



Thinking Ahead  
for the Mediterranean



## MEDPRO - Prospective Analysis for the Mediterranean Region

FP7 Project financed by the European Commission  
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### Minutes of the WP3-7 implementation meeting

Cairo, 29 – 30 June 2010

**Introductory remarks, Dr. Rym Ayadi (Centre for European Policy Studies, CEPS)**

Dr. Rym Ayadi, Coordinator of MEDPRO opened the meeting by presenting the overall progress of the project and recalled the aim of this workshop hosted by the Faculty of Economics and Political Sciences of the Cairo university (FEPS): to focus on the implementation of WP3 (demography) and WP7 (education, social protection and inequalities) respectively led by Dr. George Groenewold (Netherlands Interdisciplinary Institute for Demography, NIDI), and Jorgen Mortensen (CEPS) in collaboration with Prof. Alia El Mahdi, Dean of FEPS. The Coordinator clarified pending matters regarding the participation of FEPS, the Palestine Economic Policy Research Institute (MAS), Institut Marocain des Relations Internationales (IMRI) and Institut Tunisien de la Compétitivité et des Etudes Quantitatives (ITCEQ).

**MEDPRO methodological framework, Dr. Rym Ayadi (CEPS)**

MEDPRO covers seven research fields, each endowed with a work package, and deals with three research tasks\*. The first is to construct partial views about the future within each work package while at the same time identifying key driving forces and factors of change. The second is to establish a general framework of foresight analysis, which considers the interdependencies among various work packages. As

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\* The seven work packages are geopolitics and governance (WP2); demography (WP3); energy and adaptation to global warming (WP4a), energy and mitigation of global warming (WP4b); economic development (WP5); financial services and capital markets (WP6), human capital inequality and migration (WP7).



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a third task, MEDPRO will provide feedback at the EU-level on how to strengthen relations with the MED-11. In this regard, most of these countries have concluded association agreements with the EU and also are members of the Union for the Mediterranean (UfM). Within its focus on the Euro Mediterranean relations MEDPRO will also explore the relevance of the third generation agreements embedded by the advanced status recently obtained by Morocco and being currently negotiated by Tunisia.

To do so, the research will be conducted in three phases. First, current policies will be reviewed using existing sources and data collected. Second, by exploiting existing and new projections, scenarios will be elaborated for the foresight analysis. In this regard, MEDPRO will look at strong and weak signals, which could be considered as candidate wild cards. In a third stage, drawing on the previous results, policy responses will be formulated and results disseminated. It is in this final stage that the qualitative and quantitative scenarios will be built, drawing on the methodological frameworks by Dr. Carlo Sessa (Istituto di Studi per l'Integrazione dei Sistemi, ISIS) and by Prof. Pantelis Capros (Institute of Communication and Computer Systems, ICCS). The Sessa framework considers possible futures stemming from the combination of two dimensions, namely:

- Total wealth in the MED-11 region (incorporating various types of capital endowments, institutions, etc.)
- Intensity of Euro Mediterranean cooperation

The junction of this two dimensions results in four possible futures:

- Global EU-Med upside scenario, in which MED-11 countries become wealthier and intensify cooperation with the EU
- Global EU-Med divergent scenario, in which MED-11 countries fail to meet the wealth challenge and disregard cooperation with the EU



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- Global EU-MED downside scenario, in which MED-11 countries become wealthier but do not cooperate more with the EU
- Global “trends” scenario, scenario, in which current policies are pursued in the future\*

Each work package will consequently develop four artificial futures based on this framework in which the likely evolutions of the key drivers will be assessed.

The Capros framework built on the GEM-E3 model will encompass the partial views of the future in a coherent fashion.

Scenarios discussions: Dr. Rym  
Ayadi and Jorgen Mortensen  
(CEPS)

To facilitate the development of the four qualitative scenarios, the proposed conceptual approach of MEDPRO aims at ensuring full compatibility between the work packages with the basic aim of studying the conditions for ensuring sustainability of growth and the development process. This framework is not restrictive to the analysis of the MED-11 countries and builds on the dynamics of four pillars existing in every society (four capital endowments) in junction with one building ground, resources:

- Economic capital
- Social/human capital
- Political capital
- Resources/ Natural capital

Each work package will be called upon to review the drivers related to its research field (linked to each of the pillars) and these drivers will be factored into the four above described scenarios. Regarding WP3 and 7 specifically, the question to address is the following: what are the drivers of population and knowledge? As MEDPRO joins this qualitative exercise to a translation into quantitative methods through the use of the GEM-E3 model; in a first stage WP 3 and 7 leaders will have to send to the Coordinator a list of indicators translating the reviewed drivers in order to augment the core model.

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\* The global trend scenario raised many questions during the meeting. The scenario will have to be discussed in length in the next scientific meeting in Milan which will take place on November, 2-3 2010.



