

# Inequality in Morocco: An International Perspective

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## Summary

Income inequality is high in Morocco. In 2013, the share of national income<sup>1</sup> of the richest 10% in Morocco stood at nearly 32%, 12 times higher than the share of national income of the poorest 10% of the population. High inequality can adversely affect long-term growth as it tends to be associated with underutilization of human potential. This paper argues that, drawing on international experience, there is much more that Morocco's government can do to reduce inequality while at the same time enhancing growth and – possibly – doing so in a manner that is budget-neutral or even budget-positive.

## Introduction

Income inequality is high in Morocco. In 2013, the share of national income<sup>2</sup> of the richest 10% in Morocco stood at nearly 32%, 12 times higher than the share of national income of the poorest 10% of the population.

Inequality is a natural and even desirable aspect of market economy, especially one that is amid a rapid transformation. However, recent empirical work suggests that, beyond a certain threshold, high levels of inequality are not only associated with deprivation at the bottom of

the distribution and reduced social cohesion but can also have a negative impact on economic growth (IMF,2017). This research implies that action to reduce inequality, if carried out appropriately, can support growth even at low levels of development.

High inequality can also be associated with crime and political instability, depressing investment. Perhaps most important, high inequality leads to the underutilization of human capital, since Inequality of outcomes is nearly always associated with inequality of access to health, education, social networks, and jobs. Even though it turns out that inequality in Morocco is not out of line with its level of development, underutilization of human capital is certainly a feature of Morocco – denying many individuals the possibility of living up to their full potential.

1. It should be noted that given the unavailability of income data, the High Commission for Planning of Morocco uses household expenditures as a proxy for income.

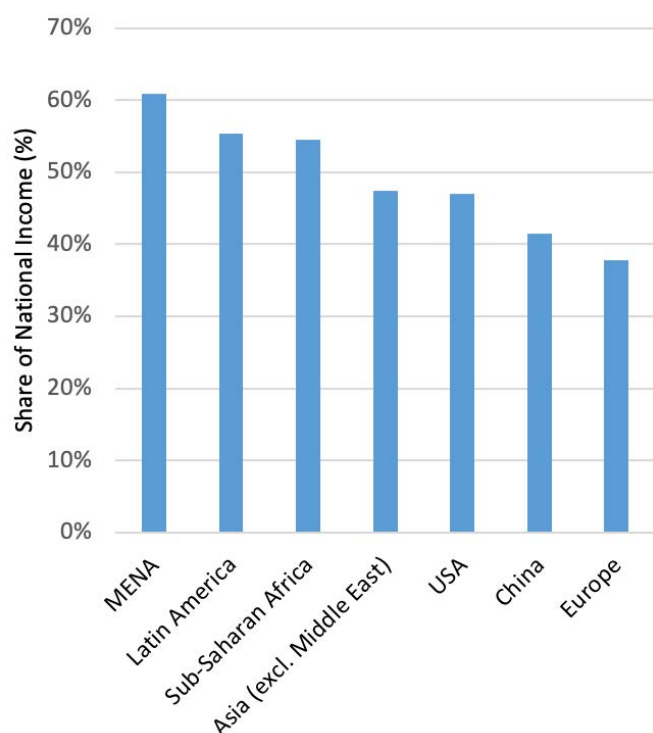
2. It should be noted that given the unavailability of income data, the High Commission for Planning of Morocco uses household expenditures as a proxy for income.

Unfortunately, analysis of the drivers of inequality in Morocco is hampered by the unavailability of data from standard sources, such as tax return statistics, and from household surveys. The most recent household survey was conducted in 2014, but the data publicly available from the survey is limited to household expenditure by decile, without the wealth of detail (by age, gender, region, level of education, etc.) needed for proper evaluation of the drivers and nature of inequality. Within the bounds set by these serious limitations, this brief examines the state of Morocco's unequal distribution of income, education, job opportunities, etc. in comparison to global averages and more specifically to a sample of countries.

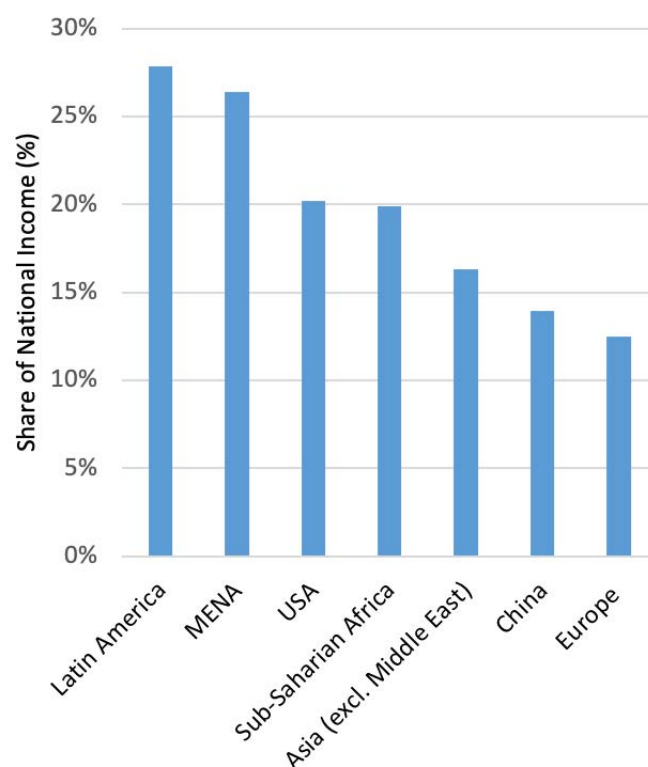
## Global Inequality: Trends of Relevance to Morocco

Inequality in developing countries like Morocco is usually higher than in advanced countries, whether measured as the share in total income of the top 1% or top 10% (chart 1 & 2).

**Chart 1 : Top 10 % national income share across world region, 2016**



**Chart 2 : Top 1 % national income share across world region, 2016**



Source: World inequality database, 2019

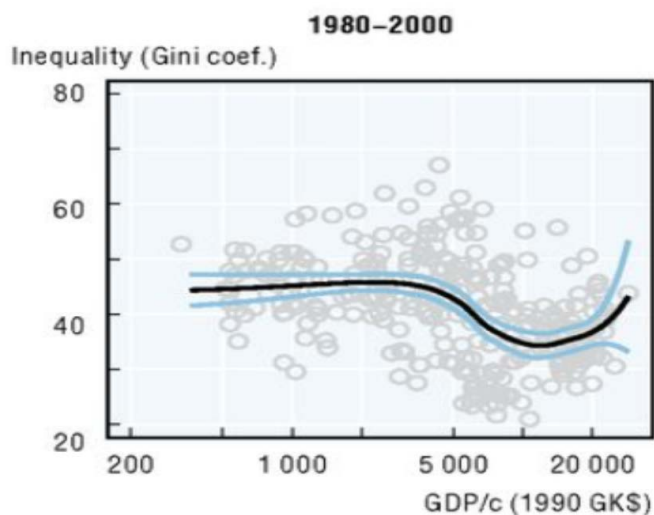
This is in line with the Kuznets curve (Kuznets, 1955), which describes how, during the early stages of a country's economic development (the industrialization phase), economic growth is accompanied by an increasing levels of inequality, needed to attract workers from the countryside to the cities and factories, a process ongoing in Morocco. According to Kuznets, when the country reaches a high level of development, inequality begins to decrease, partly because of the country's capacity to increase social spending, adopt progressive taxation, etc.

