Microeconomics of growth in MENA: the role of households

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Abstract

This paper discusses whether households in the Middle East and North Africa (MENA) allocate their resources efficiently and in such a way as to promote growth. It focuses on the role of urban households because they form the majority and they are the main source of growth in human capital. I argue that an efficient and pro-growth allocation of household resources may not be feasible because of constraints that households face in their decisions to supply labor, and to accumulate human and physical capital. I identify two aspects of the environment in which MENA households operate as critical to conditioning their behavior: the large role of the state in the economy, which distorts the incentives in the education and labor markets, and social norms regarding gender, which influence the division of labor at home and in the economy. Patriarchal gender norms limit women's participation outside the home, resulting in higher fertility and lower labor force participation of women in MENA compared to countries with similar income. The strong role of the state affects incentives in three key markets for credit, education, and labor. Powerful central governments have inhibited the development of modern financial markets by preventing the emergence of private banking and an independent judiciary, which is critical for enforcement of financial contracts. Distorted financial markets affect household savings by keeping interest rates low and often negative, and thereby discourage accumulation of financial assets relative to unproductive assets such as land. Of greater importance is state intervention in the markets for education and labor, which determine the amount and type of human capital MENA households accumulate. I argue that the prevalence of public sector employment and the regulation of private employment have increased private returns to formal schooling over and above their social return, while at the same time reduced private returns to other types of productive skills below their social return. As a result, the households invest in an inefficient portfolio of human capital with dire consequences for long run growth.

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I. Introduction

As the longest standing unit of social organization, the family is also recognized as an important agent of economic growth. Households make important decisions that affect production and accumulation of physical and human capital. Increased recognition of this fact in economics has led to a surge in theoretical and empirical models of household behavior in the last two decades. Manski (2000) considers the increased emphasis on households as one of the major recent innovations in neoclassical economics. A recent microeconomic view of growth in Sub-Saharan Africa by Collier and Gunning (1999) has produced important insights.[1] However, research on economic growth in the Middle East and North Africa (MENA) region has largely ignored the role of households, instead focusing on actions taken by governments. Historically, the region has been ruled by strong and dominant central governments, and often with negative effects on economic growth (Issawi, 1995). More recently, in the 20th century, socialist ideology and availability of oil revenues have helped maintain the image, if not the reality, of the all-powerful state. Nevertheless, we must understand the behavior of the micro units--households and firms—in order to reach a deeper understanding of aggregate outcomes, including the consequences of actions taken by powerful states.

In this paper I examine the role of households in MENA growth. I focus on the incentives and constraints faced by households that help or hinder their role in fostering growth. The constraints I consider are those imposed by the two institutions that are not peculiar to the region but have greater influence in MENA than elsewhere: the importance of central governments in economic life and social norms regarding gender. I show how these institutions define the incentives and the constraints that shape household behavior pertaining to growth. The strong presence of the state operates primarily in the form of extensive interventions in the markets for education and labor that create large gaps between private and social returns to human capital, leading individuals and households to invest more in formal education and diplomas than productive human capital. Social attitudes toward gender roles affect household behavior primarily by affecting the allocation of women's time between home production and market work. Women are discouraged from engaging in market work, thereby limiting the supply of labor and human capital to the economy and reducing incentives for investment in the education of girls. Limits on women's access to education and the labor market in turn promote population growth, reduce the education of the next generation, and thereby retard economic growth.

Throughout the paper I rely on the theory of household economics to guide the discussion, and on the rather limited body of empirical studies to relate the theory to the experience of individual countries in the Middle East. The most useful of the latter are those that use survey data. Learning from micro data is the most effective way to learn about household behavior in specific countries. Unfortunately, such data are only available for a handful of countries and researchers have only recently started to use them in micro econometric studies of households and markets in the Middle East. In the

[1] For a review of similar applications of microeconomics to economic growth around the world, see Guriev and Salehi-Isfahani (2003).

Appendix to this paper I provide a partial list of the micro data sets that exist for the MENA region, some of which are publicly available.

The role of urban households

I limit my discussion to the role of urban households in part to keep the discussion more focused but more importantly because urban households have greater influence on human capital accumulation and modern growth. Rural and urban households perform many similar economic functions—procreation, education, and labor supply—but they differ in important ways. Historically, the arid climate and the feudal system of surplus extraction have created urban centers that are quite distinct from rural communities. Rural and urban areas remain geographically and economically quite distinct even today. Because rural households operate both as firms and families, to properly treat the role of rural households in economic growth would require widening our scope considerably and discuss the role of agriculture in economic growth. It is best that the role of agriculture is treated separately. Furthermore, social norms interact with family decisions differently in rural areas because in rural settings the distinction between private and public space is more blurred, so rural women face less conflict between market related activity and housework than urban women.

Fortunately, focusing on urban households only is less of a limitation in MENA than in other regions because, next to Latin America and the Caribbean (LAC), MENA countries are the most urbanized in the developing world (see Table 1). The degree of urbanization is even higher if we control for income per capita. Figure 1 shows that in late 1990s all MENA countries were at or above the (linear) conditional mean rate of urbanization.[2] For the greater part of the twentieth century, MENA countries have had a relatively high proportion of their population live in urban areas. In 1970 the share of urban population in MENA was 41%, compared to 19% each for South and East Asia; in 2002 the MENA share had increased to 58%, compared to 28% and 38% in South and East Asia. Except in Egypt and Yemen, in all MENA countries the urban population exceeded the rural population (Table 1). Given that the average rural household is larger, urban households must outnumber rural households in most MENA countries by a good margin. The share of the labor force in agriculture is also lower in MENA countries compared to other developing regions except Latin America and the Caribbean (Table 1), which further indicates the significance of the economic role of urban households in MENA.

Table 1 here

Urban areas in MENA have historically been important centers of public administration, trade, and surplus extraction. Until the second half of the 20th century, those living in urban areas were not important as direct producers but their positions as managers of the agricultural surplus placed them at the helm in capital accumulation and growth. Their decisions as landlords, tax farmers and government bureaucrats affected how much was produced and collected in taxes, how the proceeds were used in the local economy, as well as international trade. The role of urban dwellers as managers of the agricultural

[2] The regression in Figure 1 (as well as in other similar figures) includes observations on all low and middle income countries. All data is from World Bank Development Indicators, 2000.

surplus diminished as major land reform programs in the 1960s—notably in Egypt, Iran, Iraq, and Syria—weakened the traditional land tenure systems and shifted the control of agricultural production to rural households.

In subsequent decades, with industrialization and globalization the significance of human capital in production has increased, and with it the role of urban households as its main producer. Finally, the dramatic increase in the flow of foreign exchange to the region after the oil price revolution of 1973 further tilted the balance away from rural to urban households. Although all MENA countries did not benefit to the same extent from the oil price increase, labor migration to oil rich countries and the resulting remittances spread the foreign exchange increase widely across the region. Foreign exchange inflow enabled more import of food and thereby diminished the role of rural households as agents of economic growth. Thus, in the modern period, although urban households have lost their traditional roles, as producers and suppliers of human capital they remain at the center of the growth process.

II. Economic and social environment

Many aspects of the social and economic environment affect growth. My interest in this paper is in those aspects that constrain and distort household choices. I further narrow my attention to those that are exogenous to household choices (such as geography), because only these can be meaningfully said to limit choices. Some facets of the environment that are commonly believed to affect choice, such as low education, do not fit the criteria because they are themselves the result of household actions. Besides geography, two key features of the MENA environment that I believe fit the requirement of exogeneity are the strong role of the state in the economy and social norms regarding gender. I argue that state interventions in the markets for education and labor are the greatest single source of distortion for household decisions. They distort incentives for investing in human capital and adversely affect growth. The state funds and directly provides much of the education, and acts as intermediary in the relation between workers and employers. State interventions in the labor market reduce flexibility in wage setting and turnover, which not only reduce incentives to work and cause misallocation of workers to jobs (static misallocation), they result in inefficient accumulation of human capital (dynamic misallocation).[3]

Social gender norms, too, affect growth by influencing static and dynamic allocations. Gender discrimination in the household and in the work place affects the allocation of time within the household by limiting women's access to market work outside the home. Social gender norms that govern the division of labor in the household can be considered exogenous to household decisions, and therefore constrain those decisions, to the extent that they have developed in an earlier period to serve a purpose which no longer exists. In a modern economy, restricting women to private spaces may inhibit economic growth by encouraging high fertility, reducing female labor supply, and lowering returns to female education. In this sense, as a constraint on household decisions, norms act in the

[3] Salehi-Isfahani and Murphy (2004).

same way as public sector domination of employment which distorts returns to human capital.

II.1 Natural endowments and climate

The climate in MENA is arid and semi-arid. Scant and unreliable rainfall has forced settlers in most of the region to develop vast systems of irrigation based on rivers and underground aquifers. In 1997, about 31% of MENA cropland was irrigated, compared to 3% in Sub-Saharan Africa, 21% in Latin America, and 38% in South Asia. The low proportion of irrigated land in Africa is one of the reasons why African rural households face high risks, which Collier and Gunning (1999) argue has at the micro level caused poor economic growth. Irrigation is an important part of the response of farmers in the region to the risky environment. In some MENA countries where rainfed cultivation still contributes a large share of agricultural production, as in Syria, rural households must cope with a high degree of risk due to variability of rainfall. In the more densely populated parts of the region, such as the banks of the Nile, irrigation is the only method of cultivation, which helps attenuate weather risks almost entirely.

In the last half a century, another geographic factor, the region's rich reserves of hydrocarbons have exerted an influence at par with the climate. With two-thirds of the world's oil and one-third of natural gas resources the economies of the region were to varying degrees affected by the rising price of crude oil in the second half of the twentieth century. The oil wealth has greatly affected the course of economic growth by raising real wages faster than productivity and changing relative prices in favor of non-traded sectors through the well-known Dutch Disease phenomenon (Gelb 1988).

