

## **HUMAN DEVELOPMENT CHALLENGES IN THE EURO-MEDITERRANEAN AREA**

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### **1. Introduction**

The development has to be studied with a new paradigm! In fact many and many researchers are feeling more and more disaffection for the old idea of growth based on the simple increase of income and consumption essentially measured through the variations in the gross domestic product (GDP). Three issues, emerged with strength in recent years, can be considered as causes of this disaffection:

- a) GDP emphasizes just one aspect of well-being and the well-living of people, as the Stiglitz-Sen-Fitoussi Commission focused in his 2009's Report and the subsequent activities (Stiglitz et al., 2009);
- b) GDP ignores the problems of inequality. And inequality has a terrible negative influence on social hardship and poverty (Wilkinson R., Pickett K., 2009).
- c) GDP also disregards the problems of sustainability at many different levels.

The Human Development Approach (HDA) has been elaborated in line with those criticisms and represents a new way for understanding the evolution of social and economical aspects of human life. It presents a lot of advantages in defining a general framework in which we can provide a new representation of the fundamental challenges that the human consortium has to face.

In this paper first of all we want synthetically underline the main theoretical characteristics of Human Development Approach (HDA). Then we try to emphasize the specific link between economic growths, as it is measured by rate of growth of GDP, and human development, as it is measured by human development index (HDI). The last part of the paper is devoted to propose some empirically based considerations on the human development and some of its possible determinants, with a special focus on the Euro-Mediterranean countries.

### **2. The Human Development: definition and measures**

Sen in many of his essays gives a definition of Human Development: "Human development, as an approach, is concerned with what I take to be the basic

development idea: namely, advancing the richness of human life, rather than the richness of the economy in which human beings live, which is only a part of it (Amartya Sen, Professor of Economics, Harvard University Nobel Laureate in Economics, 1998).

In another essay, he clarifies: "In judging economic development, it is not adequate to look only at the growth of GNP or some other indicators of over-all economic expansion. We have to look also at the impact of democracy and political freedoms on the lives and capabilities of the citizens." (Sen, 1999, p. 150) and in the introduction of this book: "Freedoms are not only the primary ends of development, they are also among its principal means." (ibid, p.10).

According with the human capabilities approach, therefore, the central focus of the development is not the growth of the quantity of material goods that people consume, but increasing the liberty of the people to be or to do what they want, because the freedom is the much important characteristic of human beings. Indeed human life consists "of a set of 'doings and beings' – we may call them 'functioning' – and relates the evolution of quality of life to the assessment of the capability to function" (Sen, 2003, p. 4). It is important to underline that Sen emphasizes that the growth in availability of material goods can promote the expansion of freedom and it is not in contradiction with it. On this issue Sen's ideas is quite different with respect to the theory of degrowth of Serge Latouche (Latouche, 2009). However, Sen's theory of growth highlights that there is not an automatic effect of a greater availability of material goods on the improvement of the quality of life. Therefore it is needed to deeper investigate how and why the former generates the latter.

The Sen's approach, in which the development is considered an extension of the space of opportunities of individuals, has conquered the mind and the heart of all those who believe in the values of justice and equality, but, at the same time, are attached to the value of freedom. The connection between human development and the expansion of opportunities that prompted scholars and institutions to reason about the development as elimination of un-freedom produced by hunger, poverty, ignorance, preventable morbidity, discrimination, conditions of the absence of democracy and the indiscriminate exploitation of natural resources.

### **3. Human Development and Economic Growth**

According to human development perspective, it is crucial to analyse the link between economic growth – i.e. increase in production, monetary income, amount of goods and services available to people and social groups - and human