Recent empirical evidence on the cross-country correlation between per capita income and inequality, measured by the GINI index<sup>3</sup>, over 1980-2000 shows that there is a slight positive correlation until an income level of around 5000 \$ (1990 international dollars), not far from Morocco lies today, and a sharp decline at higher income levels. However, contrary to Kuznets' theory,

3. Gini index measures the extent to which the distribution of income (or, in some cases, consumption expenditure) among individuals or households within an economy deviates from a perfectly equal distribution. A Gini index of 0 represents perfect equality, while an index of 100 implies perfect inequality. (<https://datacatalog.worldbank.org/gini-index-world-bank-estimate-4>)

income inequality rises again among the wealthiest nations of the world (Moatsos et al., 2014).

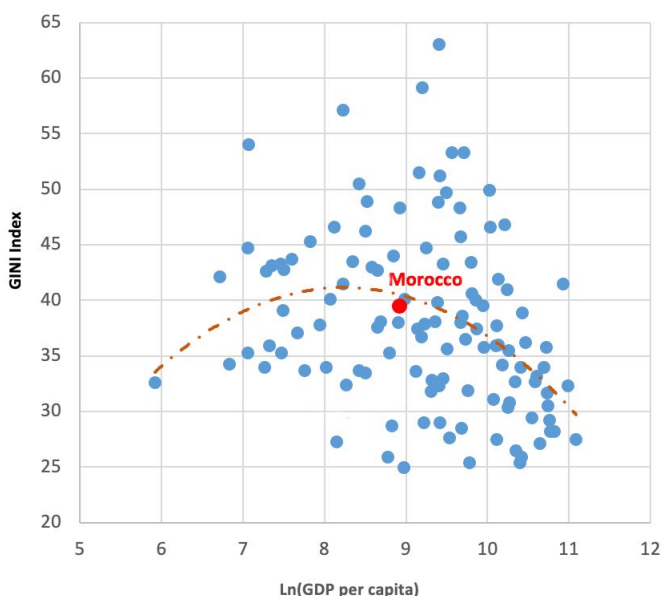
**Chart 3: Correlation between Gini coefficients and GDP per capita between 1980-2000**



Source : Moatsos et al. 2014

Inequality in Morocco as measured by the GINI index and ranked internationally is not far from Morocco's rank in income per capita adjusted for purchasing power, a rank near 100 out of some 200 countries.

**Chart 4 : Correlation between Gini coefficients and GDP per capita in 2017<sup>4</sup>**



Source: Authors' calculations based on WDI. \* 2017 or most recent available data

4. In this chart we represent the correlation between Gini Index and GDP per capita PPP for 118 countries for which we have data.

Review of income inequality trends over the period 1980-2016 shows that it varies considerably from one region to another. These inequalities are highest in Latin America, the Middle East and sub-Saharan Africa, and lowest in Europe, mainly due to the existence of a strong social protection system. The United States is the advanced country with the highest income inequality, higher even than many developing countries.

It is a remarkable fact that in 2016, the richest 1% of the population earned 2.6 times more income than the poorest 50% did in total in the Middle East and North Africa, the region to which Morocco belongs in the World Bank classification. Many of the wealthy individuals in the Middle East and North Africa region reside in the oil-rich Gulf states, and it is unlikely that such extreme levels of inequality apply within Morocco, for which comparable data on the top 1% is not available.

Income inequality has increased in most countries, but at different speeds between 1980 and 2016 highlighting both common forces and the crucial role played by national policies and institutions in managing and shaping inequalities.

Several factors are believed to explain the increasing levels of inequality within and across world regions. The most important of these is likely to be skill-biased technological change, or technologies that save on unskilled labor and require more skilled labor, such as automation (Jiancai & Pengqing, 2018). Globalization contributes to the trend by also placing a premium on skills even in countries which have an abundance of unskilled labor, and by creating many winner-takes-all opportunities<sup>5</sup> (Maskin, 2014).

As will be discussed below, there is little doubt that skill-biased technological change and globalization have been important features in Morocco. In addition, since around the mid-1980s, policies in many countries (though it is unclear whether that is the case in Morocco) have become more liberal, entailing reduced progressivity of taxation, deregulation, privatization, and, in many countries, reduced social transfers of various kind. Recently, evidence has emerged that in the advanced economies for which historical data sets are available, the rate of return on capital has been higher than the growth rate of GDP over very long periods, decades and

5. See <http://www.worldbank.org/en/news/feature/2014/06/23/theorist-eric-maskin-globalization-is-increasing-inequality> for further information on the impact of globalization on inequality.

centuries, accentuating wealth and, ultimately, income inequality (Piketty, 2014). Still, the limited available data for Morocco shows relatively little change in income inequality over the last three decades.

## Inequality in Morocco: Dimensions

Though inequality remains high and stable in Morocco, it is important to recognize from the outset that, reflecting sustained and moderate economic growth rates, Morocco has been able in recent years to make significant progress in economic and social development, while significantly reducing poverty. Supported by GDP growth of 4.2% a year over the period 2000-2014 (over 2% per capita), a combination of rising market incomes and increased social spending helped reduce the poverty rate in Morocco. The share of people living on less than 2.15 USD/day PPP in the population fell from 15.3% in 2001 to 4.2% in 2014. Indicators of multidimensional poverty<sup>6</sup>, which account for the various deprivations of the poor such as lack of access to education, has also decreased significantly in Morocco, from 24.5% of the population in 2001 to 6% in 2014.

How to characterize the income distribution in Morocco in an intuitive way? The latest household survey results, for 2014, lacks detail but enable us to identify four main groups of households based on our knowledge of the country and our previous work on the middle class in Morocco (Arbouch and Dadush, 2019). Chart 5 shows the distribution of expenditure by deciles expressed in \$ PPP updated to 2017 to reflect inflation. The bottom decile, with incomes under 4\$ a day includes all or nearly all the poor people as defined by income using the World Bank's poverty line as well as some people who are living just above the poverty line. The next 4 deciles of the population spend between \$4 a day and \$10 a day. Most of these people reside in the countryside and the typical main income earner is a man who works in agriculture (with help from the family) or works informally in the urban service sector. These households are not technically defined as poor, but they suffer some of the

deprivations identified in multidimensional poverty and are very vulnerable to the vagaries of weather, to changes in their health, or to losing their job without compensation.