II.2 Trade shocks

The largest trade shocks to the region result from fluctuations in the price of oil. A group of nine oil exporters in the region are directly affected by oil price fluctuations, and the rest through worker remittances and direct aid (El-Erian et al 1996). Oil prices quadrupled in 1973 and jumped again by a factor of three in 1979-80, after which they started a gradual decline until 1986 when they collapsed, wiping out all but 10 percent of the gains made during the two previous price hikes. Since 1986 oil price fluctuations have continued (high in 1990-91, low in 1998, and high again in 2003-05), resembling price fluctuations for other primary commodities, with the obvious difference of the role played by political factors. There is no evidence available regarding how the variability in oil incomes enters household decision-making. Governments, who are arguably better informed about oil price shocks than households, have so far failed to smooth their own expenditures. Kuwait is the only country that systematically excludes a part of its oil revenues from current use by placing it in a fund for future generations. Several other countries, such as Iran, have oil stabilization funds that help smooth consumption over temporary price fluctuations but not over generations (Davis et al 2001).

II.3 The institutional environment

The role of state

Central authorities have historically played a significant role in the economic life of MENA societies. The reasons for the strong role of the state have changed over time and differ from country to country (Anderson 1987). In the past the state dominated economic life because of its role as the manager of water resources, extractor of surplus and protector of agricultural communities.[4] The role of Islam in the promotion of a patrimonial system may also have contributed to the rise of the state (Bill and Leiden 1974). In the recent past, socialist ideology following independence (Iraq, Syria, and Tunisia), rise of nationalism (Egypt and Iran), and oil revenues that accrue to the state (Saudi Arabia, Iran, Kuwait and other Gulf states), have helped the state continue its dominant role to date (Richards and Waterbury 1996).

Although the state has contributed to economic growth by providing infrastructure and other public goods, it has also inhibited micro units--firms and households--from playing a more positive role in economic growth. For households state intervention in the markets for capital and labor has been the main inhibitor. Specifically, as we see below, the rise of public sector employment and interventions that reduced the flexibility of the labor market have distorted individual incentives for lending to firms and investments in human capital.

There is a large literature in economics that shows labor market regulations affect employment and growth, but they do not directly relate to the role played by the households. Lazear (1990) shows how regulation in the form of severance pay hurts employment; Besley et al (2003) show how manufacturing growth in Indian states with stricter labor regulation has lagged behind those with less regulation; and Botero et al (2003) show that more regulation reduces labor force participation.

The large size of the public sector in MENA can be deduced from the share of public expenditures in GDP. In Figure 2, where this ratio is depicted for individual countries relative to a regression line for low and middle income countries, with the exception of Iran, Syria, Turkey, and Yemen, all MENA countries are above the regression line. The public sector in Iran is perhaps one of the largest in MENA, but the heavy under pricing of foreign exchange and energy products is responsible for the relatively small share of public expenditures reported in the World Bank data. Esfahani and Taheripour (2002) put the share of government expenditures closer to 50% of the GDP, which would make Iran an outlier in the other direction. State expenditures as percentage of GDP range from a low of about 25% in Turkey to 35% for the North African countries, to 50% in Kuwait and Iran, compared to 12% in East Asia and 25% in Latin America (Table 2).

Not only are public expenditures high in relation to GDP, the share of wages and salaries of public employees in GDP is also high relative to other developing regions. Wages and salaries comprise about one-third of public expenditures in MENA compared to one

[4] The terms 'Oriental Despotism' and 'Asiatic Mode of Production' have been used to describe the economic systems at the helm of which stood the state. For an application to 18th century Iran, see Ashraf (1970) and Abrahamian (1974).

fourth in East Asia and Latin America (Table 2). The share of public sector wages and salaries in GDP, which ranges from 6.0 percent in Turkey to 15.4 percent in Jordan, compared to 2.6 percent for East Asia. Except for Turkey, the share of government wages and salaries in MENA countries' GDP lies above the conditional mean represented by the regression line (Figure 3).

The heavy burden of public employment is correlated with overall intervention in the labor market. To start with, the state is by far the largest employer. If we consider public employment (civil service and state enterprises), the extent of the impact of public employment on the labor markets becomes evident. In 1990, public employment as percentage of total employment ranged from 21% in Morocco to 34% in Egypt, 44% in Jordan, 57% in Algeria, and 85% among nationals in Kuwait (Shaban et al 2001, Said 2001). Nearly one of every three Arabs working outside agriculture is a public employee, compared to one of five in OECD countries (Said 2001). Growth in public employment has come from access to oil revenues (Iran, Kuwait, Saudi Arabia, and UAE), job guarantees (Egypt and Morocco), and the government acting as the policy of employer of last resort during recessions (Algeria, Jordan, and Tunisia).

As the largest provider of formal employment and regulator of private sector employment, governments in MENA have radically affected the labor market and the economic environment. Public sector employment is characterized by low turnover and emphasis on formal education, especially high school and university degrees (Said 2001). The share of state in employment of the educated workers is even higher. In Iran, in 2001, 58 percent of men in the public sector had upper secondary education or more, compared to 20 percent in the private sector; for women, 75 percent in the public sector compared to 35 percent in the private sector (Salehi-Isfahani 2004). The state is thus in a position to influence the structure of rewards to education out of proportion to its share in total employment. By emphasizing diplomas at the expense of productive skills, the state helps reinforce a system of education based on memorization and testing rather than acquisition of productive skills.

In addition to their role as the largest employer, most MENA states have further reduced the flexibility of the labor market through regulation of pay and rules for job termination. According to the Heritage Foundation index of wage and price flexibility, the MENA countries represented in the sample, with the exception of Jordan, Morocco and Tunisia, had a labor market rigidity score above the median.[5] In Iran, which has a high score of 4 (only four countries in the sample had a higher score), the government sets the pay scales for private sector jobs based on formal schooling, and the 1990 Labor Law places the burden of proof on the employers who layoff low productivity workers (Salehi-Isfahani 1999, 2000, 2002). In 2002, the Labor Law was amended to exempt firm with five or fewer workers. Egypt also has pay scales based on education and a system of compulsory arbitration between the employer and employees (Assaad 1997 and Said 2001). According to Labor Law 137 (1981), all prospective employees must register at a

[5] Heritage Foundation, 2002 Index of Economic Freedom. Washington, D.C. and New York, New York: Heritage Foundation and Wall Street Journal.

district labor office where government officials evaluate skills and note ratings on an "employment certificate." Upon being hired or terminated, workers must notify the labor office of their change of status. In the event a firm is acquired by another, the obligation to continue employment falls to the new owner. Furthermore, the state has successfully used the hierarchical union organization under its control to influence the employment relation in private enterprises (Posusney 1997). In most other MENA countries the government places restrictions on firing of employees (Said 2001). Egypt and Morocco adopted policies of job guarantees for educated workers in an effort to increase incentives for education (Assaad 1997, Shaban, et al 2001). Recognizing the distortions that these policies have on incentives in the markets for education and labor, both Egypt and Morocco have in the 1990s backed away from their employment guarantee obligations. In 1990, Morocco provided exemptions from the stringent employment regulations that allowed businesses to hire, for up to 18 months, skilled workers without restrictions on wages and benefits or any obligation to retain them (Said 2001).

The effect of state regulation of the labor market on human capital accumulation is exacerbated by its direct role in its production of education. The educational system in MENA is under heavy influence from the state, both in setting the curriculum and in financing of education. Except in Lebanon, where private schooling at all levels predominates, in all MENA countries the state is the main provider of education. In 1992, only 7.2% of primary and 6.2% of secondary students in Arab countries were enrolled in private schools, compared to 11.7% and 41% for upper middle-income economies (Barnett, Eken, Lockheed, and van Eegen 1998). In Iran, in mid 1990s the same figures were 1 and 2 percents only (World Bank 1997a). Psachropoulos and Nguyen (1997) show that in Arab countries private spending was only 10% of total spending on education compared to 50% for East Asia and the Pacific.

The trend is for more privatization of education in MENA, but the environment for human capital accumulation may not be significantly affected by private provision of education as long as the labor markets remain inflexible. To the extent that educational institutions take their cues from the labor market, private schools may not behave very differently from public schools (Salehi-Isfahani and Murphy 2004). In Iran, private schools only outperform public schools in test taking to prepare them for entry into universities, not in offering a more varied curriculum. After all, for parents and students success is still defined by passing the university entrance examinations and landing a job in a labor market that rewards diplomas much better than productive skills.

Social norms

It is commonplace to speak of the Middle Eastern societies as patriarchal and characterize their gender relations as less equal compared to other developing regions.[6] The veil has come to symbolize separation, and to many the subordination, of women in social and economic life in MENA societies. Although the origins of these gender relations can be traced to pre-Islamic Middle East (Nashat 1999), Islamic laws and edicts may have made them more resilient to change long after their purpose had disappeared, hence the

[6] There is a vast literature on this subject. For an excellent discussion of gender norms in the Middle East as it pertains to work and education, see World Bank (2004).

designation of social gender norms as a constraint on household actions in the modern Middle East.

Although the importance of social norms in social outcomes is generally acknowledged, little is known about the precise way in which they influence micro decisions. Considering fertility decisions, Mason (1997) and McDonald (2000) divide the effect of gender relations into institutional stratification at the macro level and gender roles at the micro (household) level. Patriarchal gender relations exist at both levels in MENA countries, in personal attitudes toward female education and work as well as at the level of social institutions (Kazemi 2000). The state has often played an important role in promoting and enforcing social norms. In several countries gender norms have been "codified in law, especially in the region's personal status or family laws, such as those requiring women to obtain the permission of fathers or husbands to gain employment, to seek a loan, to start up a business, or to undertake any form of travel" (Moghadam 1998). The ban against women driving in Saudi Arabia, lack of women's suffrage in Kuwait prior to 2005, and the sexual segregation of men and women in buses, classrooms and the workplace in Iran, are means by which the state enforces social norms. In Iran, where women have made strong gains in education, now outnumbering men in universities, former president Rafsanjani has complained of political pressures on him (while president in the 1990s) to limit women's access to the university.[7] Patriarchal gender roles at the household level, reinforced by social image of men as breadwinners, have been blamed for low female participation in the labor market and wage rigidity (Karshenas 2001).