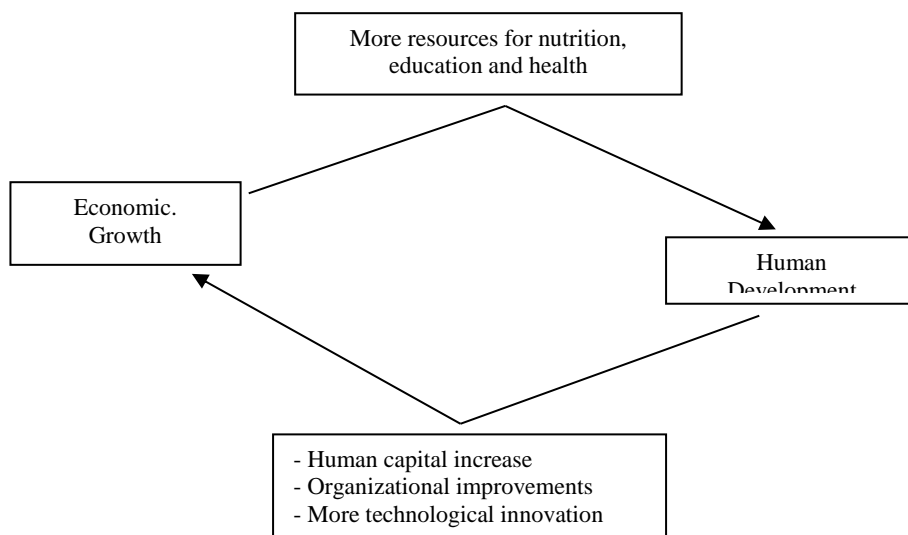
development – i.e., in Sen's language, enlargement of the space of opportunity to choose the life you want to do and to which you assign the value.

We have already said that the utilization of the adjective human to qualify the noun development means giving up the believing that there is an automatic effect of the growth of material wealth on the real space of freedom of the people to be and to do what they wish. Actually we must give more substance to this idea and reflect in constructive terms on the positive link of both the economic growth on the human development and of the human development on the level of income.

From the point of view of the capabilities approach to the first question is just to make it clear that the two phenomena are different and, therefore, require different measures (i.e. GDP rate of growth for the economic growth and improve of an index, such as HDI, human development index, for human development). There is also to make it clear that, in the view of Sen, Nussbaum and the scholars who are inspired by their thesis, the relationship between the two phenomena are bidirectional and not unidirectional, as dictated by the orthodox economic vision for which causality is always and everywhere from economic growth to human development. For scholars of the capabilities approach the links between growth of GDP and human development should, therefore, be studied in-depth and it is also important trying to measure their strength with empirical investigations refers both to different national and regional contexts and to different historical periods. However it is correct to build a theoretical interpretive framework that can adequately take into account bidirectional causality relations which, for many reasons, may be at work.

The diagram in Scheme 1, can help us to better focus the two "chains" -as they are called in the contribution of Ranis, Stewart and Ramirez published in the Handbook of Human Development (Ranis *et al.*, 2000) - which act to make economic growth as a source of human development and, at the same time, human development as a cause of economic growth. The former effect is based on the increase of resources that make it more workable strategies for human development, the latter on the effect of enlargement of the space of capabilities on the productivity of labor and technological innovation.

We begin to examine the factors that link the higher levels of GDP to human development. They are associated with a greater chance of a good life for the people and for the communities. First of all, the greater amount of resources available in the system raises the possibility of increasing the revenue from the tax and so to reinforce the commitment of the government to support programs for nutrition, education and health. It is self evident that the increased resources that flow to the State and public administrations are a necessary, even if not sufficient, condition for the purpose: the fight against hunger, ignorance, disease and poverty requires both political choices and economic resources.

**Scheme 1** – *The Human Development - Economic Growth chains*

Consider also that an increase of the income produced and distributed will provide even more private resources that can be used to buy goods and services on the market. These latter can improve the health and nutritional status, as well as increase years of education and the participation in vocational courses and training.

According with the literature (see Ranis *et al.* 2000, and references therein) the link from the economic growth to human development is stronger when some specific conditions occur. In fact, the programs against hunger, ignorance and disease, have a better implementation, when the following conditions are verified:

- a) a greater weight of women in the administration of resources;
- b) a more equitable distribution of income;
- c) a greater share of public expenditure allocated in health, education or food programs.