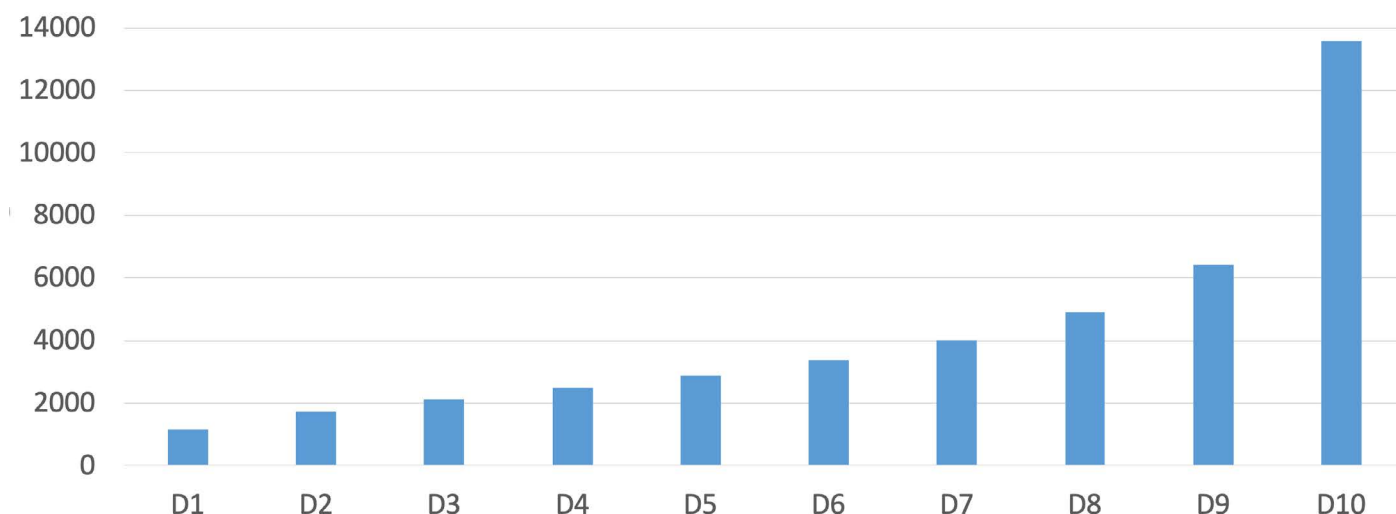
The next 4 deciles, those earning between \$10 a day and \$21 a day represent the middle class in Morocco, and thus belong to families that may be able to afford a used economy car or better, and various household appliances (See Arbouch and Dadush, 2019); some in this group are vulnerable to falling back into poverty or near-poverty but most will have resources and connections to fall back on in hard times. A part of this group, though certainly not all, is covered by social security, pensions, and formal health care coverage.

The last group is the top decile which is composed of the more affluent middle-class population and a small group of relatively well-off families whose living standard is not materially different than that of middle class and higher middle-class European families. The better off in this group are families that can, for example, afford a luxury automobile. In fact, luxury automobiles represent 7% of the cars used in Morocco and are probably owned by about 2.5-3% of families<sup>7</sup>. It is among them that one can find the top 1%, for which data is not available. If the Moroccan income distribution is similar to the average of developing regions, and there is no reason to believe that it is vastly different, one can speculate that the top 1% in Morocco earns about 1.5 times more income in total than the bottom 50% of the population does in total.

6. "Multidimensional poverty encompasses the various deprivations experienced by poor people in their daily lives – such as poor health, lack of education, inadequate living standards, disempowerment, poor quality of work, the threat of violence, and living in areas that are environmentally hazardous, among others" "visit for further information <https://ophi.org.uk/policy/multidimensional-poverty-index> ".

7. Approximately 40% of Morocco's population belongs to families which own a car., and 7% of this group owns a luxury automobile (Arbouch and Dadush, 2019)



**Chart 5: Annual average expenditure in Morocco per Decile, US PPP 2017**

Source : Author's calculation, Haut-commissariat au Plan

Despite the progress made in recent years, high inequality and low living standards among the mass of the population generates much frustration. According to a recent survey conducted by the European Training Foundation entitled "Migration and Skills", 59% of young Moroccans between 18 and 29 years old, would like to leave Morocco, with a large part of them definitively.

Inequality in Morocco is an especially complex phenomenon, as it reflects gender and regional inequality as well as social/income inequality.

Regional inequalities in Morocco are marked. Indeed the three regions of Casablanca-settat, Rabat-Salé-Kénitra and Tangier-Tetouan-Al Hoceima alone concentrate 58% of the total wealth created in Morocco, far higher than their 44% share of the total population (General Population and Housing Census of 2014, HCP).

There are also large differences in access to health care across regions, and between rural and urban areas as well as across social strata. Health human resources are unevenly distributed and do not correspond to the needs of the population particularly in rural areas. The average number of people per doctor in Morocco at the national level is 1513; this figure is doubled in the region of Draa-Tafilalet (3342), while it is reduced by 42 % in the Rabat-Salé-Kénitra region. In 2016, about 52% of doctors are concentrated in the two regions of Rabat-Salé-Kénitra and Casablanca- Settat (Ministry of health

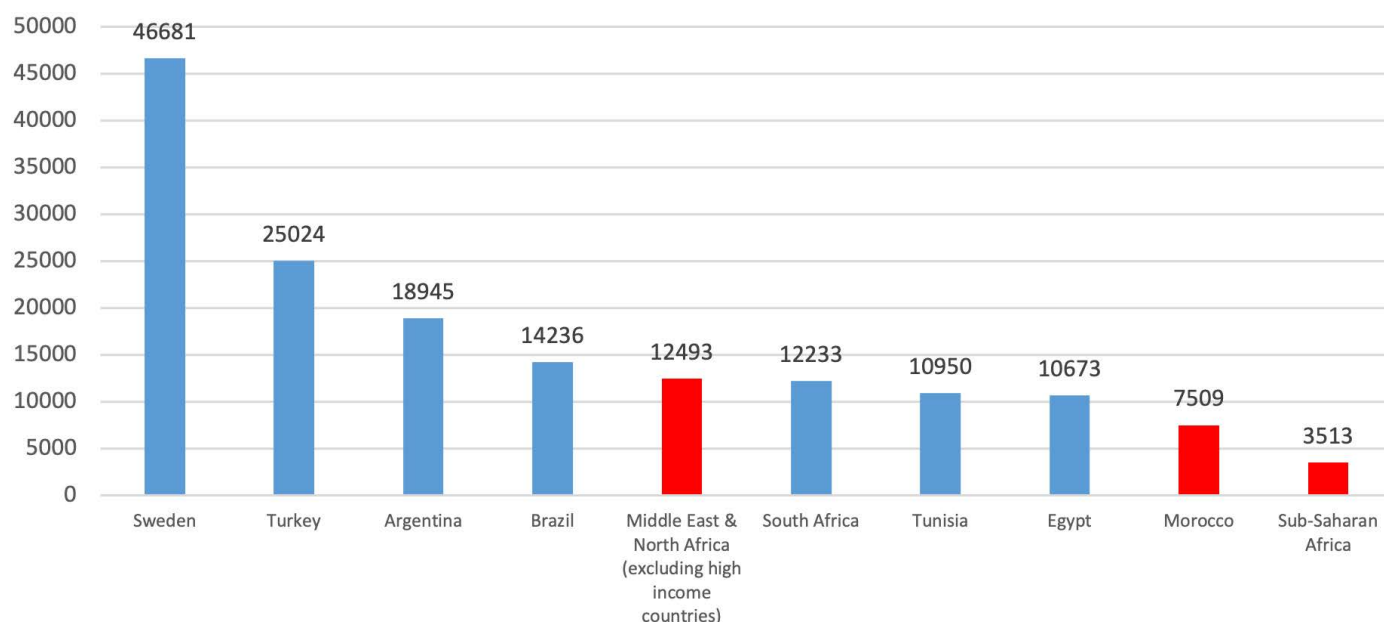
(Morocco)) alone even though it is home to only 34% of the population.