The gap in gender relations between MENA and other regions of the world points to social norms as an important feature of the social environment in which micro units operate. The Gender Empowerment Measure calculated by the United Nations, which measures the economic and social opportunities open to women relative to men, allows a comparison of gender relations across countries.[8] Figure 4 depicts mean GEM by income per capita and shows that all MENA countries lie below the regression line. Interestingly, GEM in MENA is even below that of much poorer Sub-Saharan African countries (ERF 2000). Around the world women live longer than men. The "Disability Adjusted Life Expectancy" (DALE) index calculated by WHO shows MENA countries among a select group in which men fare better than women (Murray and Lopez, 2000). Indeed, the top five countries in this category are MENA countries. As one observer put it, the lack of "a sex gap in Egypt and Iraq, or the existence of a gap in favor of men in

[7] "They asked why women should study if they are not going to work. And even some radical representatives spoke from the tribune of the Majlis asking why should we give the seats in universities to a woman who when she finishes her education must go home and take care of children. I said that an educated mother without a job would be effective in the society because of the children that she will educate." (Interview with M. H. Rafsanjani, author's translation from Persian, *Hamshahri* 1/10/00, p.15)

[8] According to the *Human Development Report, 1999,* the Gender Empowerment Measure (GEM) "captures opportunities for women in selected economic and political areas. It examines whether women and men are able to actively participate in economic and political life and take part in decision-making. It tracks the percentages of women in parliament, among administrators and managers and among professional and technical workers—and women's earned income share as a percentage of men's.

Turkey and Iran, may reflect a relative devaluation of women's well-being in those countries, as well as large inequalities between the sexes in education, a variable that correlates highly with health."[9]

Gender norms are constraints on individual decisions but they also change when enough individuals choose to defy them. Norms with respect to childbearing have gone through drastic change in many MENA countries, where fertility has declined precipitously in recent decades, notably in Iran where the slow pace of increase in women's work outside the home, despite improvements in health, reproduction, and education, might lead one to suppose very rigid gender norms (Salehi-Isfahani 2005). Since our understanding of how specific social norms arise and disappear, as explanation of individual behavior we must use them sparingly. Ironically, the oil boom that increased incomes and hastened modernization in the region may have strengthened the traditional gender contract because the inflow of oil revenues removed the need for women to work outside the home (Moghadam 1998). This observation fits the pattern of gender norms across the region relatively well: norms have proved more resilient to change in oil exporting countries of Iran, Kuwait, and Saudi Arabia, where women have low labor force participation rates despite relatively high education, but shown less rigidity in Morocco, Tunisia and Turkey where women have the highest activity rates with no apparent advantage in education or skills compared to women in oil rich countries.

III. Household decisions

Economic theory identifies three household decisions with direct impact on economic growth: to save, to accumulate human capital, and to procreate. These decisions are interdependent. There is the well-known tradeoff between the quantity and quality of children, which derives from the scarcity of resources, mainly time, in the household (Becker 1991). Children can be a substitute for other assets as means for old age support. This interdependence implies that, in principle, all other household actions also indirectly affect growth. The allocation of household time between home production, leisure and market work is the most important such decision. For example, rewards for market work for women influence household choices with regard to fertility and investment in human capital and thus indirectly affect growth. In this section I consider decisions with both direct and indirect impact on growth, and two features of the environment that constrain these decisions—the interventionist state and social norms.

III.1 Household time allocation

The most important asset of the household is the total time available to its members. The household divides its total endowment of time between leisure, work for home production, and market work. For urban households home production primarily consists of 'child services' (Hotz, Klerman, and Willis 1997), which is itself a function of the number and quality of children. Modern economic growth is associated with a shift from home production of commodities to market work, especially for women, and from quantity to quality of children.

[9] *Washington Post*, June 12, 2000; page A09.

The allocation of time in MENA households differs in significant ways from households in other developing countries, and this is most noticeable in the gender allocation of tasks between married couples. Moghadam (1998) speaks of a specific "gender contract" which designates men as breadwinners and women as homemakers, which appears to correspond to low female labor force participation which is difficult to explain given the levels of fertility or education in MENA societies. Whether low participation can be blamed on social norms is an empirical question, for which we do not yet have a satisfactory answer. MENA gender norms inherited from the past can be said to constrain household choices--and thereby hinder growth-- at present, if we can determine empirically that they prevent a more productive allocation of time between household members. I now examine how social norms affect time allocation in fertility and labor market participation decisions.

Fertility

Despite substantial decline in fertility in several MENA countries, notably Egypt, Iran, Lebanon, Turkey, and Tunisia, the region as a whole has been slow in its demographic transition (Rashad and Khadr 2002). In 2002, fertility rates in MENA, averaging 3.2 births per woman, were exceeded only by countries in Sub-Saharan Africa (World Bank 2004). Delay in the transition and persistence of high fertility in the Arabian Peninsula where, despite high incomes and high education, fertility remains around 6 births per woman, has given rise to the notion of Islamic or Arab fertility (Caldwell 1986, Obermeyer 1992). As late as 1977, births averaged 6.3 per woman (Table 3), nearly as high as in Sub-Saharan Africa (6.6) with much lower per capita income, and twice that of East Asia and the Pacific (3.3). Figure 5 shows that in 1977 the total fertility rate (TFR) in all but two MENA countries (Egypt and Turkey) was higher than indicated by the regression line which depicts mean TFR by income for all developing countries. Recently, fertility has declined in most countries of the region, lowering the TFR from 6.3 to 3.6 in the last twenty years (Table 3). In 1997 at least half of MENA countries were below the regression line relating TFR to GDP per head (Figure 6).

Two implications of lower fertility for growth are important to note. First, the move from high to low fertility provides these countries with a one-time bonus derived from a favorable age structure. Economic historians have labeled the benefits to growth from a more rapid labor force growth and a low dependency ratio (ration of working to non-working population) that follow fertility transitions as a "demographic gift" (Bloom and Williamson 1997) and a "window of opportunity" (Barlow 1994). Salehi-Isfahani (2002), Tunali (1996), and Yousef (1998) show how the changing age structure can play a positive role in MENA countries. Even though fertility has been on the decline in the last twenty years, the rate of growth of the labor force has remained high, averaging 3.2 percent during 1985-95 and 2.9 percent during 1995-2002 (Table 3) and will likely remain above 2 percent for the next decade or so. Labor force growth rates could be even higher if female labor force participation rates increase. As noted earlier, although the effect of lower fertility and more female education on labor force participation of women in the formal economy is yet to fully materialize, it is only a matter of time before women begin to seek work outside the home.

Participation of women in market work

Reliable data on labor force participation of women in the region is lacking. A few countries report data based on household surveys (Egypt, Kuwait, Iran, Morocco, and Turkey). As in other developing countries, accounting for women's work, especially in self-employment and in agriculture, is notoriously difficult. In addition, many women prefer to declare their occupation as housework (or are identified as such by their husbands if they are the respondent) rather than declare themselves unemployed, even though they would readily accept an appropriate job. Variation in the definition of what is meant by 'work' reduces comparability of estimates, but this is a less severe problem in urban areas where own account workers form a smaller proportion of the workforce than in rural areas.

Comparison of urban women across the world reveals a much lower rate of participation for MENA. In 1990s female participation rates in urban Turkey was only 15% (Tunali and Baslevent 2000), in Egypt about 16% (Assaad and El-Hamidi 2002), in Jordan 12.1% (Flynn 1999), and in Iran 8.6% (Statistical Center of Iran 1998). These rates are all less than half the rates reported for East Asia. Even in the predominantly Muslim Malaysia female labor force participation has reached 40%. Table 4 presents a more complete comparison of MENA female participation rates based on the share of women in the labor force as reported in World Bank (1999a). The participation rate for MENA women is the lowest of any region and is not changing as fast as one would expect given the rise in education and decrease in fertility. The sharpest contrast is with Sub-Saharan Africa where, despite higher fertility and lower education, women comprised 42.2 percent of the workforce in 2002, compared to 28.6 percent for MENA. The fact that Africa is more rural explains a part but not all the difference. The rate of participation in market work of MENA women appears low even taking into account their higher fertility. Although labor force participation, female education, and fertility are obviously interrelated, it is still informative to compare labor force participation rates conditional on education and fertility. Figures 7a and 7b present these conditional regressions, and depict the relative positions of MENA and Sub-Saharan African countries. In this regression, the participation of African countries appears well 'explained' by their high fertility and low education, whereas MENA countries appear as outliers. Finally, changes in participation over time in MENA suggest a slow response to falling fertility. During 1977-2002, a period when fertility dropped by more than half (Table 3), the share of women in the labor force increased by very modestly, from 23.4 to 28.6 percent (Table 4).

Given the declining trend in fertility and rising female education, female labor participation has the potential to contribute to MENA growth. If the proportion of women who work outside home were to gradually increase to the level in East Asia, three times as many women would be participating in the labor market. This increase in the rate of growth of the labor force has the potential to generate economic growth.

These observations present the low rate of market work among MENA women as an anomaly, for it is not readily explained by low education or high fertility, but do not explain it. Social norms are frequently advanced as an explanation (see, for example, El-

Sanabary 1993), but convincing evidence that they do in fact act as a constraint is still lacking. An alternative hypothesis for the low participation of women in MENA is the importance of oil income (World Bank 2004). Oil income permits the average MENA family to enjoy a higher standard of living given their education and productivity, thereby reducing the need for women to work. Non-wage family income is well known as a negative influence on the labor force participation of women. The question is whether oil income at the national level acts on household behavior the same way as unearned income. The answer depends on how oil income is distributed. To the extent that households receive transfers from the government, their real income rises without changing the price of leisure. Direct transfers to households, as in Kuwait, and subsidies for consumer goods, as in all oil exporting countries, fall into this category. But transfers that occur through the labor market, e.g. higher pay for public sector jobs, do not because they raise the price of leisure which would increase labor supply. Anecdotal evidence suggests that the income effect on women's labor supply maybe negative. For example, we read that, coping with hard times, "reluctantly, men allow their daughters to work until marriage or allow their wives to go on working until the mythical day when they can afford to forgo a second salary," (Afaf al-Sayyid-Marsot 1989, p. 121). But systematic evidence for this view is lacking. Assaad and El-Hamidi (2002) find evidence from micro data from Egypt which indicates the opposite--that female wage workers are more likely to be found in households with a male wage worker and one with higher earnings.