The first condition regards most of all the countries in the developing world: many empirical studies show that women are more careful than men to the problems of correct diet for the family, education of children (all children, men and women) and health of family members. Data seem to confirm that when the women manage economic resources -both at home and in the institutions of public administration- the share of both private and public expenditure devoted to acquire products promoting human development tends to increase.

The second condition can be expressed as follows: with the same overall per capita income, when the income is distributed more equitably between the different

social groups of the community, there is a greater overall spending in education, health and nutrition in order to generate more high performance in terms of human development. The explanation of this stylized fact can be found in at least two elements: first of all, the poorer deciles of population spend a higher share of income for the satisfaction of the needs related to nutrition, health and education, secondly the positive association between greater equity in income distribution and degree of the attention of public institutions to the basic needs of the human persons.

The devolution of further shares of public expenditure programs against hunger, ignorance and for the health obviously has a direct and immediate positive effect of improving the standard of life (well-being) of the people. Moreover, we have to consider the positive effect on the private expenditure given by a higher public expenditure in education, good food and health. In fact, the education and health, in particular, but also the area of the production and marketing of food, especially in developing countries, are sectors in which private goods and services are complementary to public ones. As an example, we can consider that a health service is consumed by the individual, but is the result of a well-functioning of the system and it is possible only if there is an integration of different elements that are necessary for this purpose. Physical structures (such as a hospital, equipment, etc..), medical and health personnel adequately trained (and motivated), an organization of efficient service within a local network well thought out. Those conditions requires at least two elements: 1) an adequate commitment of the public sector (the Sovereign, Smith would have said) to ensure those public goods that no private has the convenience to produce; 2) a set of rules and institutions that only the public sector can ensure and enforce with rewards and punishments.

As regards the connection between human development and economic growth, the literature has highlighted a lot of ways in which the best results in terms of human development can support greater economic growth.

First of all we have to consider the positive effects on labour productivity of more education, better health and, why not, better nutritional status. This is especially true in those countries where hunger and malnutrition are still relevant social problems affecting large part of population.

Let's look in more detail the ways through which the human developments exert these positive effects on labour productivity. It is obvious that both better health care and better situation of nutrition reduce absence from work due to illness. At the same time they increase the effort of the workers and their efficiency, as the first models of *efficiency wage* clearly put in evidence when explain why it would be convenient, for the same firms, pay higher wages to the workers (Dasgupta and Ray, 1986, 1987).

With respect to the role of education, from an individual point of view, more knowledge, skills and abilities means for the economic agent an enlargement of the area of her/his freedom. It implies for him a better ability to fit in useful and profitable way in the economic process and in social life, gaining a lot of benefits both for herself/himself and for the community, i.e. a greater labor productivity provides benefits for firms and for the whole economic system.

On this point it is worth mentioning that the recent literature on growth (the so-called Endogenous growth models(Lucas, 1988; Rebelo, 1991)) emphasizes the role of the human capital in the introduction of technical innovations and, in this way, for the promotion of economic growth. Education has great relevance for the R & D that has a significant impact on total productivity increases and, through this way, on the growth of outputs and income. Moreover, the education has other positive economic effects:

- a) has a positive impact on exports;
- b) increases the equality
- c) reduces the problems of overpopulation

A greater attention should be devoted to the detailed analysis of each of these effects. However, for the sake of brevity and for the scope of this paper, we limit the present discussion to some short considerations.

The increase in exports is given by the chance for a country to improve their specialization and to occupy sectors with higher value added in the international division of labor, thanks to the higher qualification of its workforce. Assuming exports as the completely autonomous components in effective demand – as highlighted in an important and interesting body of literature that relates to Keynes and Hicks (Thirlwall, 2011) – we understand the macroeconomic relevance of this additional channel that can link human development and economic growth: more education, higher exports, higher level of aggregate demand and income.