Inequality in provision of public services and in public investment in infrastructure contributes to the lack of attractiveness for investors, both domestic and foreign, of backward regions, reinforcing a vicious circle. Disparities in access to education and to employment opportunities across regions and social groups are crucial issues that will be taken up further below.

## The International Perspective on Morocco's Inequality

To gain a better understanding of what drives inequality in Morocco in this section we compare Morocco with four developing countries that are more unequal, namely Argentina, Brazil, South Africa and Turkey and two countries that are more equal and in the MENA region, Egypt and Tunisia, with which Morocco is often compared in other contexts. We also include Sweden in the comparison. Sweden is widely regarded an example of best practice since it has achieved a relatively equal income distribution, but also enjoys a favorable business climate, high income and solid economic growth compared to the world's most advanced economies (Chart 6).

Chart 6: GDP per capita, PPP (constant 2011 international \$), 2017



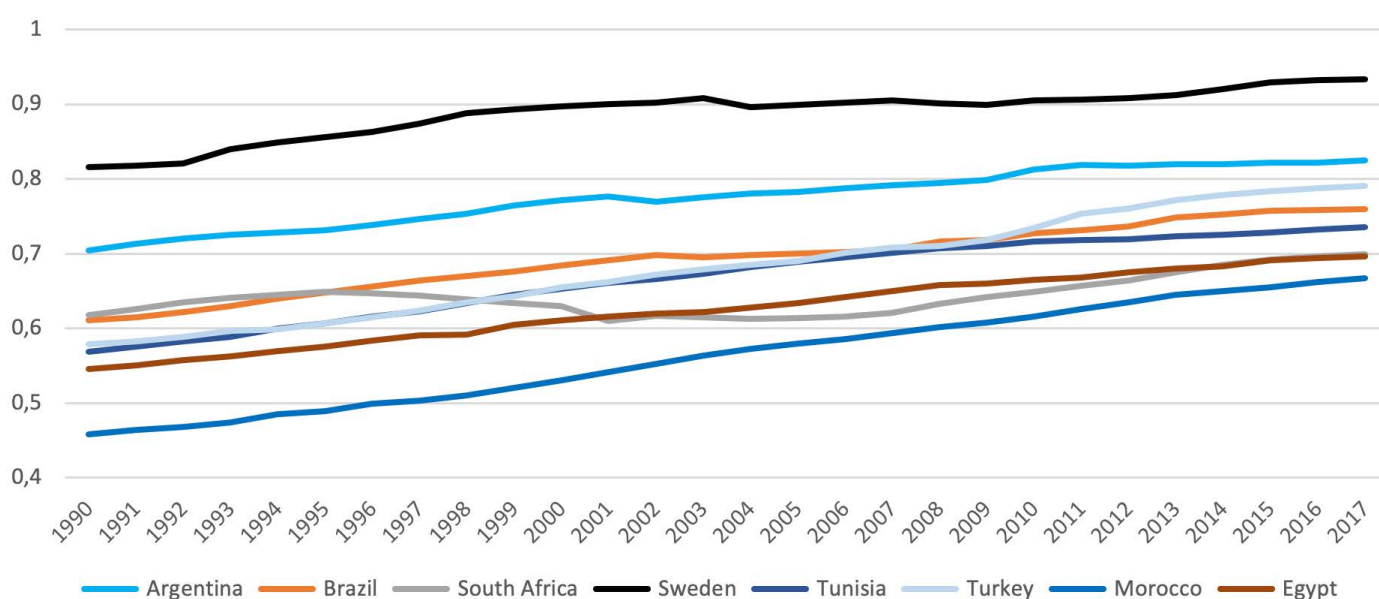
Source: WDI, World Bank Database

## Human Development and Inequality

Morocco's relative performance on the United Nations' Human Development Index (HDI) shows that Morocco has made significant progress in terms of human development

in recent years. The Human development index<sup>8</sup> (HDI) of Morocco has increased significantly from 0.46 in 1990 to 0.67 in 2017 but, as chart 7 shows remains the lowest in the sample by a considerable margin, in line with its low income.

Chart 7: The Evolution of HDI by Country



Source: Human development Data, United Nation

8. The Human Development Index (HDI) is a summary measure of average achievement in key dimensions of human development: a long and healthy life, being knowledgeable and have a decent standard of living. The HDI is the geometric mean of normalized indices for each of the three dimensions. See <http://hdr.undp.org/en/content/human-development-index-hdi> for further information.

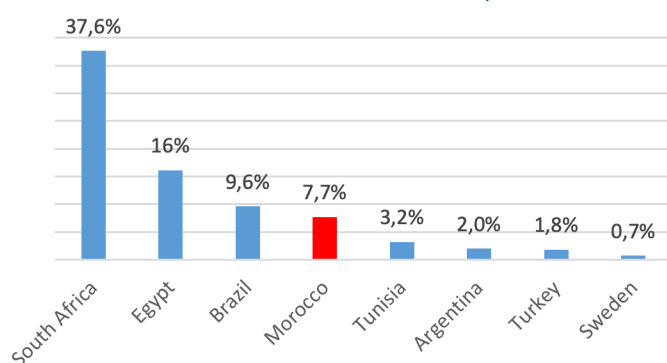
However, Morocco is gradually closing the gap. The improving trend is reflected, for example, by the fact that between 1990 and 2017, life expectancy at birth in Morocco increased by 11.4 years, the average number of years of schooling increased by 3.3 years, the expected number of years of schooling increased by 5.9 years and the GNI per capita increased by about 93.2% in real terms.

Still, Morocco's human development performance remains below that of North African countries and is

ranked 123 out of 189 countries and at the bottom of the sample of the selected countries.

