Classical macroeconomic approaches often resort to already built frameworks in order to model the explanatory behaviour and evolution of unemployment, inflation or any other measure of one could care for. These models are nourished by and evaluated with econometric techniques based on empirical data such that their fundamental objective is to unfold and predict subsequent economic performance. Solowian economics claim for the appearance of country convergence conditional on a set of characteristics whereas the introduction of an endogenous Ramsey model involving the use optimal control theory predicts the possibility of a steady state for a given set of variables. These variables and characteristics common to most models involve the interaction of population dynamics as an argument of any function describing the factors driving long-term economic prosperity, but such component is seldom endowed with an endogenous characteristic, and it is usually announced as a constant. Despite the inclusion of this parameter on modelling GDP per capita growth rate is often revealed as inversely proportional, the role of population growth rate holds an uncertain nature. Enhanced labour force or shifts in aggregate demand are both linked to the notion of population growth rate, thus impacting in a desirable way economic prosperity. On the other hand, the denominator rise (per unit of population) when computing the progress of GDP per capita or the potentially excessive demand pushing up price indexes (inflation) might justify the opposite. Yet the issue is far from black and white. Empirical evidence suggests that MED countries are undergoing a process of stagnation in terms of population dynamics whereas pre-industrialized economies experience lingering peaks in the number of inhabitants. Economies like Japan, Italy or Spain are currently portraying negative population rates which diverge significantly from the average replacement rate required to sustain population from one generation to another one (2.1 children per woman), and World Health Organization projections point at the shrinkage of up to 10% in Europe in contrast with the African boost of over 50% by 2050. Our opening hypothesis requires us to explore the most relevant components shaping the evolution of population dynamics outside of the confounding effects arising from migration. A both cultural and economic perception calls for this analysis, locating the existing relationship between such variables with population rates and enabling the researcher to predict for future directions.

(educacion, pq es importante y como podría afectar a crecimiento poblacional, objetivo del trabajo)

Assuming our target variable holds a null independence nature, current population movements would behave as a function of past observations, hence suggesting the inclusion of an autoregressive time series model in addition to features related to the current state of it (household size, median age etc.).

Research design

RQ:

Unit of analysis, time period:

Data, sources, units:

Causal diagram, justify qualitiatively, explanations of biases:

<https://www.studysmarter.co.uk/explanations/macroeconomics/economic-performance/population-and-economic-growth/>

<https://www.researchgate.net/publication/235434071_The_Optimal_Population_Growth_Rate_in_Diamond_1965_Model---The_Role_of_Demographic_Dividend/citations>

https://www.un.org/es/global-issues/population