The search for cultural reasons for differences in the labor force participation of women with different ethnic background in the US has produced mixed results. Ortiz and Cooney (1984) find that the influence of Hispanic culture on the rate of participation women works mainly through education, fertility and language. Reimers (1985) confirms this finding for Hispanic women, but concludes that the difference between US-born whites on the one hand and Asian and blacks on the other is due to "direct cultural effects on the parameters of the labor force participation function." On the other hand, decline in the female labor force participation during industrialization has been explained by social norms that prevent women from accepting blue collar jobs (Mammen and Paxson 2000). Goldin (1995) argues that in the US blue collar jobs are shunned because they stigmatize the husbands as unable to care for their wives, whereas women holding white collar jobs do not.

Gender norms may influence labor supply of married women through the relative power of men and women in the household. The literature on the division of labor within the household suggests that the relative bargaining position of men and women influences the labor force participation of women, but the direction of influence is not obvious. More power to women may raise or lower their likelihood of market work. Grossbard-Schechtman (1993) presents evidence of circumstances in which women *increased* their participation in response to a decrease in their share of the gains from marriage, itself caused by a decline in the ratio of males to females. It is equally plausible to imagine, as indeed the prevailing wisdom on obstacles to women's participation goes, that increased female power within marriage would lead to higher participation. This version appears to be more true in MENA where female labor force participation declines with marriage (World Bank 2004). In Egypt, Assaad and El-Hamidi (2002) show that women's market

work drops sharply with marriage rather than with childbearing. In Iran, married women have the lowest participation rates, followed by single and widowed women. In Kuwait, Shah and Al-Qudsi (1990) find that the labor force participation of single women aged 25-39 is more than twice that of married women (60 percent compared to 30).

Where the rise in education has increased labor force participation rates, social norms may have forced occupational segregation. In MENA, where they have evolved to allow women to work outside the home, gender norms continue to restrict choice by defining what appropriate jobs are for women. However, although job segregation appears to discourage women from participation, it does not appear to be out of line in comparison to other regions (World Bank 2004, p. 93). As in most other regions of the world, educated women predominate in teaching, nursing and clerical work.

III.2 Human capital

Historically, human capital has played a significant role in the economic growth of the MENA region. Harnessing water resources for agriculture and developing the calendar to assist cultivation presupposed the development of a scientific community in urban centers. When the environment has been conducive to human capital accumulation, the region has prospered. Although institutions of formal education existed for periods of time in the major cities of the region, the urban nuclear family seems to have played a significant role in the intergenerational transfer of human capital. To this day, education in the MENA region enjoys a high social status, which is reflected in a high level of public commitment. Public expenditures on education are higher than in most developing countries (World Bank 1997b), and average years of schooling and enrollments are commensurate with the region's income.[10] Yet the region's experience of economic growth does not seem to have benefited from its growth of education (Pritchett 1999). Thus the central question which is posed by MENA experience is why the *productivity* of human capital has been so low (Pissarides 2000).

In this section I focus on the key dynamic decisions of MENA households that affect growth through the accumulation of human capital. A general characterization of the behavior of the average urban household in MENA is that it invests little in physical capital, a respectable amount in human capital, and has a relatively high fertility. The key dynamic decisions influenced by the MENA external environment are those that relate to fertility and the accumulation of human capital. My emphasis is on how the external environment, as defined by the preeminent role of the state in the labor market, has influenced human capital accumulation. I will argue that the relatively high level of investments in education in MENA results in a low accumulation of productive human capital because excessive job protection distorts incentives in favor of testable knowledge and away from less observable types of human capital, such creativity. The importance attached to diplomas as distinct from learning productive skills is the results of labor market institutions which reward formal schooling but not productive skills that only employers are able to observe. In short, private returns to measurable skills exceed their social returns, while the opposite is true for employer determined abilities.

[10] For a review of education in Arab countries also see, Arab Human Development Report, 2002 (UNDP 2002, chapter 4).

Health and Education

Although governments share with households the responsibility for provision of health and education of children, they cannot fully substitute for the role of households. Decisions taken by households to provide for the health and education of children during the early years are of critical importance for their human capital as adults (Young 1995, Hoddinott, 1999). Furthermore, while governments can be effective in the provision of health and education services, parents must be willing to take advantage of those services. Health outcomes in MENA appear commensurate with the economic standing of the region (Table 5). Infant mortality declined by more than 50% between 1977 and 2002, in line with fertility. Life expectancy and mortality reflect better health outcomes in MENA than in South Asia and Africa but lower than in East Asia and Latin America.

Parental investment in children is affected by the incentive structure they face. The most critical signals they receive are the rates of return to investment in various types of human capital which the labor market and the educational system generate. We can assume that decisions to invest in children are mostly driven by considerations for child welfare and old age security for the parents. Depending on the level of old age security that is socially provided, parents may depend more or less on their children as means for old age support. Parents may also wish to increase the welfare of their children by investments that are embodied in them—human capital—rather than by bequest. The tradeoff between these two depends on the performance of other asset markets and inheritance laws. Lack of confidence in asset markets and inheritance laws that conflict with the wish of parents--for example, Islamic laws allow daughters to inherit only one half of boys—increase the willingness of parents to invest in human capital.

The pattern of increase in education in MENA offers a clue to the productivity puzzle noted earlier. While literacy rates are not high in comparison with other developing countries, enrollments in high school and universities are very impressive. In 1997 female and male literacy rates of 46 and 71 percent in Arab countries were marginally better than 49 and 65 percents in Africa, and much worse than 86 and 88 percents in Latin America and 75 and 91 percents in East Asia (United Nations 1999). In contrast, in 1996 university enrollment rates were on average twice as high as East Asia and Pacific (Table 6). Emphasis on university education is also evident in the share of public expenditure that goes to higher education, ranging from a low of 50% in Algeria to as high as 99% in Lebanon (United Nations 1999). Rewards to education above the basic level—upper and post secondary—appear to be high, in keeping with the reward structure in the public sector dominated labor market.

The same anomaly appears in the gender gap in education: the gap in literacy is higher than in all other regions except South Asia, but much narrower in secondary and higher education (Table 7). The proportion of women in secondary education in MENA countries is between 45-50 percent, comparable to 48% in South Korea. In higher education the proportion is surprisingly high, exceeding 40% for many countries, surpassed only by Latin American countries. In Kuwait, Iran, and Saudi Arabia women equal or outnumber men in universities.

In MENA, through intensive testing, university education is rationed according student aptitude, willingness to work hard and to memorize, and to a lesser extent by parental willingness to pay, compared to Europe where they are "rationed not by price or aptitude, but by achievement in the core subjects studied in secondary schools" (Bishop 1996, pp. 120-21). MENA states enforce uniform tests at all levels of education, but their control of the university entrance examinations is probably their most effective tool in determining incentives in all levels of education. In Iran, private schools work harder than public schools to teach for the 'big test' and parents spend large sums on private tutoring (Salehi-Isfahani 2002). In Egypt, parents invest heavily on private tutoring to help prepare their children for university entrance examinations (World Bank 1999b). In 1994, 64 percent of urban and 51 percent of rural primary school age children had received supplementary tutoring (Bray and Kwok 2003, p. 2). In 1997, household expenditures on supplementary tutoring in preparatory, primary and secondary levels accounted for 1.6 percent of GDP (World Bank, 2002, figure 15), which is more than one quarter of all public expenditures in education. Private tutoring is also an important industry in Turkey, costing parents about 1.4 percent of the GDP (Tansel and Bircan 2004).

As noted earlier, despite high levels of enrollments in high school and university education, the impact of education on growth in MENA is not noticeable. Pritchett (1999) argues that the MENA region has enjoyed "the fastest expansion of schooling of any region, including East Asia," but has experienced one of the slowest growth rates in the world. Pritchett points to the low quality of education in MENA as a possible explanation for the low impact of education on growth. But the problem may not be so much with the quality of education than lack of a link between what students learn and what productive jobs require. Schools place too much emphasis on repetition and memorization, which may help with entering the university but not with productivity on the job (World Bank 1999b). Finishing high schools and entering the university has a huge premium in most MENA countries because it increases the probability of getting a job and of higher pay (see references below to returns to education). Highly competitive exams for entering university induce parents and students to invest heavily in skills that increase the chance of passing the university entrance examinations, as evidenced by the huge expenditures on private tutoring just noted. The test taking approach to education not only short changes students on the skills they need for productive employment, it creates huge losses in efficiency as the bar is continuously raised to admit a limited number of students into the highly desirable places in universities. One outcome of this competitive system is that while top students from MENA perform very well in international competitions, students who take part in other international tests (such as in TIMMS) that measure learning by the average student do rather poorly (World Bank 1997a).

The role of the labor market

The returns to investment in human capital are in large part realized in the labor market. Wide ranging state interventions have reduced the flexibility of MENA labor markets (Pissarides 2000). Evidence for labor market rigidity was presented earlier in section II.

Two aspects of this inflexibility are particularly important from the point of view of human capital accumulation. First, is the importance of formal education and diplomas for selection into public and private sector employment, and, second, the inability of employers to reward or layoff workers according to productivity (Salehi-Isfahani and Murphy, 2004). Employers, public or private, place too much emphasis on formal degrees and little on individual characteristics that they deem as productive. As noted earlier, some countries even offer job guarantees for high school and university graduates, as in Egypt and Morocco. Emphasis on formal schooling and diplomas on the part of employers, private or public, is a logical response to an inflexible labor market (Salehi-Isfahani and Murphy, 2004). Individual characteristics that are not easily measured by testing but can be observed after a period of employment are not very useful to employers who cannot lay off workers once they have hired them. As a result, they are likely to place greater value on ex ante signals of human capital, such as years of schooling, test scores, and class and school rank. Naturally, in MENA countries workers invest in the type of human capital that can land them a good job rather than those that help them hold on to it once it has been acquired.