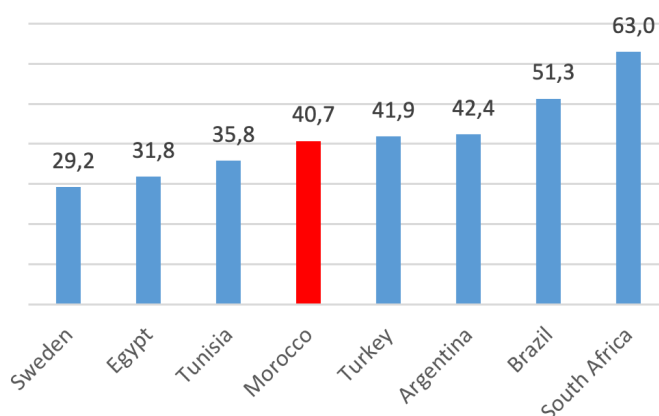
Morocco continues to lag on Human Development despite its respectable rate of growth and its progress in reducing poverty. The poverty rate which best applies here is defined at \$ 3.2 a day by the World Bank and in Morocco it is at 7.7 %, below that of Brazil, and well below that of Egypt and South Africa. Morocco's poverty rate is, however, twice that of Tunisia and 4 times higher than that of Turkey (Chart 8).

**Chart 8 : Poverty headcount ratio at \$3,20 a day (2011 PPP) (% of population) (2017 or most recent available data)**



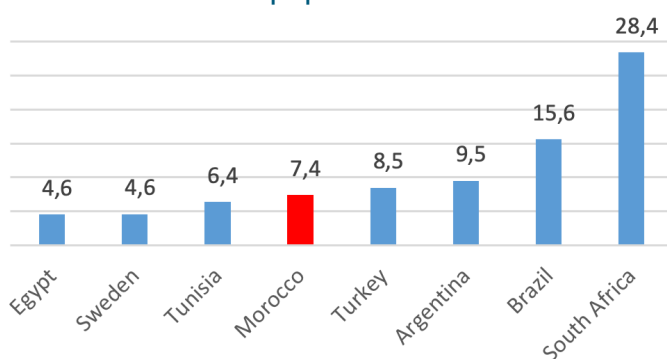
Source : WDI, World Bank, 2018

**Chart 9: Gini coefficient : 2010-2017**



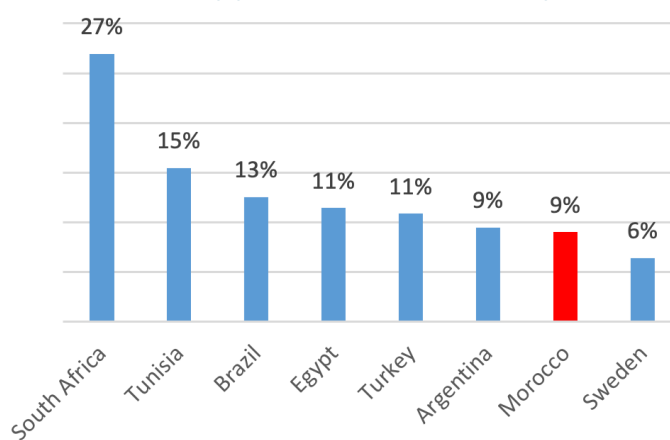
Source: Human Development Indices and Indicators, united nation, 2018

**Chart 10: Ratio of the average income of the richest 20 percent of the population to the average income of the poorest 20 percent of the population**



Source: Inequality-adjusted Human Development Index

**Chart 11: Unemployment, total (% of total labor force) (modeled ILO estimate)**



Source : WDI, World Bank, 2018

Poverty reduction, on which Morocco has made progress, crucial as it is, is only one aspect of inequality. The broadest and most widely used measure of inequality, the GINI index, shows that inequality is high in Morocco relative to sample countries in North Africa and there has been little change over the past three decades. Still, as chart 9 shows, Morocco is far less beset by inequality than Brazil and Argentina which are among the world's most unequal nations, if not the most unequal.

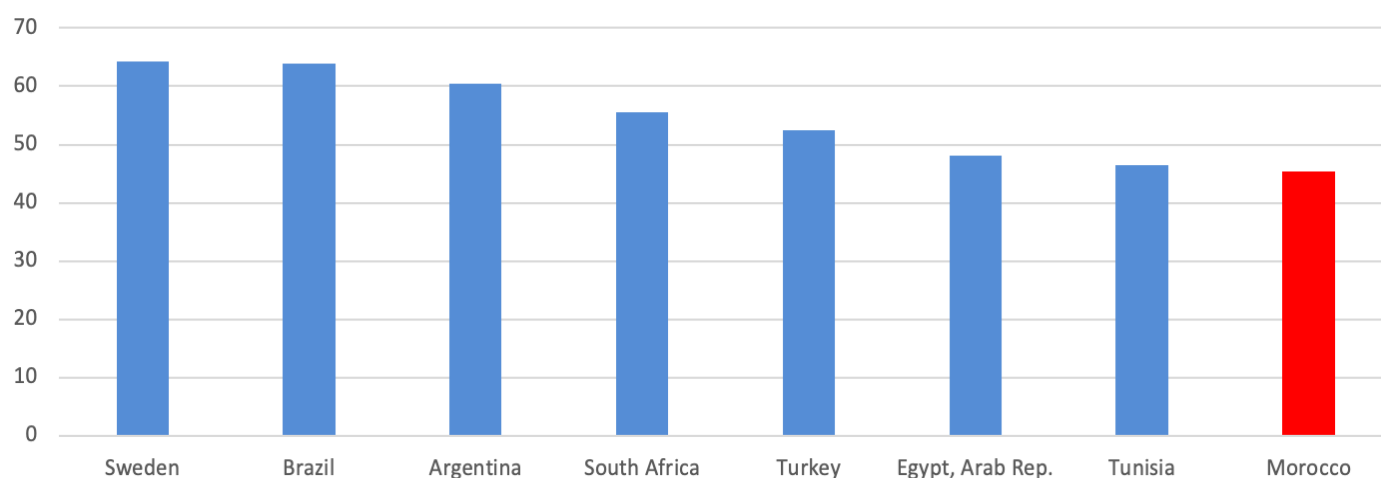
Another widely used measure of inequality is the ratio of income derived by the top 20% and that derived by the bottom 20%. This measure broadly confirms Morocco's high inequality. As Chart 10 shows, Morocco's ratio is, at 7.4, far higher than Egypt's 4.6, but bears no resemblance to South Africa's 28.4.

## Jobs and Gender

A very important contributor to inequality in Morocco is uneven access to the labor market. The official unemployment rate in Morocco stood at 9% in 2018, lower than Egypt and Tunisia and is among the lowest in the sample of selected countries (Chart 11). However, the official unemployment rate in Morocco gives only a very partial picture of the state of the labor market. The official

unemployment rate relates mainly to the urban formal sector and fails to capture the complexity of job market developments that exhibit a high degree of informality. The measure also fails to capture underemployment (i.e. very low productivity activities) in the countryside, as well as in many urban services. The core reasons of the continued unemployment and underemployment in Morocco lies both in labor supply factors – rapid labor force growth and availability of surplus labor - and labor demand factors – a respectable rate of GDP growth but one that is job poor, i.e. associated with vastly improved labor productivity, a reflection of investments in physical and human capital as well as technology improvement. Cultural factors, expectations, and skill-matching also play a very important role in explaining unemployment and underemployment in Morocco. Most worrisome from the standpoint of equity and stability, youth unemployment is a major challenge facing the Moroccan economy. In 2018, this unemployment rate reached a very high level, nearly 26% of the population aged between 15 to 24 and about 43.2 % of urban youth in that age group. Almost one in two young in urban areas is unemployed. In addition, the labor force participation rate in Morocco does not exceed 46%, the lowest compared countries in our sample (chart 12).

