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Abstract: Morocco has a distinguished reputation for opening the economy, privatization and for increasing the role of the private sector in economic development. The nation has also had well known success in achieving a high degree of price stability through a fixed and credible exchange rate that was supported by sound monetary policy. All of these successes led to accelerated investment, both domestically and by foreigners. One highly important potential impediment to growth is that Morocco, however, appears to have neglected the global fiscal reform movement aimed at providing a growth oriented and fairer tax system that encourages private sector risk-taking and investment. Following some key reform in the early 1990s, tax rates have not been altered much since then and remain relatively high, especially for individuals at low and moderate income levels, in comparison with other countries. This paper examines the importance of tax policy for investment and whether there are opportunities there to accelerate productivity and growth through tax reform.

Morocco has extremely high taxes, especially the individual income tax, social insurance or payroll taxes and the value added tax. The individual income tax is the highest in the region and the highest marginal rate begins at a relatively low level of income. The corporate tax rate is among the highest in the region as well. At least one country in the region, Tunisia, has already taken the initiative to follow the global trend of cutting marginal tax rates in order to stimulate investment and growth. Morocco could usefully consider taking the lead in pursuing more competitive and lower, broader and less-discriminating taxation. Among the most critical steps would be cutting the top rate on individual income from 44 percent and extending the income level from where it begins to a larger multiple of median income. There are numerous loopholes that could be closed in order to finance such a change. Such steps would have the added benefits of lowering interest rates and boosting private capital formation and economic growth. But a broader and more aggressive agenda of tax reform is easily justified by regional or international comparisons.

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Is Tax Policy Retarding Growth in Morocco?

Morocco has a distinguished reputation for opening the economy, privatization and for increasing the role of the private sector in economic development. The nation has also had well known success in achieving a high degree of price stability through a fixed and credible exchange rate that supported, and was supported by, a sound monetary policy. Pressures from the International Monetary Fund and agreement that the Bank Al-Maghrib had achieved a reputation for sound anti-inflationary monetary policy led the country to begin to move toward a floating exchange rate, initially by broadening a peg to the U.S. dollar to a basket of currencies. All of these successes led to accelerated investment, both domestically and by foreigners. Morocco agreed on August 31, 2007 to a Compact with the U.S. Millennium Challenge Corporation under which the country will receive $697.5 million over five years for programs to stimulate growth and improve governance. Nonetheless, there seems to be a degree of puzzlement and anxiety over the slow growth of productivity and real income per capita which authorities regard as having had an insufficient response to the strong past actions.[1]

One highly important potential impediment to growth is that Morocco appears to have neglected the global fiscal reform movement aimed at providing a growth oriented and fairer tax system that encourages private sector risk-taking and investment. Following some key reform in the early 1990s, tax rates have not been altered much since then and remain relatively high, especially at low and moderate income levels, in comparison with other countries. For example, Gwartney and Lawson (2006) show that Morocco cut the top marginal rate from 87 percent as recently as 1985, to 46 percent in 1995 and 44 percent in 2000-2002. They report more aggressive and continuing cuts for a number of other countries, however. More importantly, the top rates apply at relatively low incomes in Morocco. For example, Egypt cut the maximum rate from 80 percent to 34 percent over the same period, according to Gwartney and Lawson. While the size of the reduction is only slightly larger, the end result is a much lower marginal tax rate on individual income. Thus the incentive to work, take risk, invest and grow income and employment is stifled for a large majority of the citizenry. This paper examines the importance of tax policy for investment and whether there are opportunities there to accelerate productivity and growth through tax reform.

I. Morocco's Growth Problem

Despite an excellent record for adopting trade, monetary, and privatization policies for promoting economic growth and openness, Morocco has not been very successful in boosting growth. Table 1 shows the annual average growth rates of real GDP for non-OECD Mediterranean countries and the largest emerging market economy on the African continent for five-year periods ending in 1985 to 2005. The table shows that Morocco

[1]The International Monetary Fund (2007a) has concluded that Morocco's growth accelerated to an 8.1 percent rate in 2006, but probably fell back to a 2.5 percent rate in 2007, yet has "moved to a new trajectory." This presumably reflects the notion that trend growth in economic capacity has accelerated somewhat.

has typically not been a growth leader. Morocco was the growth leader for only one period, the five years ending in 1990, when growth averaged a 4.4 percent rate. In the five years ending in 2000, Morocco ranked third. Despite acceleration in Moroccan growth in 2001-2005, Morocco slipped to fourth place. Four other Mediterranean countries (Egypt, Jordan, Syria and Tunisia) grew more rapidly over the full 25 year period. Countries that grew more slowly generally had episodes of political instability that dominated their economic performance.