The link between education and equality has been studied by a vast literature, both theoretical and empirical, that has analyzed the connections between differences in income and differences in education in various directions and from different points of view. On one side a lot of studies have deepened the reasons for which different levels of education generate higher inequality in wages and salaries emphasizing the way in which it start a cumulative causation mechanism. On the other side many studies have sought to understand how and why inequality produce different investments in human capital and, also in this case, the literature emphasizes “vicious and virtuous circle” that cause a progressive enlargement of the social distances. Finally we should mention the studies that have focused on the impact of education (and public programs to improve the levels of education for all) on equality, noting that in societies where it is the higher the average level of education, income distribution is more egalitarian.

#### 4. The empirical analysis

All the theoretical issues discussed above lead us to construct and estimate some linear models that relate the human development and the other socio-economic features.

In order to collect the data we need for the models we analyzed several database. We focus on the Word Bank database for economic issues, Unesco databases for the education, on the International Labour Organization, on the Stockholm International Peace Research Institute (SIPRI), Yearbook: Armaments, Disarmament and International Security for the military expenditures, and Inter-Parliamentary Union (IPU) for the gender issues in politics. We fix as reference year the 2010. Within this large database, we selected all countries with a population larger than 300,000 people. Standard descriptive analyses have performed for variability, skewness, curtosis, presence of missing data and outliers.

With respect to the presence of missing data we decide to adopt a multiple imputation procedure with constraints (Scafer, 1997; Little and Rubin, 2002). The imputation procedures have been performed by using all the information available in the large database and not only the variables we selected for our purposes.

On the other hand, to deal with the presence of outliers, we decide to adopt a robust estimators for our linear regression models and in particular we use the least Trimmed Squares (LTS) estimators (Rousseeuw, 1984; Rousseeuw and Leroy, 1987).

In addition we considered also a dummy variable coding for each country being or not a Mediterranean country. Indeed, despite of relevant economic, socio-political, and cultural differences that characterize different countries, in our opinion the Mediterranean Area represents a very interesting laboratory for studying the relationship between economic growth and human development. The factors, that have been highlighted in literature as key determinants of virtuous circles fostering a positive relationship between human development and economic growth, seems to have larger effects in that Area with respect to the rest of world. For this reason we decided to test also the effect of the Mediterranean Area. The first relation that we tested was between the logarithm of GDP per capita and the HDI:

$$\text{Log}(\text{GDPperCapita}) = \beta_0 + \beta_1 \text{HDI} + \varepsilon \quad (1)$$

In the second and third models we tested also the effect of being a Mediterranean country by adding both a simple dummy and the interaction effect:

$$\text{Log}(\text{GDPperCapita}) = \beta_0 + \beta_1 \text{HDI} + \beta_2 \text{Med} + \varepsilon \quad (2)$$

$$\text{Log(GDPperCapita)} = \beta_0 + \beta_1\text{HDI} + \beta_2\text{Med} + \beta_{12}\text{HDI} \times \text{Med} + \varepsilon \quad (3)$$

Looking at results reported in Table 1, we can conclude that there is a strong positive effect of the human development on gross product per capita. The estimated coefficients through the OLS and LTS slightly differ. This latter performs generally better in terms of adjusted  $R^2$  and estimate standard error spotting the presence of some anomalies. However, as the differences between the coefficients are not very large we can conclude that such outlying observations are not so influence.

**Table 1** – Estimated regression models (M1-M3). Estimated coefficients through OLS and LTS, their standard errors (in *Italic*),  $R^2$  for the estimated models. (Significant parameters are marked by:  $^{\circ}p < 0.10$ ,  $*p < 0.05$ ,  $**p < 0.01$ ,  $***p < 0.001$ ).

Log(GDP)	M1		M2		M3	
	<i>OLS</i>	<i>LTS</i>	<i>OLS</i>	<i>LTS</i>	<i>OLS</i>	<i>LTS</i>
Constant	2.38***	2.38***	2.82***	2.56***	2.85***	2.54***
	<i>0.22</i>	<i>0.19</i>	<i>0.23</i>	<i>0.19</i>	<i>0.23</i>	<i>0.19</i>
HDI	7.98***	8.58***	8.01***	8.30***	7.96***	8.33***
	<i>0.33</i>	<i>0.27</i>	<i>0.34</i>	<i>0.28</i>	<i>0.34</i>	<i>0.28</i>
Med	-	-	-0.07	-0.03	-1.26	-1.83
			<i>0.17</i>	<i>0.14</i>	<i>1.40</i>	<i>1.13</i>
HDI*Med	-	-	-	-	1.55	2.23
					<i>1.81</i>	<i>1.46</i>
$R^2$	<i>0.78</i>	<i>0.86</i>	<i>0.77</i>	<i>0.85</i>	<i>0.77</i>	<i>0.86</i>

There is no effect of being a Mediterranean country (the coefficient is close to zero and not significant at all), while there is a slight positive interaction effect, even if not significant.