**Chart 12 : Labor force participation rate, total (% of total population ages 15+)**  
(modeled ILO estimate)



Source: WDI, World Bank, 2018



Gender inequality is a crucial dimension of the disparities in Morocco. The very low participation of women in the Moroccan labor market is striking and remains one of the lowest in the world. As table 1 shows, the labor force participation rate of woman in Morocco is just 18% in urban areas, while that of men is 3.7 times higher in 2017. The unemployment rate of women at the national

level is 14.7% compared to 8.8% for men. According to the general census of population and housing, conducted by the high commissioner for planning in 2014, the time allocated by men to professional work is 4 times higher than that of women, while the time allocated to domestic work is 7 times lower than that of women.

**Table 1: Unemployment and participation rate in Morocco in 2017**

		Participation rate	Unemployment rate
<b>Female</b>	Urban	18%	25%
	Rural	30%	3%
	Total	22%	15%
<b>Male</b>	Urban	68%	12%
	Rural	78%	4%
	Total	72%	9%
<b>Total</b>	Urban	42%	15%
	Rural	54%	4%
	Total	47%	10%

Source : Haut commissariat au Plan

The low participation rates of women in the labor market in Morocco can be explained by a combination of cultural norms, historically high fertility rates, lack of child-care structure, skill-mismatch (widespread girls' secondary and tertiary education is relatively recent in Morocco), decline of industries such as garments which employ large numbers of women, and insufficient growth and job-creation. According to a recent PCNS policy report, policies<sup>9</sup> or autonomous shifts that encourages increased participation of women in the labor force could boost the annual growth<sup>10</sup> rate of Morocco's GDP by between 0.2 and

1.95 percentage points over an indefinite period (Agénor et al., 2017) Although the effect on income distribution is not discussed in the aforementioned report, it is highly likely in our view that increased participation of women in the labor force would not only reduce gender inequality directly, raise the incomes of many least well-off families in the cities, and reduce poverty, but also reduce income inequality across households.

## Education

Education is the issue that is perhaps most critical to mitigating inequality in Morocco. The current situation of the Moroccan educational system is alarming; its low quality is a source of both high inequality and economic growth that is insufficient to tackle the nation's chronic unemployment problem – especially that of young people. Moreover, standardized test scores show that the situation has hardly changed since the early 2000s. The problem is not so much that of resources – as Morocco invests in education at rates not dissimilar than comparators as a share of GDP and an even larger share of its public spending – but of effectiveness of resource use.

annual growth rate of market production.

9. These anti-discrimination policies or shifts would reduce gender bias in the labor market.. They could take the form of either legal constraints (e.g. mandatory parity in hiring) or incentives (e.g. awareness campaigns on the economic cost of gender bias, or an obligation to publish the distribution of wages in companies by gender and type of activity. The direct result are to increase the family's income. This increase is reflected not only in an increase in household spending but also in higher private savings and investment, which has a positive effect on growth and tax revenues. Higher tax revenues contribute to higher public spending on education, which helps to promote human capital accumulation during childhood and (through the persistence effect) into adulthood. This effect (which operates in the same way for men and women) also contributes to promoting growth. The total effect is to accelerate the economic growth rate..

10. The variables of the model used to simulate the impact of anti-discrimination policies in the labor market are: women's time allocation; men's time allocation; family decision variables, including fertility rate, share of total family income spent on each child, savings rate, ratio of men's and women's time spent in paid employment, gender bias in the workplace, and women's intra-family bargaining power; and finally, the

## The weak outcomes of Morocco's educational system are evident:

#Two-thirds of 20-year-olds Moroccan (nearly 400 000 out of 600 000) do not obtain the Baccalaureat, and out of 200 000 who have passed their Baccalaureat, only 50 000 receive training that meets their employment expectations. Moreover, only 2% of the 20-year-old age group will obtain highly qualified diplomas that will facilitate their integration in the labor market (Chauffour, 2017). University graduates in Morocco have a high unemployment rate.

# Although illiteracy has declined, at 30.6% of the population, it remains very high. Illiteracy is a major cause of marginalization and leads to a wide income gap between this category and the more educated.

#The weaknesses of the Moroccan educational system are also confirmed through the international TIMSS (Trends in International Mathematics and Science Study) and PIRLS (Progress in International Reading Literacy) tests<sup>11</sup>. In mathematics, Morocco has a score of 377 for primary and 384 for middle school; in science, it has a score of 352 for primary<sup>12</sup> and 393 for middle school.

The results of the PIRLS and TIMSS surveys also show that the level of educational inequality is extremely high in Morocco compared to the other countries of the world. Thus, the top 10 % most successful students score 2.5 times higher than those at the bottom 10 %. These learning gaps are much higher than the world average of 1.5.

Instead of promoting social mobility, schools tend to reproduce social inequalities according to the socio-economic background of parents. In a context of widespread mistrust of national education, the demand for enrolment in private education is growing rapidly.

11. "TIMSS and PIRLS are international assessments that monitor trends in student achievement in mathematics, science, and reading". TIMSS and PIRLS results include:

- Measuring the effectiveness of their educational systems in a global context
- Identifying gaps in learning resources and opportunities
- Pinpointing any areas of weakness and stimulating curriculum reform
- Measuring the impact of new educational initiatives
- Training researchers and teachers in assessment and evaluation

See <https://timssandpirls.bc.edu/> for further information.

12. See the chart 1 and 2 in the appendix that shows the TIMSS tests results for primary school in Morocco, compared to world averages.

Young Moroccans now live in parallel educational worlds delimited by the socio-economic background and the financial capacity of their families.

The inequality of access to quality education is evident in pre-schooling, which experts believe is critical to the child's development as an adult, as shown, for example by the recent national survey on preschool education (ENEP, 2014). The likelihood of pre-schooling a child whose father has a higher level of education (78.6%) is 2.5 times higher than those of a child whose father has never been to school, and 1.5 times those of a child whose father has just the primary school level. Private preschool establishments in Morocco accounted for nearly 93.5% of preschool children in the 2000s, compared with 76.0% in the 1960s.

Unequal access to high quality education is converted in the future into unequal access to the labor market and as result into income and wealth inequality. Especially important is investment in high quality early education, making it accessible to a large majority of small children. An overhaul of the Moroccan public education system is overdue. This takes us to the role of government in reducing inequality.