Table 1
Trend growth rates for selected Mediterranean countries

	1985	1990	1995	2000	2005*	average
Algeria	5.2	0.6	0.2	3.1	4.9	2.8
Egypt	6.7	3.7	2.8	6.0	3.7	4.6
Jordan	4.5	-0.5	6.2	3.2	6.2	3.9
Lebanon	7.0	-17.1	12.2	2.3	4.0	1.7
Libya	-3.0	-4.6	1.3	2.1	4.9	0.1
Morocco	3.3	4.4	0.9	3.6	4.2	3.3
Syrian Arab Rep.	2.5	2.4	8.4	1.3	2.7	3.5
Tunisia	3.8	3.0	3.9	5.6	4.5	4.1
South Africa	1.4	1.7	0.9	2.8	3.9	2.1

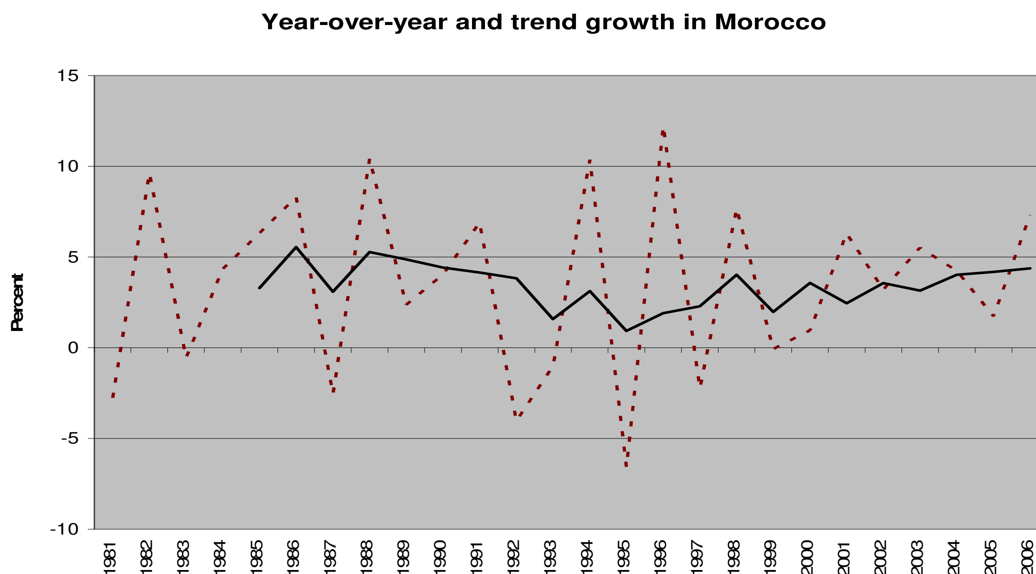
For 2005 based on IMF estimates for Lebanon, Morocco and Syria

Chart 1 shows Morocco's trend growth rate for five-year periods along with the year-over-year growth rates. The chart suggests some positive features that are not seen in Table 1. First, the trend growth rate appears to be accelerating after 1995, but by 2006 growth was still slower than it had been before 1990. Moreover, Egypt and Jordan have higher average growth rates over the 25 years in Table 1 and have higher growth rate in the latest five-year period shown in the table. While growth may be improving, it is not clear that Morocco will take the lead in the Mediterranean region soon.

Second, the annual growth rate appears to have become less volatile. Morocco has suffered serious recessions in the past because of drought and its impact on agricultural production, which is a large share of output. Whether droughts have become less frequent and/or less severe, or the economy has become less sensitive to them is unclear. At least for the former, the time span of reduced incidence is too short to generalize.[2]

[2]See Chafiki (2005) for a more detailed review of both of these trends. The International Monetary Fund (2007a, b) recently endorsed the conclusions that growth is accelerating and that increasing diversification away from agriculture has reduced the volatility of the economy.

Chart 1
Is Moroccan growth accelerating and becoming less volatile?



Morocco's growth problem is reinforced by its relatively low level of income. In 2005, Morocco had a gross domestic product (GDP) per capita of $1,713, sixth out of the seven countries listed in Table 1. Indeed, three of the countries in Table 1, Libya, Lebanon and South Africa, are upper-middle income countries according to the World Bank, meaning they have a gross national income (GNI) per capita above $3595, and less than $11,116. Table 2 shows GNI per capita and population for the countries shown in Table 1. Real GDP per capita measures are similar and the rankings are the same for either measure. Of the nine countries, Morocco has the seventh highest GNI per capita, above only Syria and Egypt. Its closest neighbors, Algeria and Tunisia have much higher incomes, 57 and 66 percent, respectively, in 2005. In terms of population, Algeria is closest in size to Morocco and these two countries are the largest, after Egypt, in the Mediterranean region.

Table 2
Morocco is far behind most of the region in income per capita
[Gross national income (GNI) per capita in U.S. dollars and population in 2005]

	Algeria	Egypt	Jordan	Lebanon	Libya	Morocco	Syria	Tunisia	South Africa
GNI per capita	$2730	$1260	$2460	$6320	$5530	$1740	$1380	$2880	$4770
Population	32.9m	74m	5.5m	3.6m	5.9m	30.2m	19m	10m	46.9m

Source: World Bank

Perhaps more striking in a global context is that China had exactly the same GNI per capita as Morocco in 2005. The implications of China's rapid growth rate is telling both for where Morocco was relative to China 25 years earlier, and more importantly, where Morocco will be relative to China in 25 years if growth does not accelerate.