While theory helps us understand the potential distortionary effects of labor market interventions on incentives, the actual effects can only be assessed empirically. Studies of private returns to education are the most widely used for this purpose. Unfortunately, only a few studies of returns to education exist for MENA (see Assaad 1997, Tansel 1994, and Wahba 2001). In general, they show the convex (rising) rate of return that one would expect from an education system in a distorted labor market. There is also some evidence of the effect of public sector dominance of employment. Assaad (1997) studies the returns to public and private jobs in Egypt. He finds that public sector hiring practices have a substantial impact on the labor market because, despite erosion in pay, they still offer an advantage over private sector jobs. The overall premium caused by compensation and job tenure is high enough to cause large unemployment queues for public sector jobs.

III.3 Savings

Like households elsewhere, MENA households save for a variety of reasons, to improve a business, for old age or a dowry, or just as insurance against loss of income. The behavior of urban households that operate small enterprises, and therefore engage in both saving and investing, are more appropriately addressed in a paper on firm behavior. The majority of urban households that do not own a business and are the focus of this paper resort to financial or other assets as a means to save.

Existing data do not permit disaggregation of national savings by origin (households, firms, and the government). Income and expenditure data reported in household expenditure surveys are not reliable for estimating personal savings.[11] The high-saver countries in MENA are exclusively large oil exporters (Table 8). Non-oil exporters' propensity to save is less than half of East Asian countries. Private sector investment in

[11] Expenditure and integrated household surveys in Iran typically report expenditures in excess of income, sometimes by 30 percent. The blame usually goes to the unreliability of the income data.

MENA is below other countries, about 10 percent in the 1990s compared to 18 percent for developing countries and 22 percent for Asian countries (IMF 1996). No data are available on the part of this investment that is financed by household savings as opposed to retained earnings of firms. In developed countries household savings is a significant source of finance for firms, but not so in developing countries, where weak financial intermediation cannot channel household savings towards investors. Policies to liberalize the financial markets and deepen financial intermediation intend to raise the ability of small savers, such as households, to contribute to growth. Several MENA countries, mainly in North Africa, have attempted financial reform as part of their structural adjustment, but no studies exist that can show if household savings have increased as a result.

Economic theory does not give a clear indication of the impact of interest rates on personal savings (Deaton 1997). Neither of the main theories of why households save—life cycle, permanent income, or consumption smoothing—predict unambiguously that savings should increase with interest rates. What we do know is that a well-developed system of financial intermediation is associated with a more effective use of household savings. It is generally agreed that with low and negative real rates of interest it is difficult to raise long-term finance from personal sources. Table 8 shows that for those countries that report the real interest rate in World Bank (1999a), it has increased over time and is positive. In Iran, until recently, real interest rates averaged negative, and as recently as 2000 were about five percent points below zero (Jalali-Naini 1997). Easterly (1999) notes a similar rise in the rate of interest for developing countries as a whole, showing that real rates, which were negative before 1980, were on average positive afterwards.

The financial environment in which MENA households generally operate not only suffers from lack of depth, they are also insecure due to the heavy influence of the public sector and a weakly developed legal system overseeing financial contracts. As a result, households may prefer to place their savings in unproductive assets such as gold and land rather than in the financial system. The risks of nationalization and loss of value due to inflation, even in countries undergoing reform, deter savers from depending on the financial system for long term savings.

IV. Conclusions

The question posed in this paper is whether households in MENA allocate their resources efficiently and in such a way as to promote growth. To answer this question, I focused on the role of urban households, because they form the majority of households and are the main source of growth in human capital and therefore of modern economic growth. I argued that an efficient allocation of household resources which would maximize growth may not be feasible because of constraints that households face in their decisions to supply labor, and human and physical capital. I identified two aspects of the environment in which MENA households operate as key to conditioning their behavior: the large role played by the state in the education and labor markets and the social norms regarding gender. I argued that this environment has affected an important static decision

of the households, namely the division of labor within the household, resulting in high fertility and low labor force participation of women. Given the declining trend in fertility and rising female education, female labor force participation has the potential to contribute to MENA growth. If the proportion of women who work outside home were to gradually increase to the level in East Asia, three times as many women would be participating in the labor market, resulting in a lasting positive impact on economic growth.

I then identified the implications of the same environment for the dynamic aspects of household decisions—human capital accumulation and savings. Although little evidence exists regarding the magnitude of household savings in MENA, we know that their effectiveness for growth has been compromised by lack of confidence on the part of the households in the financial markets, which is itself the result of arbitrary actions by governments and the absence of the rule of law. I argued that the impact of state interventions and social norms on household actions were much greater in the accumulation of human capital than physical capital. The role of the public sector in MENA in education and the labor market has created a system of incentives in which households strive hard to accumulate formal education but not enough in productive human capital.

There are several implications of the analysis of this thematic paper for future research. First, studies focused on individual countries should examine the extent to which characteristics of the environment identified here—the large role of the state and social norms—apply in specific cases. As far as the role of state is concerned, a description of employment policies and labor market regulations is a good place to start. For social norms, indicators of restrictions placed on women in schools, the workplace and public space should be developed to define the environment in which the households make decisions regarding fertility, female education and labor force participation. If these constraints are judged as relevant and adequate descriptions of the environment in which households operate, their effect on household behavior should be the next item on the research agenda.

Micro studies of household behavior can be very useful in understanding the impact of the environment on the static and dynamic decisions of the households. In particular, they are indispensable in disentangling the effects of individual preferences and social norms, as opposed to constraints, in shaping behavior. For example, it is important to distinguish gender discrimination due to parental preferences from that which is a rational household response to the gender discrimination in the labor market. Evidence on the static decisions could come from aggregate data on fertility and labor force participation of women, but ideally, one would need micro data to link individual characteristics, such as income and education, to fertility and labor force participation decisions. By controlling for observed individual characteristics, micro studies can provide a closer link between social norms and demographic and labor market outcomes.

For decisions to save and to accumulate human capital, the focus should be on the institutions of markets for credit, education, and labor. With respect to physical capital

accumulation, the efficiency with which credit institutions can channel household savings toward productive investments should be determined. Do banks and other mechanisms of financial intermediation provide households with good alternatives to investments in unproductive assets such as land? Micro studies of consumption smoothing over the life cycle and intergenerational transfers through inheritance and dowries can provide valuable information on the household motives to save. With respect to human capital, which is produced within households as well as in schools, two questions should guide country studies. First, to what extent is the productivity of human capital affected by state interventions in the labor market? Second, to what extent household investments in the education of boys and girls are driven by the gender inequalities due to social norms? Studies of returns to education which compare returns to formal schooling in private versus public sector, large establishments regulated by labor laws vs. those unregulated, can reveal how state interventions in the labor market affect household choices in the amount and type of human capital to accumulate.

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Table 1. The importance of urban households in MENA

Country	Urban population as % of total		Labor force in agriculture (%)	
	1970	2002	1970	1990
Algeria	39.5	58.3	47.4	26.1
Egypt	42.2	42.8	51.8	40.3
Iran	41.9	65.4	43.8	38.8
Iraq	56.2	67.5	47.1	16.1
Jordan	50.5	79.0	27.8	15.3
Kuwait	77.8	96.2	1.8	1.2
Lebanon	59.4	90.3	19.8	7.3
Libya	45.3	88.2	28.9	10.9
Morocco	34.5	56.7	57.6	44.7
Oman	11.4	77.0	56.9	44.5
Saudi Arabia	48.7	87.1	64.2	19.2
Syria	43.3	52.1	50.2	33.2
Tunisia	44.5	66.8	41.9	28.1
Turkey	38.4		70.7	53.1
United Arab Emirates	57.2	87.6	8.8	7.8
Yemen	13.3	25.3	70.4	61.0
MENA	41.5	58.0	49.8	34.8
East Asia & Pacific	18.5	38.2	76.4	68.9
South Asia	18.7	28.0	71.1	63.4
Sub-Saharan Africa	18.7	33.1	78.5	67.5
Latin America & Caribbean	57.4	76.4	41.0	25.5
Middle income countries	33.2	52.6	61.1	52.8

Source: World Bank, *World Development Indicators,* 2004.

Table 2. Size of government

Country	Government wages & salaries as % of GDP		Public expenditures as % of GDP	
	1977	1997	1977	1997
Algeria	..	8.30	..	31.8
Egypt	9.52	6.3	46.9	34.2
Iran	11.27	9.16	45.8	23.2
Iraq	..	..	..	..
Jordan	..	15.43	44.8	35.0
Kuwait	6.53	13.07	31.4	41.5
Lebanon	..	8.68	..	37.9
Libya	..	..	..	..
Morocco	10.44	11.34		..
Oman	4.95	10.23	40.2	..
Saudi Arabia		..	52.6	..
Syria	7.30	..	49.4	23.8
Tunisia	9.52	10.33	33.3	32.6
Turkey	5.98	6.08	20.9	26.9
United Arab Emirates	..	4.15	8.0	11.8
Yemen	..	11.41	..	39.2
MENA	9.11	7.96	38.09	27.89
East Asia & Pacific	..	2.62	..	11.6
South Asia	2.11	..	12.7	17.7
Sub-Saharan Africa	7.08	..	23.0	..
Latin America & Caribbean	6.09	..	19.1	..
Middle income	..	..	..	..

Source: World Bank, *World Development Indicators,* 2004.