## International Perspective on the Role of Morocco's Government in Reducing Inequality

Estimates of inequality before and after taxes and transfers show clearly that progressive taxation and social spending by government can play a very important role in reducing inequality across the world. For this reason, one needs to examine GINI coefficients as they measure the distribution of market incomes, i.e. before taxes and transfers and as they measure net incomes, i.e. income after taxes and transfers, including direct and indirect taxes, government spending on education, health, pensions, etc. For example, Lustig and her co-authors (Lustig, 2013) estimate that taxes and transfers reduced the GINI coefficient of Argentina and Brazil, countries in our sample, by about one quarter, i.e. from 0.497 to 0.369 and from 0.574 to 0.438, respectively. Longitudinal studies show that inequality can be reduced drastically by regime change, as in the case of communist

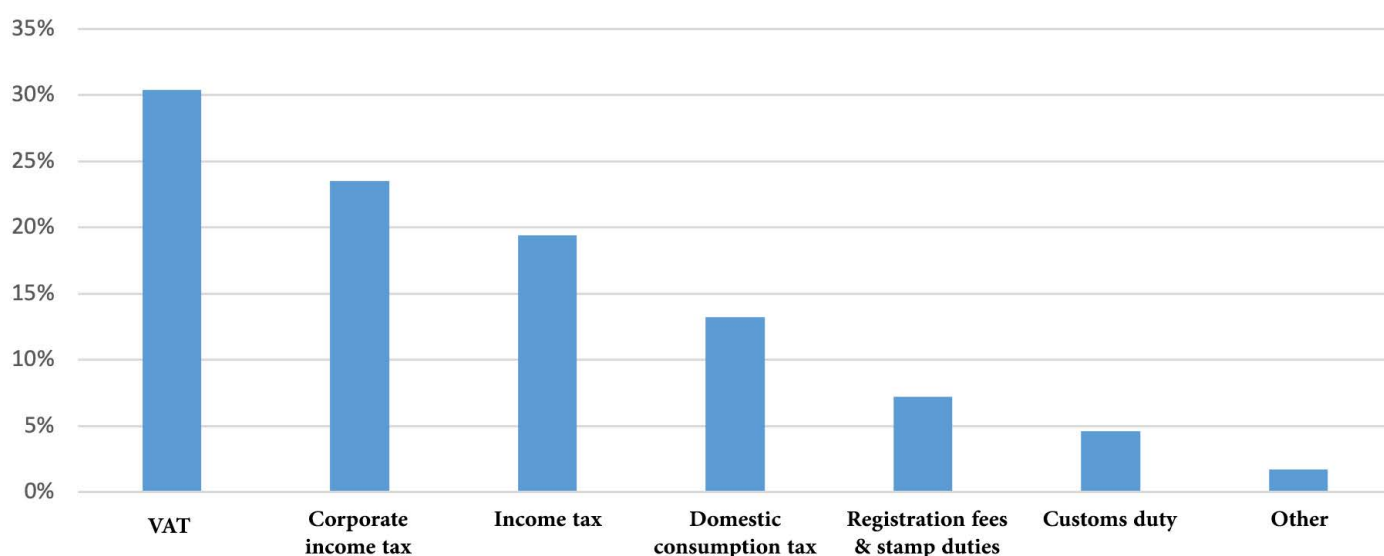
Eastern Europe, which saw a decrease in GINI from 0.4 in 1929 to 0.27 in 1990, and an increase to 0.36 in 2000 after the fall of the Berlin Wall (Moatsos et al.2014). The adoption of Reagan-Thatcher reforms contributed to a sharp rise in the GINI index in the US and the UK after 1980 from already high levels.

The GINI coefficient for Morocco is derived from household expenditure data so a part of the government's taxes and transfers are already included and there is no available estimate of what the GINI would be before and after taxes and transfers to our knowledge. To evaluate the effect of government in reducing inequality in Morocco, the best we can do at this stage is to examine the size of the government's tax take as an indicator of resources available to cover social spending and the amount of social spending, as well as how that revenue is raised and spent. In 2016, Morocco's tax revenue represented

26.4%<sup>13</sup> of GDP, not far out of line with the average of the sample of selected countries. Tax revenue in Morocco as a share of GDP is far higher than in Egypt but less than Tunisia. Brazil and Argentina, where redistribution towards the lower deciles of the income distribution is considerable have higher tax revenue than Morocco by about 5% points of GDP. Sweden's tax revenue is a full 18 percentage points of GDP higher than in Morocco.

How the tax revenue is levied matters a lot. Insofar as indirect taxes, duties and fees, play a large role taxation, as is the case in Morocco (Chart 13), their effect is likely to be regressive compared to taxes imposed on incomes. And social spending on primary education and health, for example, is likely to be more equalizing than social spending on universities which are disproportionately attended by the relatively well-off.

**Chart 13: Direct and Indirect Tax in Morocco in 2018**



Source: Trésorerie Générale du Royaume

To improve tax collection in Morocco and achieve levels of revenue in GDP comparable to those of the better performers in this regard in the sample, would require reducing the size of the informal sector. Morocco's informal sector is estimated to exceed 30% of GDP and is close to the highest in the sample. Informality not only reduces the tax take but is also associated with low productivity/low wage jobs, precarious employment and absence of benefits. According to a recent analysis, firms in the informal sector tend to exhibit low growth rates as well, and very few graduates into the formal sector (La Porta and Shleifer, 2014). It is encouraging that

the estimated size of Morocco's informal (or shadow) economy has seen a moderate decline of 5% points as a share of GDP over 2004-2015.

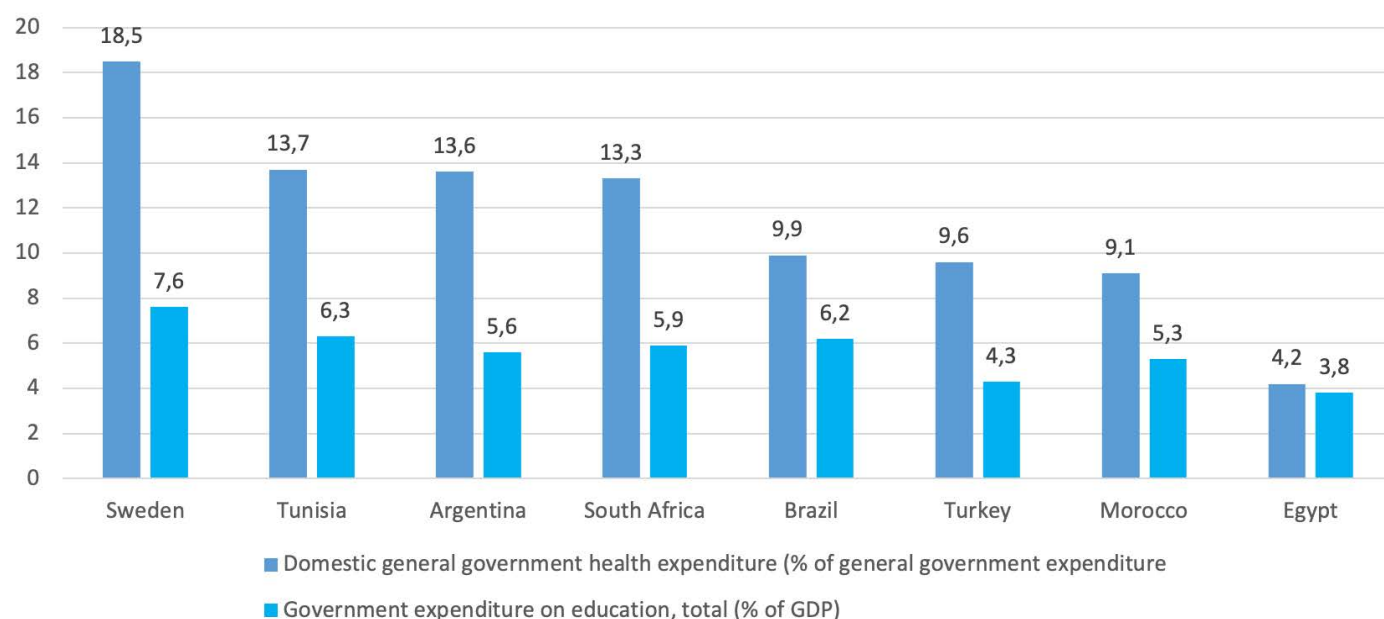
Spending on health and education in Morocco is very much at the low end of sample (Chart 14). On education Morocco spends less than the other countries in the sample except Egypt and Turkey. Considering Morocco's young population and the weak standardized test scores of Moroccans, it seems clear that government is not using