II. Gross capital formation

One of the principal sources of economic growth is capital formation, including human capital, new plant and equipment and software and employment growth. We do not focus here on employment growth, but it is very sensitive to the taxation of labor income, as Gwartney and Lawson (2006) have indicated. Prescott (2004) and Rogerson (2007) provide evidence that the large difference in hours worked by the adult population in Europe and the United States is due to differences in individual income and payroll tax rates.[3] Rogerson's argument is especially relevant for Morocco because he shows that the major effect of high tax rates on labor income, besides reduced employment and hours, is a stunted service sector as workers stay home and provide their own services, which would be relatively more expensive in the marketplace in a high-tax country.

Growth in capital per worker is, along with technical change and innovation, the main source of growth in economic theory and in evidence on growth. Human capital has come be regarded as an even more important form of capital formation for growth. Unfortunately, data on capital formation is difficult to obtain. In particular, we do not have data on human capital in Mediterranean countries.

In addition, the distinction between public and private capital formation is not widely made, even though private capital formation is directly motivated by concerns for efficiency and wealth maximization in ways that public capital formation is not. Nonetheless, gross capital formation data are used here because of availability.

Table 3
Gross capital formation as a percent of GDP
(Five-year average data for period ending in year shown)

	1985	1990	1995	2000	2005*	Average
Algeria	33.3%	28.7%	26.5%	23.7%	23.5%	27.1%
Egypt	31.4	30.5	18.1	19.9	17.2	23.4
Jordan	31.8	21.5	29.3	24.2	20.9	25.6
Libya	26.1	15.9	13.2	11.8	11.0	15.6
Morocco	24.8	21.7	21.9	22.0	23.8	22.8
Syria	23.9	17.5	24.9	20.1	21.8	21.6
Tunisia	30.4	22.0	26.1	24.8	24.1	25.5
S. Africa	25.6	19.3	15.7	16.1	15.8	18.5

*Jordan data for 2001-04

Table 3 shows gross capital formation as a percent of GDP for all of the Mediterranean countries except Lebanon. The IMF does not publish capital formation for Lebanon. Five-year averages are used, as in Table 1, to smooth the effects of the business cycle and the same periods are used, the periods ending in 1985 to 2005. In Jordan, 2005 data is not reported by the IMF so the 2001-04 average is used.

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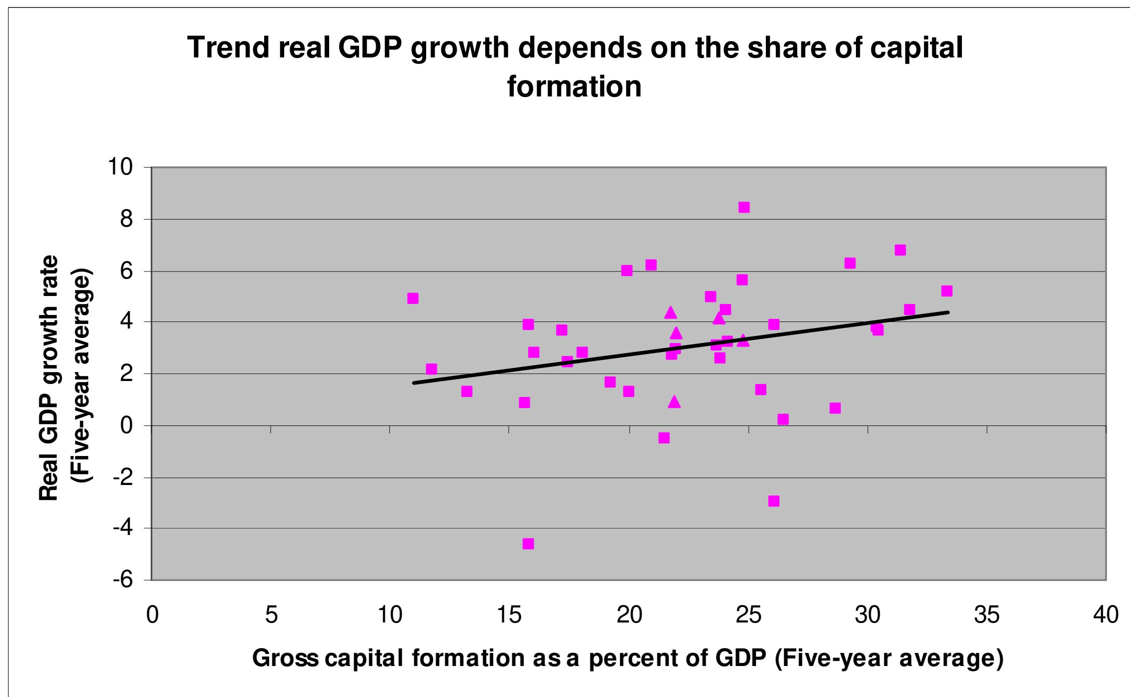
[3] Also see Prescott (2002). See also McCurdy, Green and Paasch (1990) and Knieser and Ziliak (1998) for discussions of the effect of taxation on labor supply and of major tax rate reforms on labor supply.