Table 3. Population, labor force, and fertility

Country	Population growth (annual %)			Growth of labor force (annual %)			Fertility rate, total (births per woman)		
	1977-1986	1987-1996	1997-2002	1975-1984	1985-1994	1995-2002	1977	1997	2002
Algeria	3.1	2.4	1.6	3.2	3.9	3.4	7.2	3.5	2.8
Egypt, Arab Rep.	2.5	2.2	1.9	2.2	2.6	3.0	5.3	3.6	3.1
Iran, Islamic Rep.	3.5	2.2	1.2	3.0	2.4	2.7	6.5	2.8	2
Iraq	3.3	3.0	2.1	2.8	3.2	3.0	6.6	4.7	4.1
Jordan	3.8	4.6	3.0	2.1	6.0	4.1	7.2	3.9	3.5
Kuwait	5.1	0.6	3.4	7.5	1.0	5.7	5.9	2.9	2.5
Lebanon	1.3	2.0	1.4	-0.1	3.2	2.7	4.3	2.5	2.2
Libya	4.3	2.1	2.0	4.3	1.9	2.1	7.4	3.8	3.3
Morocco	2.2	1.9	1.7	3.2	2.5	2.5	5.9	3.1	2.8
Oman	4.9	4.1	2.6	5.7	3.7	2.3	10.1	4.8	4
Saudi Arabia	5.4	3.6	2.7	5.1	4.3	2.9	7.3	5.7	5.3
Syrian Arab Republic	3.3	3.2	2.5	3.1	3.7	4.1	7.4	4	3.4
Tunisia	2.7	1.9	1.2	3.7	2.9	2.5	5.7	2.4	2.1
Turkey	2.3	2.0	1.7	1.4	2.8	2.5	4.5	2.6	2.2
United Arab Emirates	8.7	5.2	4.9	21.8	5.0	4.4	5.7	3.5	3
Yemen, Rep.	3.6	4.1	2.9	1.7	5.0	3.0	8	6.4	6
Middle East & North Africa	3.2	2.7	1.9	2.8	3.0	2.9	6.3	3.7	3.1
East Asia & Pacific	1.6	1.5	1.0	2.3	2.0	1.2	3.3	2.2	2.1
South Asia	2.3	2.0	1.8	2.3	2.2	2.4	5.5	3.5	3.2
Sub-Saharan Africa	3.0	2.7	2.4	2.6	2.6	2.6	6.6	5.5	5.1
Latin America & Caribbean	2.2	1.8	1.5	3.2	2.7	2.2	4.5	2.7	2.5
Middle income	1.6	1.4	1.0	2.2	1.8	1.3	3.4	2.2	2.1

Source: World Bank, *World Development Indicators,* 2004

Table 4. Women in MENA labor force

Country	Labor force, female (% of total labor force)		
	1977	1997	2002
Algeria	21.1	25.7	29.0
Egypt, Arab Rep.	26.3	29.4	31.0
Iran, Islamic Rep.	20.0	25.4	28.4
Iraq	17.0	18.7	20.4
Jordan	14.3	22.6	25.6
Kuwait	11.6	31.2	32.1
Lebanon	21.4	28.8	30.1
Libya	17.9	21.7	24.0
Morocco	32.9	34.6	34.9
Oman	6.2	15.1	18.9
Saudi Arabia	6.8	14.2	17.7
Syrian Arab Republic	23.3	26.2	27.6
Tunisia	27.3	30.9	32.1
Turkey	36.2	36.7	38.1
United Arab Emirates	4.8	13.8	15.9
Yemen, Rep.	30.9	27.9	28.3
Middle East & North Africa	23.5	26.6	28.6
East Asia & Pacific	42.1	44.4	44.5
South Asia	33.8	33.0	33.6
Sub-Saharan Africa	42.0	41.9	42.0
Latin America & Caribbean	26.4	34.1	35.2
Middle income	40.2	42.0	42.2

Source: World Bank, *World Development Indicators,* 2004

Table 5. Health indicators

Country	Life expectancy at birth, female (years)		Life expectancy at birth, male (years)		Mortality rate, infant (per 1,000 live births)	
	1977	2002	1977	2002	1977	2002
Algeria	58.5	72.1	56.5	69.4	112.0	39.0
Egypt, Arab Rep.	55.3	70.5	52.9	67.3	131.0	33.0
Iran, Islamic Rep.	57.0	70.3	56.2	68.3	100.0	34.0
Iraq	62.3	63.9	60.5	61.4	84.0	102.0
Jordan	..	73.6	..	70.4	42.0	27.0
Kuwait	71.7	79.0	67.5	74.9	34.0	9.0
Lebanon	67.0	72.6	63.1	69.0	48.0	28.0
Libya	59.3	74.9	56.0	69.9	107.0	16.0
Morocco	57.5	70.4	54.1	66.4	110.0	39.0
Oman	56.1	75.6	53.8	72.6	51.0	11.0
Saudi Arabia	59.9	74.9	57.6	71.4	75.0	23.0
Syrian Arab Republic	61.9	72.7	58.3	68.0	67.0	23.0
Tunisia	61.5	74.6	59.6	70.8	84.0	21.0
Turkey	62.5	72.5	58.0	67.5	120.0	35.0
United Arab Emirates	68.9	76.8	64.7	74.0	70.0	8.0
Yemen, Rep.	48.5	58.1	45.0	56.8	158.0	83.0
Middle East & North Africa	57.5	70.1	55.4	67.2	107.0	43.7
East Asia & Pacific	63.9	71.3	61.8	67.7	58.7	32.4
South Asia	51.9	63.8	52.6	62.2	130.5	67.9
Sub-Saharan Africa	48.4	46.6	45.1	45.1	119.7	103.1
Latin America & Caribbean	66.0	74.0	60.9	67.6	67.5	28.3
Middle income	66.0	72.3	62.7	67.5	63.5	30.2

Source: World Bank, *World Development Indicators,* 2004.

Table 6. School enrollment rates

Country	Primary		Secondary		Tertiary	
	1980	1996	1980	1996	1980	1996
Algeria	80.9	94.1	30.5	56.2	5.9	13.4
Egypt	..	93.0	..	67.8	16.1	22.6
Iran	..	89.8	..	68.8	..	17.1
Iraq	98.6	76	46.8	..	8.7	10.9
Jordan	..	..	..	..	26.6	..
Kuwait	84.5	..	..	..	11.3	26.7
Lebanon	..	76.1	..	..	30.1	27.1
Libya	..	..	62.3	..	7.8	20.0
Morocco	61.6	73.8	20.3	..	5.9	11.3
Oman	42.6	68.7	9.9	..	..	6.4
Saudi Arabia	48.6	61.4	21.3	42.4	7.1	16.3
Syria	89.5	91.2	39.3	38.1	16.9	15.1
Tunisia	82.2	97.6	22.9	..	4.8	13.7
Turkey	..	..	..	..	5.4	18.2
United Arab Emirates	73.6	..	..	..	3.1	11.9
Yemen	..	52.0	..	..	4.1	4.2
MENA	78.2	86.8	..	61.2	10.8	15.9
East Asia & Pacific	93.5	101.3	..	..	3.3	8.1
South Asia	..	..	..	..	4.5	6.3
Sub-Saharan Africa	..	..	..	..	1.4	3.4
Latin America & Caribbean	85.5	91.2	28.7	..	14.1	18.6

Source: World Bank, *World Development Indicators,* 2004.

Table 7. Gender and education

Country	Female-male differential in literacy	% of female students in secondary education	% of female students in higher education
	1997	1996	1996
Algeria	25.0	47.9	..
Egypt	24.3	45.3	..
Iran	15.0	46.3	45.0
Jordan	10.4	47.2	46.9
Kuwait	5.6	49.6	61.6
Lebanon	12.9	..	49.2
Libya	25.8	..	..
Morocco	26.6	..	..
Oman	21.9	48.6	46.0
Saudi Arabia	18.6	45.8	46.5
Syria	30.0	46.3	..
Tunisia	22.2	..	44.6
Turkey	18.5	..	..
United Arab Emirates	-2.8	49.9	..
Yemen	43.3	..	12.5
MENA	22.9	41.3	46.3
East Asia & Pacific	13.9	..	33.2
South Asia	26.9	..	36.3
Sub-Saharan Africa	16.1	..	..
Latin America & Caribbean	2.2	..	..

Source: World Bank, *World Development Indicators,* 2004.

Table 8. Savings and interest rates

Country	Average real interest rates (%)			Gross saving/GDP (%)	
	1968-1977	1978-1987	1988-1997	1977	1997
Algeria	..	..	..	35.7	34.5
Egypt	4.6	4.5	5.9	18.5	13.0
Iran	..	..	..	37.0	34.1
Jordan	..	..	2.9	-9.7	5.5
Kuwait	..	1.3	1.6	51.9	25.2
Lebanon	..	6.3	15.9	..	-16.7
Libya	3.1	1.8	1.5	50.0	..
Morocco	..	1.0	0.5	11.6	15.2
Oman	..	1.4	2.6	44.9	26.7
Saudi Arabia	..	..	..	54.9	34.6
Syria	..	..	..	13.0	19.0
Tunisia	..	4.1	2.5	22.1	24.2
Turkey	..	2.4	..	13.3	19.3
United Arab Emirates	..	..	..	69.9	27.4
Yemen	..	..	..	..	12.8
MENA	..	..	..	36.6	25.5
East Asia & Pacific	..	..	..	28.0	37.7
South Asia	..	..	..	18.1	18.2
Sub-Saharan Africa	..	..	..	23.4	16.7
Middle income	..	..	..	25.7	25.7

Source: World Bank, *World Development Indicators,* 2004.