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Given the interdependence between the MEDPRO fields of research, there is an implicit endogeneity in almost all variables and driving forces considered in the study. This is particularly striking for WP3 and WP7\*. For example, it is difficult to say to what extent the evolutions of mortality and fertility are exogenous from social protection within an analysis of the latter. To resolve this problem, necessary assumptions on exogeneity will be made in an initial stage of the scenario-building exercise, without paying excessive attention to possible inconsistencies. The idea is not to limit creativity and allow possible clashes in order to consider all possibilities and avoid straight-jacketing the assessments. Through the iterative process embedded in the qualitative scenario building methodology, inconsistencies will be gradually resolved. Prof. Pantelis Capros' quantitative work will also complement this strategy.

The discussion highlighted an important point related to Euro Mediterranean relations, namely the Israeli-Palestinian and Arab conflict. The depth of Euro Mediterranean cooperation addresses this issue, at least partially. The Barcelona Process stemmed from the wave of enthusiasm after the Oslo Agreements. However, its revival through the UfM proposal is currently shadowed by the conflict. The wealth dimension, through its focus on political capital as well as other economic and human capital, also interacts with the conflict. Potential interactions include more spending on military rather than education and infrastructure development, reduced trade opportunities, etc. If we take demography, instead, the Israeli occupation translates into migration outflows from Palestine to neighboring Jordan and Syria which could exert an influence on various dimensions of these countries economic and social capital by 2030. To better focus on continuing Arab-Israeli conflict, which is a key driving force in the region, the WPs can also consider focused discussions of the prospects for better assessing the implications of the resolution versus non resolution of the conflict.

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\* Illustrating the complementarities between these two WP, the next NIDI workshop initially devoted to demography exclusively will deal as well with human capital, inequality and migration.



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To sum up, it is crucial for WP leaders to coordinate the development of the four scenarios in their areas. The exercise should be taken as a first step into an iterative process of scenario-building. These scenarios will be discussed on the next scientific coordination meeting in Milan, which will take place on November, 2-3 2010. It is also equally important to ensure data coordination, with each work package providing a data list to their data coordinators, identifying the needed data (i.e. a wish list) as well as listing what is available to them. In the long run, each WP should attempt to fulfill the data requests of other WPs, including those required by Prof. Pantelis Capros to run the GEM-E3 model, i.e. the “core dataset”. As is usually the case with large collaborations, the project relies crucially on an extensive and well-coordinated cooperation and creativity from all parties involved.

WP3 implementation, Dr. George  
Groenewold

The objective of WP3 is to produce demographic projections until 2030-2050, which will be used as key inputs for the scenario-building exercise. These projections will consider traditional demographic drivers, namely fertility, mortality and migration as well as other underlying factors, such as policy and macroeconomic variables. By looking at how these demographic drivers are likely to evolve in the four scenarios, specific population projections will be produced. In this regard, the first task is to establish a data requirements spreadsheet (or “data template”) in order to obtain the required base-line data for demographic scenario projections and assess data availability and quality for the countries under study. Based on these base-line data and the information analyzed and compiled, socio-economic and demographic past trends will be analyzed leading to the development of a set of plausible demographic scenarios for each country and for the region as a whole.

The level of education, labour force participation and health status stand among the main determinants of fertility, mortality and migration. To make population projections, data broken down by age and sex are the key inputs needed.



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This data is to be provided to WP3 leader Dr. George Groenewold by filling the data template by December 2010, following the steps of research in the work plan. Given the features of the countries under study, migration statistics are likely to pose the greatest challenge as data might be incomplete or unavailable. If possible, migration flows will be deduced from available household and labour force surveys or estimated indirectly by comparing recent census populations. As far as health status is concerned, the crucial question lies on how to proxy good and bad health conditions, as health status influences mortality, one of the drivers of population change. To assess the role of the quality of the health system on the health and mortality conditions in a country, it is advised to consult both quantitative and qualitative studies at the country level.

WP7 implementation, Jorgen  
Mortensen and Prof. Alia El  
Mehdi (FEPS)

The work package devoted to education, social protection and inequalities has the following objectives:

- To establish a map of the current state and performance of social protection and education systems and the current and future educational attainment of the adult population in the region;
- To assess the long term sustainability of social protection schemes;
- To analyse the link between human capital and skills with migration within the region and between the region and the EU; and,
- To assess the growth potential of enhancing female labour force participation.

The analysis will serve to formulate a foresight study of the likely future path of human capital endowment and the development of knowledge and skills in the MED-11 economies; the influence of human capital developments on migration and the socio-economic benefits of enhancing the use of the underutilized human capital of the female population.