Morocco ranks second in capital formation in the latest period, just behind Tunisia, but typically it ranks lower. In the 2000 period, Morocco ranked third behind Tunisia and Jordan. Earlier the country ranked even lower; in the earliest period shown, it was sixth ahead of only Syria. Unfortunately the relative improvement in the last ten years shown is due mainly to a decline in the intensity of capital formation elsewhere. In general, the share of capital formation is lower in the other countries in the last two periods than their average for the full period. In Morocco, capital formation in the last ten years is about the same as its average for the full period. For the full period, Morocco's average share is lower than all the countries except Libya, Syria and South Africa.

The data in Tables 1 and 3 can be used to show the importance of gross capital formation for economic growth. There is a strong relationship between the share of capital formation in GDP and trend real GDP growth. Chart 2 shows the share of capital formation for five-year periods along with the five-year annualized real GDP growth rates for each of the countries.

Chart 2
A higher share of capital formation in GDP raises trend economic growth



The trend line shows the positive relationship and the correlation coefficient for the two series is 0.27, which is the equivalent of a t-statistic of about 2.47. A simple linear regression of growth on the share of capital formation indicates that each one percentage point rise in the share of capital formation raises trend growth by 0.122 percent. Thus a rise of one percentage point in trend growth requires an increase in the capital formation share of 8.2 percent.

Morocco data in Chart 2 are indicated by points shown as "triangles," while others are "squares." The Morocco data are clustered near the middle of the chart for capital formation because there is little variation in the share of capital formation. Except for the early 1990s, when real GDP growth was depressed by repeated droughts, and in the latest period when growth lays exactly on the trend line, Moroccan growth was generally above the trend line suggesting that growth was more favorable than capital formation alone might suggest. Morocco's relatively low capital formation share results in its relatively poor growth performance. If growth is accelerating, as Chart 1 suggests, the rise in the capital formation share could be responsible. China, the world's leading emerging market with double digit growth recently, had a gross capital formation share of 43.5 percent in 2005.

Foreign direct investment (FDI) is a key indicator of openness and the attractiveness of the investment climate in a country and this is certainly the case in Morocco.[4] In 2005, FDI was about $1.6 billion, or over 3 percent of GDP. This compares favorably with FDI in China, which was 3.6 percent of GDP in the same year. According to the United Nations' index of foreign direct investment performance for the eight Med countries, Morocco ranked second behind Lebanon in 2003, third in 2004 behind Lebanon and Jordan, and fifth in 2005. Improving the equality of tax treatment of foreigners and domestic investors, liberalizing the capital account for capital outflows and lowering the taxation on domestic and foreign investors for income in Morocco would substantially improve the domestic investment climate, lower the cost of capital and boost the financing and quantity of investment. Alfaro, Chandra, Kalemi-Ozcan and Sayek (2006) argue that the mixed effects of FDI on productivity growth depend on the development of the financial sector. They argue that financially constrained entrepreneurs are more likely to start new firms where there is more FDI financing. Countries with a more developed financial sector grow twice as fast as those with weaker financial sectors, and countries with more developed financial sectors, or more human capital, have a more positive impact of FDI on productivity in their results. The effect presumably works both ways, as countries with more FDI are more likely to develop stronger financial systems to manage international capital and trade payment flows.

Improving openness of investment flows in both directions could also promote financial market integration in the region. The potential for integration of the Moroccan economy and the Maghreb has been noted by Tahari and others (2007). They explain the importance of financial market integration for the Maghreb, the current obstacles to integration and provide some insightful steps that would move the countries toward closer integration. They do not discuss the importance of tax reform for expanding the capital market and enhancing its efficiency, however, nor do they consider the potential for a financial center serving the broader MENA region. Increasing the attractiveness of the Moroccan economy for foreign investment and as a financial center for the region would provide substantial growth opportunities.

[4]Xu and Wang (2007) show that FDI has had a positive and significant effect on domestic investment in China since the 1990s, but they note that the evidence for other countries on such a positive effect is not uniform.

An expanded financial sector would boost the role of financial intermediation in Morocco. Abbas and Christiansen (2007) provide causality evidence that growth in domestic debt boosts growth in 93 low-income and emerging markets for 1975-2004, but that beyond some threshold level this effect reverses. Factors that boost the growth effect include the marketability of the debt, positive real interest rates and the extent to which it is held outside the banking system. Tahari et al. (2007) show that per capita GDP (in PPP terms) was boosted by higher shares of private credit in GDP and that this share lowered bank lending rates. Lowering individual income taxes or even bank reserve requirements would lower borrowing costs and boost credit market activity, investment and growth, although they do not explicitly address these approaches.