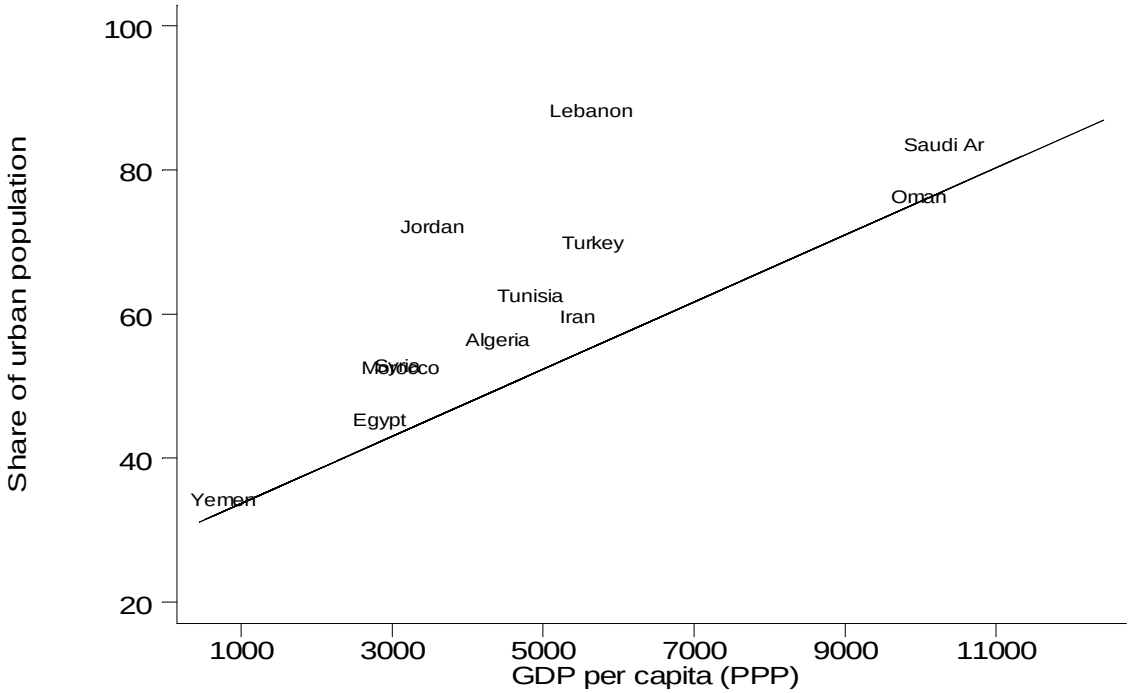


Figure 1: Urbanization in MENA countries

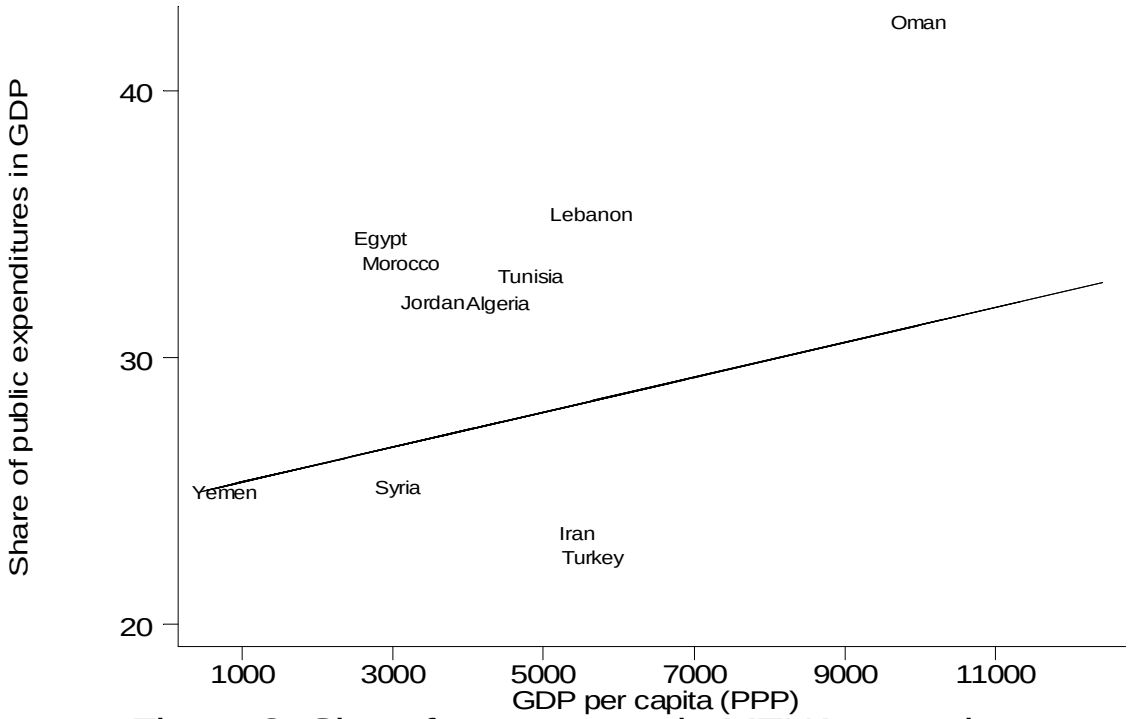


Figure 2: Size of government in MENA countries

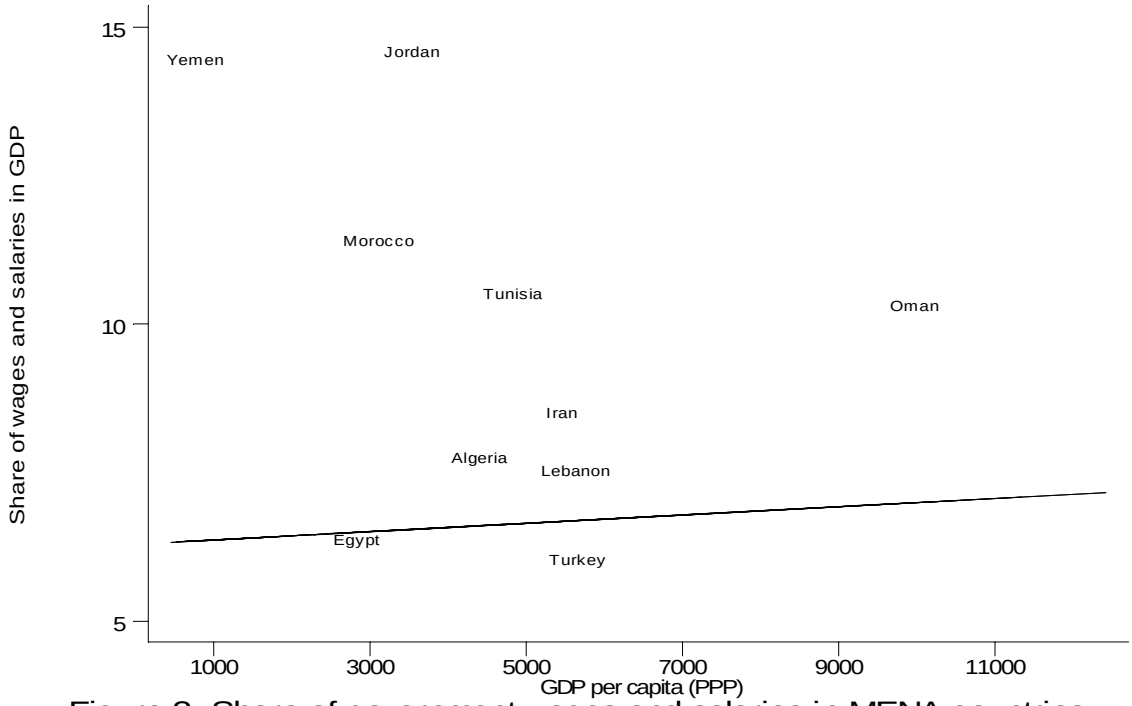


Figure 3: Share of government wages and salaries in MENA countries

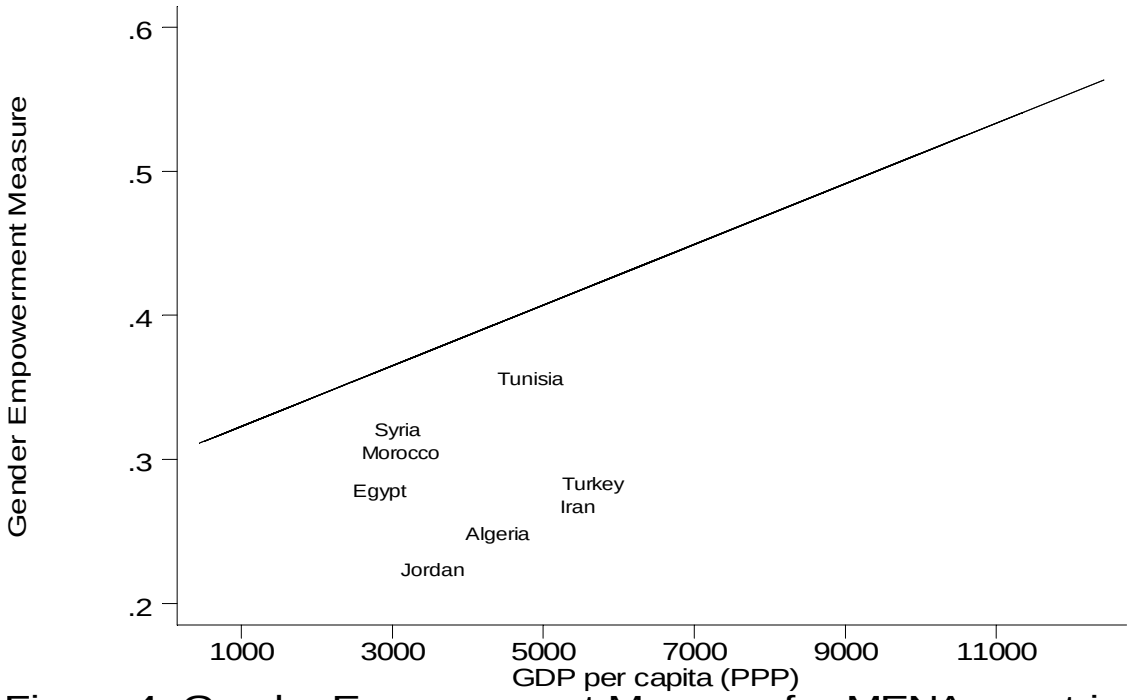


Figure 4: Gender Empowerment Measure for MENA countries

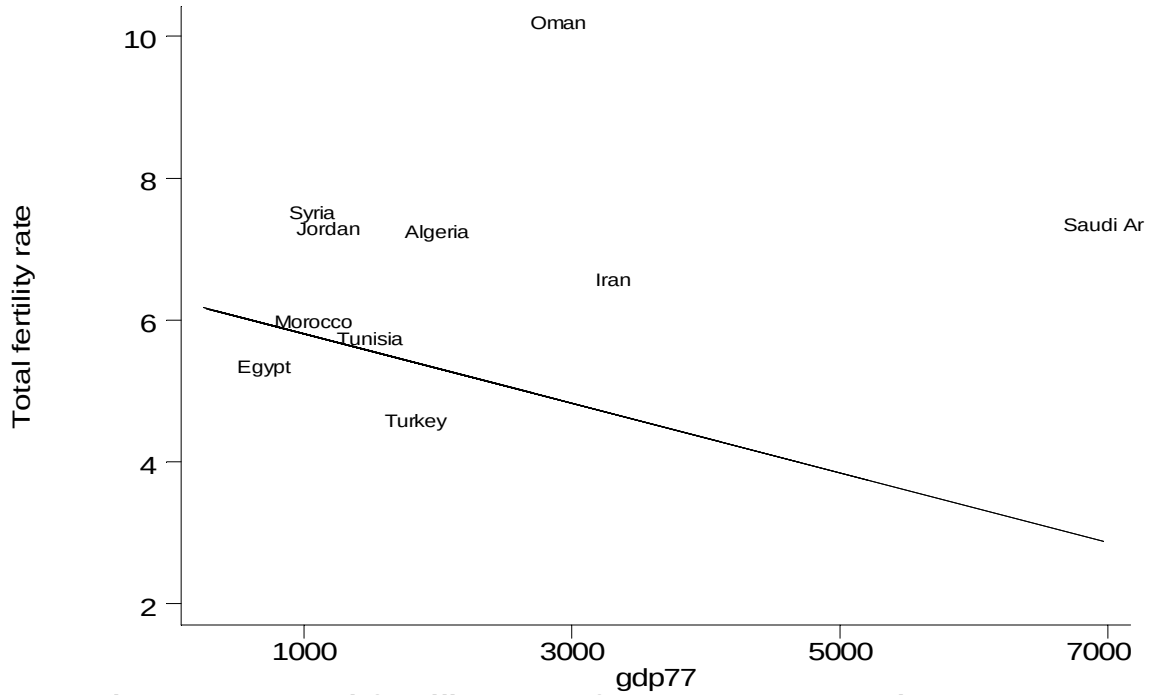


Figure 5: Total fertility rate for MENA countries, 1977

