effect in economic growth.

- The effect of population growth is more adverse in developing countries.

- It is difficult to evaluate how different econometric methods produce adverse results.

2.2 Six Ways Population change will affect the Global Economy

This paper focuses on how the growth of population in different age groups affects the economic growth in countries with different levels of income. For this, it attempts to assess the contribution of people of different ages to the economy of a country, by examining their income and expenses during the human life cycle. Additionally, it considers the geographic distribution of the population as a parameter. Following are the key findings of the paper:

- The era of population-driven economic growth is coming to an end.

- A decline in shares of global economic activities is predicted for East and South Asia, Europe and North America.

- Low and lower-middle income countries are going to benefit financially from changes in their age structure.

- Population aging is accelerating in high and upper-middle income countries.

2.3 An Econometric Model Of Integration Growth Dynamics for Long-horizon forecast

The aim of this paper is to develop a Bayesian model for the joint evolution of GDP per capita on the long run for a large number of countries from 1900 to 2017. It describes in detail the process followed and the econometric model developed, in which the growth for each country is expressed in terms of a common global growth factor. Countries are considered in groups that demonstrate common or similar growth. The paper concludes on the estimated values of the parameters of the described econometric model, and examine how sensitive the model is to changes in these parameters.

3 Main Takeaways

Overall, all three papers provided me with insights that are valuable for the start of the project. However, I believe the last mentioned of the three, i.e., " An Econometric Model Of Integration Growth Dynamics for Long-horizon forecast", can be labeled as the most helpful. The first two papers provide various results that are relative to the topic of the project, and a way to evaluate and compare different models that control different variables. On the other side, the last paper explains the development and design choices of an econometric model in great detail, which, given that I have no past experience of working with econometric models, provides an introduction to this concept and baseline for any models I might possibly come across or design during the project.