III. Tax Policy in Morocco and other Mediterranean countries

Taxes are central to directing economic activity, in particular to impeding it. Tax reformers, therefore, are prone to emphasize the importance of cutting tax rates and making up for revenue losses by broadening tax bases, especially by removing tax breaks, exemptions or credits that lead to inefficiencies or losses in the availability of resources. Thus, tax policy has a critical role to play in promoting economic development. In an emerging market context, this is especially important because most of the effort is to increase incentives to work, save and invest in a country. Often, there is almost a single-minded emphasis on attracting foreign business, entrepreneurs and capital. This is ironic because domestic residents are best able to know and respond to economic incentives and to assess new opportunities for return and risk. One of the best recent examples of the response of capital formation and economic growth to new tax incentives is the reallocation and growth of global capital due to U.S. tax cuts in the early 1980s and the subsequent reversal of those incentives n 1986.[5] The recent experience in the United States in response to individual tax changes is another example. Investors do respond to changes in the taxation of capital income, both at the individual tax level and at the corporate income level. The prospects for enhanced growth through tax reform are a largely unexplored policy, especially in the Mediterranean countries.

Taxes are only one of many barriers to investment in productive activities and growth. Before focusing on taxes, some perspective on other barriers can be found in the World Bank's project on the ease of doing business in various countries. The World Bank breaks this issue down into ten criteria: starting a business, dealing with licenses, employing workers, registering property, getting credit, protecting investors, paying taxes, trading across borders, enforcing contracts and closing a business. The 2008 overall ranking, based on 2007 data, is given in the first column of Table 4. Libya has not been covered yet in this project. Morocco ranks 129 out of 178 countries lower than all of the Med countries except Syria and lower than South Africa (35). Morocco's overall rank was 115 out of 175 in 2007. Both Egypt and Algeria moved up from lower than Morocco in the 2007 ranking to higher in the 2008 ranking. Table 4 also shows rankings for four of the key factors that affect capital formation and that are components of the ten factors making up the overall ranking.

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[5] See Tatom (1989) and (1995) for an elaboration of the theory and for evidence on how tax changes affect incentives to invest both within a country and in the rest of the world.

Table 4
Overall ease of doing business rank and selected components

	Ease of doing business	Getting credit	Protecting investors	Paying taxes	Enforcing contracts
Algeria	125	115*	64	**157**	117
Egypt	126	115*	83*	**150**	145
Jordan	80	84	107	**19**	128
Lebanon	85	48	83*	**33**	121
Morocco	129	135	158	**132**	114
Syria	137	158	107	**98**	171
Tunisia	88	97	147	**148**	80
South Africa	35	26	9	**61**	85

*tie

On taxes, the World Bank index considers the tax rate on profits, the number of tax payments, and the time required to pay taxes, as well as labor taxes and contributions, other taxes and total tax payments as a percent of profits, in assessing the overall index for paying taxes. Overall, Morocco ranks in the middle of their regional partners, ahead of Algeria, Egypt, and Tunisia, but behind Jordan, Lebanon, and Syria and South Africa. Morocco scores best, third, on labor and other taxes, and worst, last, on the profit tax rate (not shown). On the total tax paid indicator, Morocco ranks fifth of the seven countries. It is very high in several countries because it includes all the taxes paid by business, not simply the corporate tax rate. It is higher in Algeria (72.6%) and Tunisia (61%) than in Morocco (53.1%), but it is much lower in the other Med countries. Because of a recent cut in Tunisia's corporate tax rate (see footnote 6 below), Morocco may drop below even Tunisia in future World Bank reports, despite recent tax reform moves in Morocco.

Morocco's corporate tax rate is not 53.1 percent; the top corporate rate in 2007 is 35 percent, but there are many other taxes that businesses pay that make the average tax share of corporate income much higher. The difference reflects the numerous other taxes that make business taxation so onerous and time consuming. For example, there are registration fees for land purchases (5%, lower for building plots purchased by individuals), and on corporate capital and capital increases (0.5%), notary taxes on incorporation or property exchanges, a separate urban tax, municipal taxes on rental value of premises (10%), license taxes, VAT taxes, and payroll taxes. Part of the difficulty of assessing the effect of taxation on the incentive to invest, especially in emerging economies is the multiplicity of taxes, the time spent computing and paying them and the exceptions to them. Many of these taxes are merely nuisance taxes that encourage corruption by permitting multiple exceptions and discretion on the part of tax assessors and collectors.

Table 5 shows the ten components that make up the World Bank ease of doing business index, as well as Morocco's rank in 2008 among the seven Med countries. Morocco

scores relatively highly compared to the region in the ease of starting a business, enforcing contracts, and ease of closing a business. The country scores worst and last on the ease of employing people (includes the cost of hiring and difficulty of hiring and firing and the rigidity of hours), protecting investors and the ease of trading across borders. The ease of getting credit is sixth among seven countries.