In Figure 1 we represent the relationship between the GDP and the Human Development Index adding the two estimated Models 1 (LTS solid line and OLS dashed line) and highlighting the Mediterranean countries as red dots. A small group of countries with low human development but a relatively higher GDP are evident on the left upper side of the scatterplot (Republic of the Congo, Djibouti, Equatorial Guinea, Somalia and South Sudan).

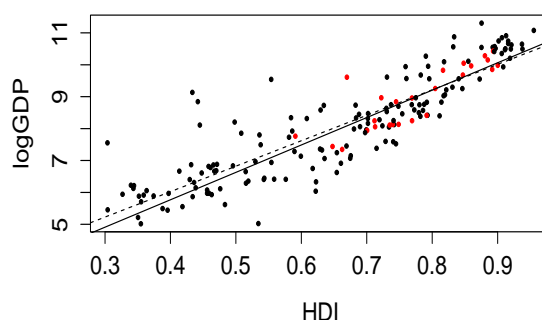
In order to go deeper in the analysis, we verify the idea of a relationship between the human development and the role of women in managing the resources, the income inequalities, and the amount of public expenditure in education, health and wellbeing.

Among all possible variables we have at disposal we select the gender parity index in tertiary school and the proportion of women seating in national parliaments to measure the relevance of women in the economy and in politics; the



Gini index for the income as measure of inequalities; and the military expenditure (the logarithm due to the high positive skewness) as measure of bad public expenditure. Note that in other models we test the expenditure for education but it is not significant at all in any models.

**Figure 1** – Relationship between the GDP and the Human Development Index – (Model1)



Finally we add a dummy variable coding if the country belongs to the Mediterranean area. The two estimated models are:

$$\begin{aligned}
 HDI = & \\
 & \beta_0 + \beta_1 Women_{Seats} + \beta_2 GenderParityI + \beta_3 GiniI + \\
 & + \beta_4 \log(Military_{Expend}) + \varepsilon.
 \end{aligned} \tag{4}$$

$$\begin{aligned}
 HDI = & \beta_0 + \beta_1 Women_{Seats} + \beta_2 GenderParityI + \beta_3 GiniI + \\
 & + \beta_4 \log(Military_{Expend}) + \beta_5 Med + \varepsilon.
 \end{aligned} \tag{5}$$

Table 2 reports the results for models 4 and 5 with the parameter estimates obtained through both OLS and LTS estimators.

Looking at results reported in Table 2, we note that in these models the LTS estimators perform better than the OLS, in term of both standard errors of coefficient and of global goodness of fit measured by the adjusted  $R^2$ . In particular, this latter highlights that the two models can be considered adequate and that the presence of the dummy variable coding the belongings to the Mediterranean area (with a significant coefficient) relatively improves the model. Moreover, being the coefficients estimated through the two methods quite similar, we can conclude that the result are stable even if there are some outliers.

**Table 2** – Estimated regression models (M4-M5). Estimated coefficients through OLS and LTS, their standard errors (in *Italic*),  $R^2$  for the estimated models. (Significant parameters are marked by:  $^{\circ}p < 0.10$ ,  $*p < 0.05$ ,  $**p < 0.01$ ,  $***p < 0.001$ ).