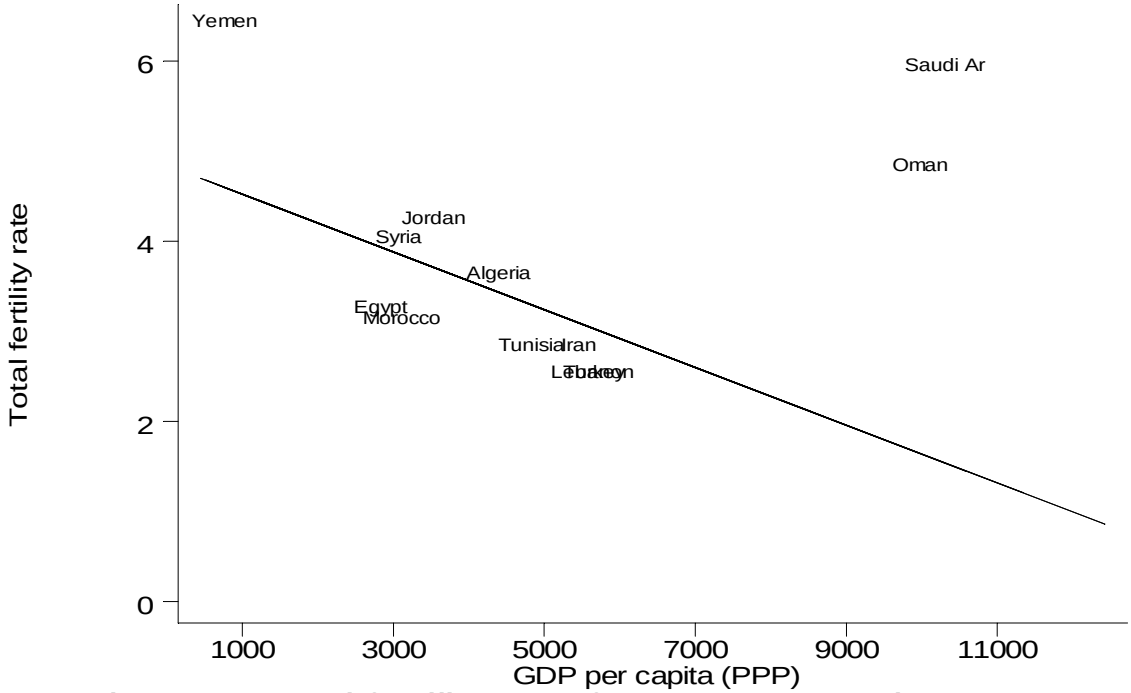
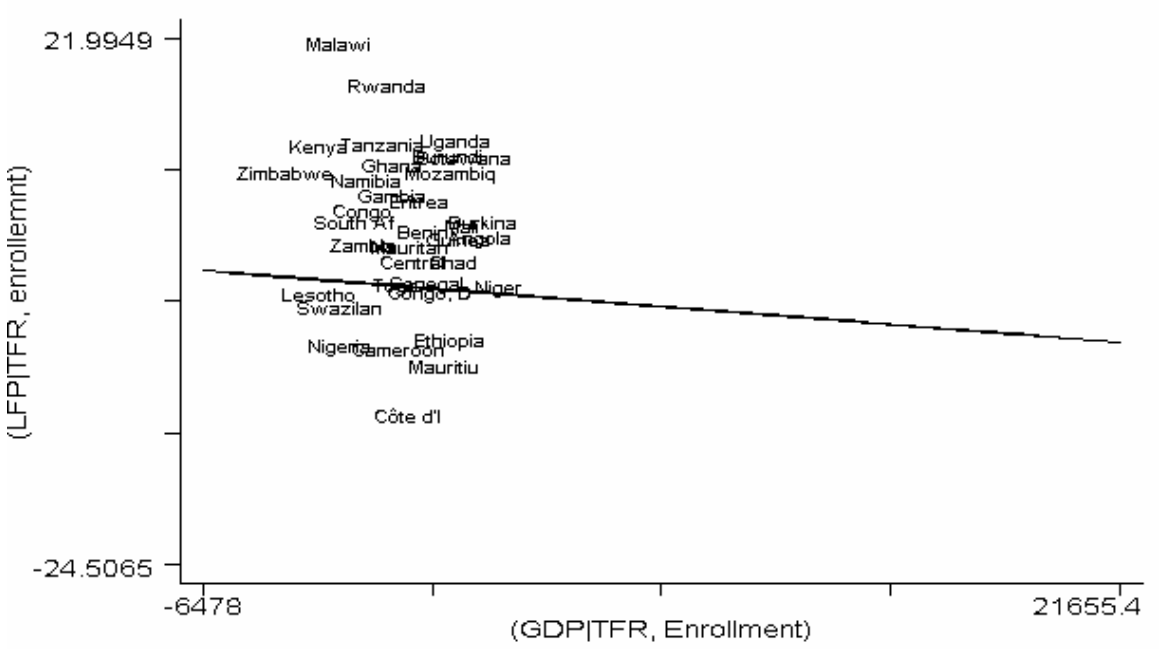


Figure 6: Total fertility rate for MENA countries, 1997

Figure 7A. Labor force participation of women, conditional on GDP per capita, total fertility, and female school enrollment in Sub-Saharan Africa



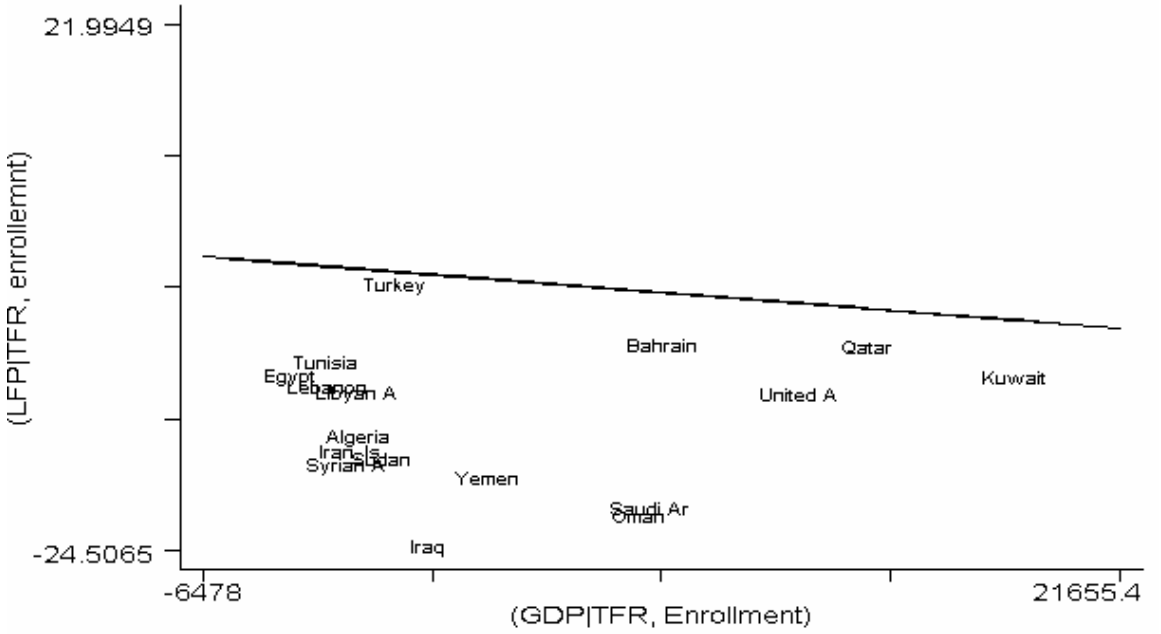


Figure 7B. Labor force participation of women, conditional on GDP per capita, total fertility, and female school enrollment in MENA