Table 5
Ten Components of the World Bank Ease of Doing Business Index (Morocco Rank)

Component	Regional rank
Ease of starting a business	1
Ease of dealing with licenses	3
Ease of employing workers	7
Ease of registering property	5
Ease of getting credit	6
Protecting investors	7
Ease of paying taxes	4
Ease of trading across borders	7
Ease of enforcing contracts	2
Ease of closing a business	3

Table 6 provides the maximum marginal corporate and individual tax rates for the Mediterranean countries, according to the Heritage Foundation-*Wall Street Journal* project on the Index of Economic Freedom, Kane, Holmes and O'Grady (2007). The marginal tax rate is the tax rate applied to an additional unit of income. The three measures in the table are the key ingredients in achieving the fiscal score, one of 10 scores that make up the overall index of economic freedom. In the overall ranking, given in parentheses, Jordan (53), Tunisia (69) and Lebanon (77) are at the top of the region, although South Africa (52) edges out Tunisia when the African continent is considered. These four countries are in the "moderately free" range, above the rest, which, with the exception of Libya, are in the "mostly unfree" range. Libya is in the bottom range of "repressed" countries. Morocco (96) ranks well above the bottom four countries, which are, in descending order, Egypt (127), Algeria (134), Syria (142) and Libya (155).

The fiscal scores of all of these countries are above their overall scores, suggesting that fiscal systems are relatively favorable to economic freedom. Morocco has the lowest fiscal score of all the countries shown, reflecting the relatively high marginal tax rates and tax burden.

Table 6
Maximum tax rates in Mediterranean and African countries

	Income tax rate	Corporate income tax	Total tax revenue (percent of GDP)
Algeria	40%	30%	10.8%
Egypt	20	20	12.8
Jordan	25	25	20.8
Lebanon	10	15	16.9
Libya	15	40	2.4
Morocco	44	35	22.7
Syria	20	35	11.6
Tunisia	35	35	20.7
South Africa	40	29	24.3

Source: Kane, Holmes and O'Grady (2007)

Morocco has the second highest marginal tax rate on corporate income, behind Libya, but tied with Syria and Tunisia.[6] In fall 2007, after this paper was first presented, the Moroccan government announced a cut in the corporate tax rate to 30 percent, matching Tunisia's 2007 cut, but still higher than all the other Med countries except Libya and Syria. More importantly, Morocco has the highest individual income tax among the countries, at 44 percent. This tax rate kicks in at a mere Moroccan dirham 60,000, the equivalent of a little over US$7000, a figure that is below the poverty level in the United States for even a single person (US$10,210). This indicator may be as important as the level of the tax rate itself in retarding economic activity and growth. The overall tax burden as measured by the percent of GDP taken by taxes is also the highest in the region, but South Africa has a slightly higher level. South Africa is certainly not a model for the Mediterranean region as it has a relatively high maximum marginal tax rate for individuals, tied with Algeria at 40 percent, but higher than all other countries besides Morocco. Even the corporate tax rate at 29 percent exceeds that in three of the more prosperous Mediterranean countries. Its overall fiscal score is lower than any other country in the region except for Morocco.

Even China is a poor role model in the tax policy area. According to Kane, Holmes and O'Grady, the individual tax rate in China is 45 percent, the top corporate rate is 33 percent and the overall tax take is 15.1 percent of GDP. These tax rates are comparable to Morocco's, but the tax take is lower. Of course in China, a greater proportion of enterprises are state-owned, which distorts the tax measure as an indicator of private enterprise. In a recent move to unify taxation of foreign and domestic firms, China has lowered the corporate tax rate to 25 percent; see Mitchell (June 2007b).

There are a couple of other taxes that are quantitatively important and can affect investment and growth. The first is the payroll tax. These taxes on labor employment discourage employment. They are generally tied to social welfare programs such as

[6] Tunisia recently dropped its top rate for the corporate income tax to 30 percent, according to the IMF's recent Article IV staff report on Tunisia (2007c).

retirement income provision or disability income. Table 7 shows estimates of payroll tax rates and value-added or general sales tax rates for the countries in 2007, according to PricewaterhouseCoopers and the World Bank.

