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# Gender Inequality and Economic Development

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## Abstract

This article attempts to analyze the effect of gender inequality on economic growth using the GMM dynamic panel for the five countries of the Great Maghreb during the period 1985-2011.The results of this study lead us to demonstrate, one hand, a positive and significant at the 5% of the population effect on economic growth and on the other hand a statistically significant and negative in 10% of the investment on economic growth effect. In contrast, gender inequality has a significantly negative effect of 5%.

**Keywords:** Gender inequality; Economic growth; Panel data

## Introduction

The extent of gender inequality is a concern within the international community. That is why we need a new gender inequality measure. In 1995, on the occasion of the Fourth World Conference on Women, UNDP has implemented substantial measures such as the gender-related human development the GDI, the human development index (HDI), indicator of women's participation IPF. These indicators have led to many measures for gender inequality. UNDP has a broader review of these measures and showed that there are major gaps. He developed a new measure of gender inequality (IIG) to fill these gaps. The Report of the World Bank [1] shows the relevance of gender issues in economic development.

Gender inequality and women's empowerment are among the objectives of milestone development goals (MDGs). Despite this, gender inequality can be observed in almost all developing countries and even in developed countries. Gender inequality in education can prevent the reduction of fertility rates, infant mortality rates and may also have negative effects on children's education and health. It can also affect economic growth through a number of channels. These channels include the direct and indirect effects of growing inequality between the sexes and have been extensively discussed in the literature [2-4] gender inequality is an important issue in itself, which is why we need indicators to compare the relative position of women and to investigate the effect of gender inequality on economic growth.

This paper is structured as follows: Section I presents the construction of the index of gender inequality (GII). Section II presents the theoretical and empirical links between gender inequality and economic growth.

## The gender inequality index

The Gender Inequality Index is a composite index constructed by aggregating individual indicators on the basis of an underlying model of a multidimensional phenomenon (OECD, 2003). Composite indicators are recognized as a powerful tool because they allow you to make simple comparisons between countries.

Economic processes are becoming more complex, that is why economists need a drawing tool, which takes into account all the dimensions of a multidimensional phenomenon (OECD, 2003). A composite index is used whenever a plurality of variables is necessary for the evaluation of macro-economic dimension [5]. Moreover, the composite indicators are easier to interpret than to identify common across many different indicators trends, and also become a powerful, useful tool in the performance of countries [6]. Despite, composite indicators can be poorly constructed and misinterpreted [7]. Thus, to be truly effective, a composite index should be based on theoretical thought, which allows you to select individual variables to associate and weighted in a way that reflects all aspects of the measured phenomenon. So the gender inequality in developing countries is complex and multidimensional problems that justify the use of the composite index.

The Workshop, The Hague identified eight relevant dimensions in which gender inequalities appear:

•     Gender identity: describes the roles of gender and cultural issues such as the socialization of girls and boys. This dimension describes the social behavior of society and individuals internalize the process of socialization.

•     Physical integrity: refers to the absence of violence against women, to control their sexuality and access to contraception [8]. This dimension describes the autonomy of the body, she explained by five variables that are the prevalence and acceptance of violence against women, the prevalence of female genital mutilation prevalence of contraception and teenage fertility.

•     The family describes inequalities within households in terms of inheritance and decision making [8] to measure this aspect of gender inequality. On 'uses the following four variables: the indicator of gender inequality in family law, parental authority, inheritance and the percentage of households headed by women.

•     Policy: political power describes the political representation and decision making [8]. UNDP and [8], uses the most obvious indicator for power on women in politics.

•     Education, access to education is measured arithmetic mean of male and female rates of literacy. It is also measured by the net enrollment in primary, secondary and tertiary education.

•     Health: Access to health care is measured against life expectancy and maternal mortality rates.

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• Economic resources include access to land, economic resources and other assets.

• The employment and income: refers to the distribution of paid and unpaid wage differentials formal and informal [8]. This dimension is measured using the following variables: the economic rights of women, the proportion of women in technical, professional and administrative domain, the ratio of male and female earned income over the rate of economic activity and the proportion of women in the workforce (Figure 1).

According to this figure a large gap between regions is observed. South Asia (SA) has the worst score with an average of 0.63. These results can be explained by the high level of discrimination against women in the dimensions of identity, health and family. In order to promote economic empowerment of women and integrate them into the process of economic growth should reduce inequalities in the dimensions of identity and family.

Countries in sub-Saharan Africas (SSA) and Middle East and North Africa (MENA) after an average of 0.48 and 0.46. The situation of women in sub-Saharan Africa is characterized by discrimination in great physical integrity and access to educational and economic resources. This situation may create distractions is in access to educational and economic resources. In sub-Saharan Africa the gender inequality seems to have a weak relationship with economic performance.

In the MENA region, gender inequalities are especially high in dimensions of employment and politics. The representation of women in economic and political power is almost nonexistent.

### Theoretical and empirical links between gender inequality and economic growth

The relationship between gender inequality and economic growth is not very clear. A portion of the authors indicate that there is a positive relationship between gender inequality and economic growth, while others show that this relationship is rather negative. Galors and Weil describe this gender gap in education and earnings are due to high fertility and low economic growth. The same result was presented by [9] in a model of overlapping generations. Women's education is considered beneficial for economic growth.