WP3-WP7 Research Progress  
Current demographic situation in  
Mashrek and Maghreb countries-  
WP3

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As a first glimpse of the diversity of demographic situations in the MED-11 region, focusing on the Egyptian context, Dr. Fatma el Zanaty highlighted some stylized facts about one of the first drivers of population change, the fertility rate. On average, women wish to have three children, notwithstanding their level of education. Although one may think that a high level of education might translate into the willingness for a woman to have fewer children, this does not seem to hold true for Egypt. Given this condition and the limited availability of arable lands in the country, demography poses serious challenges to Egyptian policymakers who expected the country to reach the replacement rate by 2016: demographic projections expect the population to grow up to 117 million by 2020 compared to the actual 80 millions. To achieve this goal, the country pursued population control objectives supported by high public spending in family planning programmes. This has resulted in a decline of the fertility rate from 7.2 children per woman in the 1960's to 3.4 in 1998. Today, the overall outreach of such programmes seems to have lost importance, since the fertility rate is stabilized to the 1998 level, with an upward trend according to latest data. Religious factors could partly explain this trend, but no clear cut answer is available until today. Rather than purely religious factors, it seems that is the overall socio cultural context that matters most. As the country still pursues a population policy, WP3 will study it and assess its effectiveness while focusing on the effects of EU-Egypt cooperation on the country's demography.

As highlighted by Dr. Samir Abdullah, Palestine's demographic structure is distinct when compared to other countries primarily due to the country's vulnerable political situation. The total population of Palestinians around the world is of 10.8 million people but only 37% actually live in the Occupied Palestinian Territory (OPT). Regarding refugees, 70% of them live outside the United Nations Relief and Works Agency (UNRWA). The Palestinian population is very young: 50% is less than 15, and the population in age of work (15-64) is of 49.5%. Males are prominent in all age groups and mortality has overall decreased in the past decade.



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This young society is characterized by a labour force participation of 41.5% with a very low number of women working (which is a common characteristic across the region) despite an equal access to tertiary education between genders. The restrictions on mobility imposed by the Israeli occupation translate into high rates of unemployment but can also partly explain higher fertility and dependency ratios.

Tunisia's demographic situation instead appears to converge towards Western standards as was explained by Dr. Abdelmajid Ben Khelifa (ITCEQ). Fertility rates have declined from 6.8 children per women in 1966 to 2.1 in 2008. This rate is comparable to France's one and highly contrasts with the Egyptian figure. The main reason behind the achieved demographic transition lies in the design of the reform process pursued in Tunisia since the country's independence, which has put a high emphasis on integrating women in society, encouraging female education and participation in the labour force while stressing the importance of women rights. Family planning is also relatively advanced in the country: as an example, Tunisia is the only MED-11 country in which abortion is permitted.

### Human capital and labour market in the MED-11 – WP7

The measurement of human capital poses serious challenges in economics literature, mainly because human capital is intangible and not directly observable as explained by Dr. Emrah Arbak. Traditional proxies for human capital are to be found in measures related to the education level such as enrollment ratios, educational attainment and literacy rates. These measures have their strengths and weaknesses. For example, while enrollment ratios and literacy rates are readily available for numerous countries from public sources, they fail to address important issues such as the matching of skills demanded and offered on the labour market. As a more general criticism, most measures suffer from potential biases introduced by omitted variables. For example, strong correlations between years spent in school and wage levels may be better explained by individual ability, parental rearing, etc. The observed relationship between years of education and other dependent variables may cease to exist once (and if) these overlooked variables are controlled for.



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Given the characteristics of the MED-11 countries and the particular question of the matching of skills demanded and offered, WP7 will use the approach developed by Mulligan and Sala-i-Martin (1997)\*. The authors' measure of human capital is equivalent to the ratio of total labor income per capita divided by the average wages of unskilled (i.e. uneducated) workers. As an advantage, this measure focuses only on observed outcomes—wages at different skill levels—without having to account for the complex human capital formation process. Although the measure provides a solution for the problem of skills matching, one of the key assumptions that drive the measure is that the productivity of unskilled labor is comparable across countries, which may invite omitted variable biases mentioned above. The availability of data on wages by education levels for the MED-11 countries may also be a restrictive factor. In that case, the second best strategy will make use of the recent Barro and Lee (2010)\*\* dataset in which the stock of human capital is measured by overall years of schooling as well as by the composition of educational attainment of workers at various levels of education.

### Annex : List of Participants

Dr. Samir Abdullah, Director, Palestine Economic Policy Research Institute (MAS), Palestine

Dr. Ahraf El Araby, Researcher, Faculty of Economics and Political Sciences (FEPS), Egypt

Dr. Emrah Arbak, Researcher, Centre for European Policy Studies (CEPS), Belgium

Dr. Rym Ayadi, MEDPRO Coordinator, Senior Research Fellow, CEPS, Belgium

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\* Mulligan, C. B. and X. Sala-i-Martin (1997), "A Labor Income-Based Measure of the Value of Human Capital: An application to the States of United States", Japan and the World Economy, 9(2), pp. 159-191.

\*\* R.J Barro, J.W Lee: "A New Data Set for Educational Attainment in the World, 1950-2010", NBER Working Paper n°15902, April 2010.



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Mr. Salim Gadi, Assistant Coordinator, CEPS, Belgium

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