Table 7
Morocco has relatively high sales and payroll tax rates

	Value added or general sales tax rate	Payroll tax rate
Algeria	17%	26%
Egypt	10	24-26
Jordan	16	11
Lebanon	10	21.5
Morocco	20	17.7
Syria	NA	14/3
Tunisia	18	16

Source: PricewaterhouseCoopers and World Bank

Morocco has the highest value added (VAT) or general sales tax in the region, in fact, it is among the highest in the world. The highest rate in the Organization for Economic Cooperation and Development (OECD) is 25 percent in Denmark, Norway and Sweden. Iceland has a 24.5 percent rate and Finland and Poland have a 22 percent rate. Belgium, Ireland and Portugal (in the Azores and Madeira the maximum VAT tax is 15%) have a 21 percent rate. These nine countries probably have the highest rates in the world and the only ones higher than in Morocco.[7]

Morocco's high tax rates and poor placement among its regional peers have not been the result of tax increases. The high level of tax rates in Table 6 is the result of complacency in the face of a regional and global tax reform. The *Wall Street Journal*-Heritage Foundation project on economic freedom began in 1995. At that time, Morocco was second in the region to Tunisia and their tax score was 73.7, while Tunisia's was 75.7. [8] South Africa's was also slightly better than Morocco's at 75.7. The overall average for the eight Med countries was 64.2. Other countries significantly improved their tax systems, but Morocco's score changed little so that in 2007 it was 75.5. Meanwhile the average for the eight countries rose to 86.7, well above Morocco's score. Tunisia's score rose to 80.8, but it too was far below the scores in Lebanon (95.9), Egypt (93.6), Jordan (88.8), Syria (88.3), Libya (87.8) or Algeria (82.6). Complacency in tax reform in both Morocco and Tunisia allowed other Med countries to surpass them in the competition to lower tax rates and attract entrepreneurial activity and investment. South Africa, a leader in tax policy in 1995, showed more improvement, but was behind all eight Med countries except Morocco.

[7] Tunisia had a VAT tax of 29 percent until recently; see IMF (2007c).
[8] The fiscal score is based on the average of three scores based, in turn, on the marginal tax rates and tax share shown in Table 5. Each index is 100 minus the square of the relevant tax measure. See *Wall Street Journal*-Heritage Foundation (2007).

The high taxes in the Morocco also stand out most in comparison to global trends. Fundamental tax reform has been very rapid in Europe and in the rest of the world, leaving the United States in the dust as it considers booting taxes with the end of the Bush tax rate cuts. According to the *Wall Street Journal* (July 13, 2007), there is a global trend toward cutting corporate and individual tax rates. They mention proposed cuts in corporate tax rates in Vietnam, Singapore, Northern Ireland, Germany and France, all of whom have lower corporate tax rates than the United States or Morocco. Mitchell (June 2007b) mentions policy discussions to cut the corporate rate in these countries and in New Zealand, Australia, Canada and Russia. The race to cut tax rates, which began in the United States in 1981, is continuing apace in the rest of the world. Sweden and Norway have cut their rate to 28 percent from 60 and 50 percent, respectively, according to Mitchell. The average in the European Union is now 26 percent and headed down, while for the average for Europe is even lower. Mitchell (July 2007a) shows that the average rate for Europe is 24.2 percent in 2007, down from 38 percent as recently as 1996.

Hubbard (2007) explains that the corporate income tax is inefficient. He also cites the evidence in Hassett and Mathur (2006) that a one percent rise in the corporate income tax rate reduces the manufacturing wage rate by 0.8 percent. By raising the cost of capital for firms, a higher corporate tax rate reduces the incentive to invest, reducing investment and the quantity and quality of capital resources that workers have available and lowering productivity and therefore wages. The wage reduction applies to all workers, not just the manufacturing workers studied by Hassett and Mathur. Even more troubling is that the corporate tax taxes the income from capital over and above the taxation of this income at the individual level. Many countries are addressing this by lowering the taxation of dividends and capital gains, but double taxation remains the rule.[9] Modern tax analysis shows that capital resources are the most elastic in supply in the long run so that taxing capital at all is extremely inefficient and lowers the available capital stock, an essential ingredient in productivity and growth, the most of any tax. The taxation of capital income raises the cost of capital for business and thereby cuts investment and growth. A recent study by Gilchrist and Zakrajsek (2007) shows that each one percent rise in the cost of capital for business reduces investment by 50 to 75 basis points and, in the long run, reduces the stock of capital by 1 percent.

As Prescott (2004) and Rogerson (2007) have emphasized, high marginal tax rates on individual income reduce labor effort. In Morocco, labor force participation is only about 45 percent of the adult population and about 10 percent of those seeking work are unemployed. This means that only about 40 percent of the adult population works, not surprising given the level of the marginal tax rate. One of the easiest ways to boost employment would be to lower the marginal tax rate on individual income; increasing employment has a much larger impact on output than an equal percentage point rise in the nation's capital stock.

[9] Owens (2005) demonstrates the global trend in reducing tax rates and broadening the tax base by simplification of taxes and eliminating exemptions and other selective and discriminatory tax breaks. See also Mitchell (2007a, b).

In the World Bank Doing Business project, in consultation with PricewaterhouseCoopers (2007), researchers find that the greater the ease of paying taxes, the better are the educational and other infrastructure systems, the smaller the informal sector and the greater is investment as a share of GDP. Moreover, they find that among poorer countries, there is a Laffer curve, along the backside of which raising tax rates actually lowers revenue as a share of GDP.[10] The study offers the example of Russia where the corporate tax rate was reduced from 35 percent in 2001, the same rate as today in Morocco and in the United States, to 24 percent. Corporate tax receipts subsequently rose by an average annual rate of 14 percent per year for the first three years.