13.Source : OECD revenue statistics

education effectively as a tool to remedy inequality. The picture on health spending is hardly better. Morocco spends less on health than all other countries in the sample except Egypt. Still, on average, life expectancy in Morocco stands at 76 years, the same level as that of Turkey, Tunisia, or Argentina. This average remains far

lower than that of developed countries such as Sweden (82 years old), but higher than that of Egypt (72 years old) and South Africa (63 years old). However, the infant mortality rate (per 1000 live births) in Morocco is the higher than all included in the sample, except South Africa.

**Chart 14: Health and education expenditure by country, 2016\***



Source: WDI, World Bank. \* 2016 or most recent available data

No discussion of the role of government in affecting inequality is complete without a reference to corruption. The link between corruption and inequality can exist in two ways<sup>14</sup>. First, high inequality can be associated with state capture by the wealthiest classes who can use inordinate influence to receive favorable treatment on government contracts, land sales, regulation and taxation. Second, corruption can increase inequality since it is only the wealthier that can “buy” the most important favors (Gupta, Davoodi and Alonso-Terme, 1998; Jong-Sung and Kagram, 2004). It is true that petty corruption may help low-paid government officials improve their lot at the expense of other citizens who may be better-off, but it is just as likely to hurt those who can ill afford to pay bribes. Transparency International places Morocco at 73 out of 180 Countries, at the same level as South Africa and Tunisia, far below the Sweden benchmark, but better than other countries in the sample. Brazil and Egypt rank far lower than Morocco. Sweden,

where incidents of corruption are rare, has a score 2.4 times higher than that of Morocco.

The data available is too incomplete to allow for definitive conclusions. It is likely, however, that Morocco’s government plays a modest role in reducing inequality. Still, it would appear that – except for Egypt - governments in the other sample countries play a more important role in reducing inequality than does the government in Morocco.

## Policy

More can be done by government to reduce inequality in Morocco. The issue has become more pressing in recent years as economic growth in Morocco has decelerated from an average of 4.3% over the period 2000-2013 to 2.8% over the last five years. This low growth occurs despite high investment rates, about 32% of GDP on average, and reflects a combination of misallocated capital (excessive reliance on public investment) and

14. See Nieves Zuniga, Transparency International, 2017, for a useful survey of the evidence on the link between corruption and inequality.

insufficient and mis-matched skills (Agenor and El Aynaoui, 2015). Low growth, skill mismatch and gender imbalance, result in low labor participation persistent unemployment especially among the youth and women. Meanwhile, although the number of poor people has declined sharply, the poorest 10% of the population have not seen an increase in their share of consumption and income since 1985, which remains stuck at about 2.5%. The room for maneuver available to Morocco's government is limited by high public debt, now at 65.1 % of GDP and a high government deficit.

Given Morocco's slowing growth and fiscal constraints, actions to reduce inequality should, ideally, be both growth-enhancing and budget neutral, a tall order. Still, any ordering of the reforms needed to reduce inequality would surely place better education and improved access to that education by the lower 50% of the income distribution at the top of the list. The reforms needed require not necessarily increased spending, although that would help, but more equitable distribution for that spending and, above all, greater effectiveness in managing the public education system.

Almost as important is improved access to the job market by the female population, which should be both growth-enhancing and budget-positive. Since Moroccan women are closing the gap with men on education and Morocco needs more qualified workers, improving the gender balance is increasingly possible and needed. As the fertility rate in Morocco continues its rapid decline, more women will be freed to work. Doubling the number of income earners among poor families in the cities by encouraging women to work, or freeing women from low-productivity work in the farms, would have a big effect on improving the lot of their families. Both education and gender reforms would not only reduce inequality but help accelerate economic growth in the long run. Investments in pre-school education could help improve educational outcomes overall and free more women to work.

Other reforms may appear lower on the list but could also have significant effects on inequality and be growth-enhancing. The regional and social disparities in access to quality health services must be reduced. A policy of decentralization with a correspondent and equitable reallocation of health spending across Morocco's regions would almost certainly help.

Morocco needs to make the tax system more progressive by reducing the reliance on indirect taxes and increasing that on income taxes. This would require, among other measures, improved collection of the corporate tax where just 2% of companies contribute 82%<sup>15</sup> of the corporate tax paid. Placing an inordinate burden on a few firms in the formal sector is both inefficient and encourages informality. Redressing this imbalance by encouraging formalization could be growth-enhancing and budget-positive.

Reforms are also needed to reduce the incidence of corruption which contributes to inequality and inefficiency through various forms of uneven treatment, such as on land sales, granting of licenses, etc. Ensuring that all sectors of the Moroccan economy are subject to a high level of competition will also help lower prices for all citizens, eliminate excess profit due to oligopolistic behavior, and enhance efficiency and growth. In a small economy such as Morocco enhancing competition usually requires greater openness. This has largely been achieved in trade in goods, but there is more to do open the service sector and facilitating foreign direct investment.

A more systematic effort to contain and reduce inequality in Morocco also requires much better data and freer access to it from household surveys and tax returns. Appropriate government action must be based on a better understanding of the characteristics of households at different points in the income distribution, including income sources, nature of occupation, level of education, health attainment, and so on. Information of this kind will enable policymakers to evaluate all manner of government policy in terms of their distributional effect.

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15. See The ECONOMIC AND SOCIAL COUNCIL Of the Kingdom of Morocco report on Moroccan tax system, published in 2012. <http://www.ces.ma/Documents/PDF/Rapport-Fiscalite-VF.pdf>



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