Hill and King [2] show that the effect of gender inequality on growth is measured by the investment gap between male and female

enrollment. The reverse was shown in the regressions some empirical studies in which gender inequality in education has a positive effect on economic growth.

Gender inequality in education is found to have negative effects on economic growth by reducing the average amount of human capital and the exclusion of talented girls educational opportunities that could do better than boys. It is suggested that educational inequality based on gender downgrades the quality of human capital and the slowdown of economic growth [3]. Similar findings were made by Elizabeth et al. [10] taking into account the externalities generated by the education of women, such as reduced fertility.

Baldwin and Johnson [11] discussed the negative effects the wage gap between the sexes in terms of participation of women in the workplace, arguing that women may choose to participate in the labor market if they are paid lower wages.

The employment gap is also discussed in the literature. For example Kalsen and Lamanna [4] studied the effect of the gender wage gap on economic growth in a cross-country analysis for the period [1960-2000]. The results indicate that the employment gender gap is one of the main determinants of growth differentials between countries. The low participation of women in some regions, particularly the Middle East and North Africa can be described as a major cause of underdevelopment [12-14].

### Methodology

We use the following specification to estimate the direct effects of gender inequality on economic growth in the case of the Maghreb countries, this study uses time series data for the period [1985-2011] using the GMM dynamic panel.

$$LY_{it} = c + \sigma LY_{it-1} + \beta 1 LNV it + \beta 2 LPOP + \beta 3 INGit + \varepsilon_{it} \quad (1)$$

With: i=1……N, t=1……T

With: LY is the growth rate of gross domestic product (GDP) per capita, L INV is the investment rate as a percentage of GDP, L POP is the growth rate of the population, ING: measuring gender inequality and $\varepsilon_{it}$ is the error term [15-16].

### Empirical Result

These estimates were made using the method of GMM dynamic panel system, which allows us to correct any problems of heteroscedasticity. The results lead us to estimate that the index of gender inequality in a negative and significant at the 5% ratio. These results confirm that gender inequality negatively affect economic growth in terms of human capital. This confirms the economic theory [17,18]. The rate of investment has a negative and significant at the 10% coefficient Thus, to promote economic growth, gender equality in various dimensions can be an effective tool to promote economic growth. Why these results support the view of the World Bank [1]. The rate of population growth has a positive and significant at the 5% ratio. This shows that gender inequality positively affect the growth of the population, which is defined by Bloom and Williamson. Finally, the lagged endogenous variable is statistically significant, assuming a positive sign to 5% [19,20]. The latter reflects the economic growth registered during a year depends negatively on those of past years (Table 1).

Number of observations= 130,

Sargan test: Chi square (125)=123.97, AR(1) test : N(0,1)=-5.31 [0.000], AR(2) test: N(0,1)=-1.26 [0.207].



**Source:** Own computation

**Figure 1:** Shows the large gap between regions.
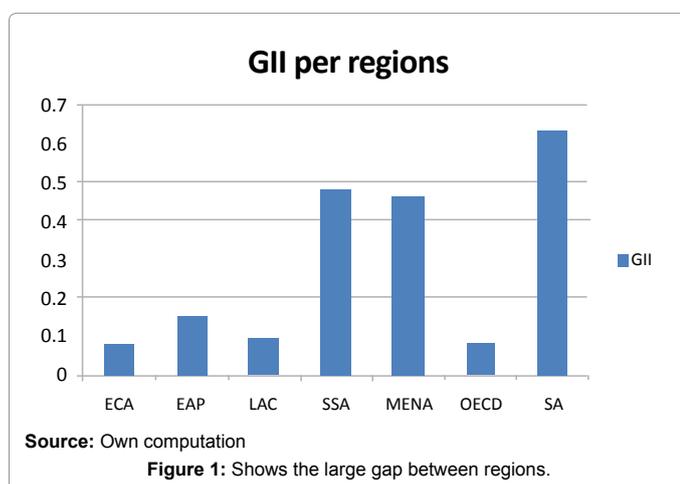
|  | Coefficient | Standard Deviation | T-Stat | Sig |
|---|---|---|---|---|
| **LY**$_{it-1}$ | 0.9382707 | 0.0199713 | 46.98 | 0.000 |
| **LPOP** | 0.303238 | 0.0132546 | 2.29 | 0.024 |
| **LINV** | 0.577998 | 0.0321051 | -1.80 | 0.074 |
| **ING** | -0.1861084 | 0.084255 | -2.21 | 0.029 |
| **CONS** | 0.5560719 | 0.2438044 | 2.28 | 0.024 |

**Table 1:** Results of the GMM estimation.

## Conclusion

The contribution of this paper is twofold. Firstly, this article examines the extent of gender inequality. Second, the relationship between gender inequality in all dimensions of their economic growth and think of another way of looking at their effect.

The gender inequality index (GII) is a new tool to measure gender inequality in developing countries. The issue of gender inequality has been much debated in academia and policy makers. Although he gained prominence as a concern for intrinsic reasons and further the implementation of gender has been embraced by economists as a macroeconomic variable. This study, through its empirical results, finds the lag effects of gender inequality on economic growth in the Maghreb. Thus, the issue of gender inequality should be addressed not only because of its intrinsic value, but also because of its instrumental value of economic growth.

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