Some 19 countries now have a flat rate tax system characterized by a relatively low maximum marginal tax rate. Wikipedia lists 19 countries with a flat tax. The flat tax rate in these countries is also relatively low, a hallmark of a flat tax. Russia is perhaps the largest economy with a flat tax, and the rate there is 13 percent. Among the leaders in Eastern Europe in moving to a flat tax are the Baltic states of Estonia (22%), Latvia (27%) and Lithuania (27%).[11]

Gwartney and Lawson (2006) estimate that a 10 percent cut in the top marginal tax rate will boost long-term growth by 0.3 percentage points. This is not a massive increase, but it makes a huge difference over time in the level of per capita income. Barro (1996) found the same effect from cutting another more implicit tax, inflation. He finds that a 10 percentage point cut in the tax rate will boost the long-term economic growth rate by 0.3 percent. Since inflation is already low in Morocco, gains from reducing inflation have been nearly exhausted. By the former estimate, however, another half point boost in growth could be achieved by cutting the maximum marginal tax rate for individuals by about 15 percentage points, or to about 30 percent.

Some steps in tax reform may be simpler than others. The large numbers of exceptions, exemptions and credits, or in many cases, differential tax rates for different activities, could be eliminated, providing a revenue bonanza that could be offset by overall tax rate reduction. A second prospect is to explore for "Laffer-Curve" possibilities where rate reduction could actually boost revenue, offering further opportunities for tax rate reduction. Such opportunities are usually found in selective taxes on particular goods or classes of goods or on particular sources of income that are taxed separately or differentially. Other opportunities for boosting economic growth through tax rate reduction may require short-term trade-offs of higher deficits temporarily. This is more difficult in Morocco, where there is a long history of chronic and sizeable budget deficits.

A final consideration that is important is the mix of tax rate reductions. Development specialists and investment banks are prone to focus on corporate tax rate cuts as offering the most visible incentives to attract new business ventures from domestic and foreign investors. There is strong merit in this view, but investors and workers also respond to

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[10] See the *Wall Street Journal* (July 13, 2007) for a graph showing the corporate Laffer curve, which peaks in Norway at corporate tax rate of 28 percent, but the curve for poorer countries likely peaks at a much lower rate.

[11] See Wikipedia (http://en.wikipedia.org/wiki/Flat_tax#Countries_that_have_flat_tax_systems).

individual tax rates, and these are far higher than in other nations in the region and much of the rest of the world. Moreover, there is a difference in the effects of tax rates on the general level of interest rates. Higher corporate tax rates tend to raise the cost of capital to firms and reduce investment. This, in turn, reduces firms' demands for funds in equity and credit markets, with the latter having the effect of reducing market interest rates. Conversely, lowering corporate tax rates tends to raise interest rates. Individual tax rates on income from capital have the opposite effect on interest rates. Individuals' decisions to save and invest depend on the after-tax rate of return they can earn, and a cut in the individual tax rate will boost supplies of funds to equity and credit markets. In credit markets, such a boost in supply will lower the interest rates. Thus the cost of capital is lowered and investment stimulated regardless of whether the individual or the corporate tax rate is lowered. But the effect on individual decisions to purchase houses or consumer durables or for small firms that face lower tax rates, or non-profit ventures, to expand their investment and economic activities is greater with a cut in the individual income tax rate.[12] Such a low interest rate strategy could also be more favorable to the development of the domestic financial system, especially if coupled with a competition enhancing opening of capital markets to foreign investment opportunities.

IV. Conclusion

Morocco has a well-deserved reputation as a country that is modernizing and expanding its private sector to boost economic growth. While there is some concern that these efforts are not being adequately reflected in productivity growth and overall development, it does appear that the growth trend is accelerating, even if it is slower than might be desired. Capital formation is not unusually low, but it is not especially rapid either. Faster economic growth and development could be achieved by policies that penalize investment less heavily.

Morocco has extremely high taxes that fall on relatively low income classes, especially the individual income tax, social insurance or payroll taxes and the value added tax. The individual income tax is the highest in the region and the highest marginal rate begins at a relatively low level of income. The corporate tax rate is among the highest in the region as well. At least one country in the region, Tunisia, has already taken the initiative to follow the global trend of cutting marginal tax rates in order to stimulate investment and growth. Morocco could usefully consider attempting to compete by taking the lead in pursuing more competitive and lower, broader and less-discriminating taxation. Among the most critical steps would be cutting the top rate on individual income from 44 percent and extending the income level where it phases in to a larger multiple of median income. There are numerous loopholes that could be closed in order to finance such a change. Such a step would have the added incentive of lowering interest rates and boosting private capital formation and economic growth. But a broader and more aggressive agenda of tax reform is easily justified by regional or international comparisons.

[12] See Mundell (1971) or, for a specific application, Tatom (1989) and (1995).

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