<i>HDI</i>	M4		M5	
	<i>OLS</i>	<i>LTS</i>	<i>OLS</i>	<i>LTS</i>
Constant	0.777*** <i>0.0625</i>	0.632*** <i>0.057</i>	0.732*** <i>0.0628</i>	0.601*** <i>0.057</i>
Women Seats	0.0019* <i>0.00095</i>	0.002* <i>0.0008</i>	0.0023* <i>0.00094</i>	0.00199* <i>0.0008</i>
Gender ParityI	0.127*** <i>0.0158</i>	0.258*** <i>0.022</i>	0.126*** <i>0.0154</i>	0.252*** <i>0.0213</i>
Gini Index	-0.0046*** <i>0.0012</i>	-0.004*** <i>0.0099</i>	-0.0040*** <i>0.0012</i>	-0.0038*** <i>0.0094</i>
Log(Military Expend)	-0.0507*** <i>0.011</i>	-0.053*** <i>0.0096</i>	-0.047*** <i>0.0105</i>	-0.050*** <i>0.0094</i>
Med	-	-	-0.086** <i>0.028</i>	0.064** <i>0.024</i>
Adjusted $R^2$	<i>0.453</i>	<i>0.655</i>	<i>0.479</i>	<i>0.667</i>

As in our hypothesis, an higher presence of women in the economy and in the management of the resources, as well as higher levels of gender parity positively affect the human development. On the contrary, higher level of social inequality and higher level of public expenditure not in education, health, wellbeing, negatively affect the human development. Finally, given all the other effects, being a Mediterranean country has a positive effect on the level of human development.

These results combined with the ones related to models M1-M3 in Eqs. (1-3), in a path analysis perspective, allow us to establish a relationship between the role of women in the economic, the social inequalities, the quality of public expenditure and the GDP mediated by the human development. Note that we estimated a model with the same explanatory variables of models M4 and M5 and the HDI, considering as response variable the GDP. In such a case the only significant effect is for the HDI and also the adjusted  $R^2$  are comparable with the models M1-M3. We estimated also a model that considers the GDP as response variable and the same regressors of models M4 and M5. In such a case we find some significant effect for the gender parity index and for the belonging to Mediterranean area (results are reported in Table 3), but quite poor adjusted  $R^2$ . Moreover, in such a case the OLS estimates differ from the LTS one, highlighting a certain instability of results due to the presence of outliers. This confirmed our hypothesis that the considered variables affect the GDP passing through the human development.

**Table 3** – Estimated regression models (M6). Estimated coefficients through OLS and LTS, their standard errors (in *Italic*),  $R^2$  for the estimated models. (Significant parameters are marked by:  $^{\circ}p < 0.10$ ,  $*p < 0.05$ ,  $**p < 0.01$ ,  $***p < 0.001$ ).

<i>Log(GDP)</i>	M6	
	<i>OLS</i>	<i>LTS</i>
Constant	8.511*** <i>0.623</i>	5.743*** <i>0.607</i>
Women Seats	0.0139 <i>0.009</i>	-0.0029 <i>0.009</i>
Gender ParityI	1.131*** <i>0.154</i>	2.210*** <i>0.204</i>
Gini Index	-0.033** <i>0.0114</i>	-0.0056 <i>0.010</i>
Log(Military Expend)	-0.314** <i>0.105</i>	-0.028 <i>0.099</i>
Med	0.615* <i>0.278</i>	0.71** <i>0.25</i>
Adjusted $R^2$	<i>0.375</i>	<i>0.481</i>

## 5. Conclusion

This paper has emphasizes the need to study problems of development through a new paradigm: the *human development approach*, introduced by Amartya Sen has been presented as this new paradigm and has been expounded in its foundations underlining the bidirectional links between growth of economic magnitudes and development of set of people capability. In the empirical part of the paper we have underlined how the data confirm that the links are very strong in Mediterranean area and encourage new analysis in which human development approach is utilized for understanding the evolution of countries that border Mediterranean Sea.

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## SUMMARY

### **Human development challenges in the euro-Mediterranean area**

The Human Development Approach (HDA) has been elaborated in line with those criticisms and represents a new way for understanding the evolution of social and economic aspects of human life. It presents a lot of advantages in defining a general framework in which we can provide a new representation of the fundamental challenges that the human consortium has to face.

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