The Educational Inequality and its impact on employment in Morocco: An Assessment Using a dynamic CGE Model

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Abstract:

The Education has a key role in the economic and social development process of the country (Denison, 1962). It contributes to reducing social and regional inequalities in any country. Indeed, an increase in education spending leads to an increase in human capital, all else being equal, an increase in labor productivity and economic growth (Barro and Lee, 1993). In the recent decades, education and employment have taken on new spatial, geographic, and regional dimensions in the analysis of subnational inequality, using socioeconomic variables to examine different performance-based regional specificities (Baumol et al. 1994).

It is important to understand the role of education in the economy as a crucial factor of development, and its impact on employment at the regional level. Lucas (1988) points out that the level of production depends on the level of education and the rate of growth, of production so that there is a positive feedback effect between education (human capital) and economic growth subsequently employment. It indicates that human capital has two effects, the first, it has standard productivity-enhancing effect, and the second, the total average level of human capital contributes to factor productivity through externalities. Indeed, the human capital externality is in fact a pecuniary externality resulting from the technological change associated with endogenous research and skills. Acemoglu (1994) argues that the amount of private optimal human capital depends on the amount of physical capital expected to be used by workers. Furthermore, the amount of private optimal physical capital depends on the availability of human capital, suggesting that if the pool of workers in a region becomes more educated, firms in that region will expect to hire skilled workers.

In this context, there is an interregional imbalance in terms of employment in Morocco, which is reflected in the existence of less favorable regions (the region of Draa-Tafilalt, the southern regions) which records a lower level of employment of 8.15% and other favored regions (Rabat-Salé Kenitra, Casablanca-Settat and Tanger Tetouane Al Hoceima) equivalent to the evolution of employment at the national level of 8.15% in 2020. At this level, the government implements programs and regional targeting policies aimed at reducing inequalities between regions that are adapted to the sectorial specificities, language and culture of each region.

The methodological interest of our present study focuses on simulations through the computable general equilibrium model (*PEP 1-t*, Decaluwé et al., 2013) in order to analyze the effects of increased education spending on economic growth and the labor market in Morocco. Our model was calibrated using data from the SAM (2019) of the Moroccan economy with three labor categories disaggregated by the level of education and degrees held by each individual in the household (Unskilled labor, Skilled labor and Medium skilled labor). In addition, we disaggregated the Education, Health, and Social Action (MN0) account into three subaccounts, namely: non-market education (ENM), Market education (EM) and Health and social action (SN). Finally, the representative household account has been decomposed into three sub-accounts, namely: poor households (HP), medium households (HM) and rich households (HR). To meet the objective of this study, we use *the CGE a dynamic model with a Top-Down approach*, the first level of the model allows us to obtain macroeconomic results such as GDP, production, consumption, ... then for the second level of the model, we use an interregional input-output table of 2019 (*Directorate of Financial Studies and Forecasting, Ministry of Finance Morocco[3], 2020*) to obtain the results regional.

The main purpose of this study is to analyze the effects of a 10% increase in education spending in Morocco on economic growth, the labor market and welfare in two levels national and regional.

Key word – Education, Government Policy, Human Capital, Dynamic Computable General Equilibrium Model, public policy, General Equilibrium and Welfare Economic Analysis of Regional Economies, Morocco, Region, Inequality…

JEL classification – J24, C68, D63, E62, H31, J18, R13.