

# Socio-economic Inequality in Jordan



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Resilient nations.*



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Jordan's inequality levels are low compared to international standards

99% of children complete primary school

most of the inequality of opportunity is explained by the **education** of the household head

social transfers buffer income inequality by bringing down income inequality measures by 4 percentage points

Inequality between governorates is markedly higher than inequality between urban and rural areas

Jordan achieved nearly universal coverage of water services, without differences across place of residence, nor income quintile

Jordan displays one of the **lowest** female labor force participation rates in the world

## Abbreviations

CIJD	Chief Islamic Justice Department's
DHS	Demographic and Health Survey
DoS	Department of Statistics
GDP	Gross Domestic Product
GE	General Entropy
HEIS	Household Expenditure and Income Survey
HOI	Human Opportunity Index
JLMPS	Jordanian Labor Market Panel Survey
MENA	Middle East and North Africa
OECD	Organization for Economic Cooperation and Development
p.p.	Percentage points
PPP	Purchasing Power Parity
PSU	Primary Sampling Unit
SPI	Spatial Price Index
UMI	Upper Middle Income

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## Executive Summary

Over the past ten years, Jordan has had success pursuing structural reforms in education, health and privatization and liberalization. In addition, the Government of Jordan has been introducing social protection systems and reforming subsidies, creating the conditions for public-private partnerships in infrastructure and making tax reforms, including tax administration and management.

However, the country faces important challenges. Macroeconomic vulnerabilities persist because of its energy import dependency and the disruption of gas supplies from Egypt. Regional tensions and their recent extension to Iraq and Syria are weighing down on the Jordanian economy through a widening trade deficit and weaker investor confidence. High unemployment and a dependency on remittances from Gulf economies is an additional threat to economic stability. Finally, Jordan faces daunting short-term challenges due to the spillovers from the Syrian conflict.

Diagnostic

Jordan displays inequality measures rather low in comparison to that of other countries with similar per capita GDP. Inequality in Jordan, as measured by per capita expenditure from the HEIS, stands at a Gini coefficient of 33.7 percent in 2010. This is similar in level to that of the developed European Organization for Economic Cooperation and Development (OECD) members. It is significantly lower than income inequality in the United States and the UK (which are around 40), and is likewise lower than inequality in most countries that are close to Jordan in terms of gross domestic product (GDP) per capita – upper-middle income (UMI) countries.

Over the past decades, inequality fluctuated in Jordan, but reached an all-time low since 2006. The overall inequality measure remains little affected by the urban/rural divide, but differences between governorates account for 8 percent of total inequality. Income inequality is higher when measured with income than with consumption. Furthermore, social transfers buffer income inequality by bringing down income inequality measures by 4 percentage points.

Less educated, prime-age employed men with large families are the worst off. Jordan faces a reverse inequality gap between men- and women-headed households: the bottom quintiles of the income distribution have the largest share of male-headed



households (90 percent). Education and income display the typical relationship: poorer quintiles have less educated heads of households.

Larger households are over represented in the bottom income quintile: over two thirds of households in the bottom income quintile have three children or more.

Over half of the population under 15 years of age lives in the poorest two quintiles. In other words, 400 thousand children under the age of 5 live in families in the poorest two income quintiles. The numbers are even higher for older children, with almost 500 thousand children aged 6 to 14 living in the poorest two income quintiles. The situation is better for youth – i.e. individuals aged 15 to 24 – who are more likely to live in the better off quintiles. The fact that half of the future youth will come from the poorest quintiles (young cohorts aged 6-14 will reach adolescent age in the coming years), population dynamics may bring forward a larger share of vulnerable youth that has been witnessed so far, and should be a critical point to be addressed by policy makers..

Jordan achieved nearly universal coverage and good availability of water services, without differences across place of residence, nor income quintile. Living conditions are quite evenly distributed across places of residence and income quintiles, and basic connectivity is reaching nearly all households in Jordan. On the other hand, access to sanitation seems to vary across income quintiles, with lower access to sewerage network and private toilet for those in the poorest quintile. Furthermore, access to educational and medical facilities is not much affected by residence or income quintile.

The health and education status of women in Jordan compares favorably with that of other developing countries. Moreover, the health and education status of women in Jordan compares favorably with that of Jordanian men. This equality is in stark contrast to the conditions in East and South Asia and Sub-Saharan Africa. But, in contrast with investments in access to basic education and health care, which have come to be viewed as universal rights, outcomes in the labor market and in political life remain very much the result of individual preference and choice, and of opportunities to participate in economic and political life. Jordan displays one of the lowest female labor force participation rates in the world.

Female labor market participation rates are one third of men's on average. Moreover,

the gender gap in market participation is markedly higher for the most vulnerable women, i.e. those with low education or from the poorest quintile. The “marital-status gap” in labor force participation (relative difference in labor force participation between married and never-married women) is high. However, and irrespective of marital status, Jordanian women aspire to be employed.

## Recommendations

Geographic inequality remains low as shown in Section 1. There are no drastic differences in inequality levels between governorates, or between urban and rural areas<sup>1</sup>. However, a more careful analysis of the contribution of social transfers to total income shows that social protection transfers are not targeted as a whole to the poorest. In order to lessen inequalities, properly targeted social protection programs should be reinforced, in order to reach the poor in a more efficient manner. Such programs include, but are not limited to, means-tested social assistance, i.e. programs that take into account pre-transfer wealth to determine eligibility. While these programs have country-specific formulas, a number of indicators are usually shown to be correlated with poverty and social exclusion, especially family composition, including the presence of children. Reforms towards more child-sensitive social protection programs should be put in place.

Jordan achieved nearly universal coverage and good availability of water services, without differences across place of residence, nor income quintile (see Section 2). Similarly, access to health and education facilities is rather equally distributed across income quintiles. However, while there are few differences in terms of access to health and education, there may be some quality of services issues that this report cannot discern, due to the limited information included in the data. Given that Jordan seems to have universal access to education and health services, one should focus on quality of service delivery across geographic zones and income quintiles.

On the other hand, access to certain services, such as sanitation, road network and street lighting, connectivity (cell phones and internet), turns out to be more unequally distributed across quintiles. Programs emphasizing access to services and

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<sup>1</sup> However, one should not forget that the present report uses data from the 2010 HEIS, which record data on households from the year 2009. The impact of the 2008 crisis cannot be analyzed using the 2010 HEIS.

connectivity should thus focus on a subset of services to be delivered: sanitation, and good transportation services for those who are not well serviced. In addition, connectivity has been shown to foster growth – see the roll out of cell phones in India for instance and its incidence on growth and economic development – and should be emphasized in order to foster a more pro-poor growth.

Children and youth are overrepresented in the bottom quintile, but inequality of opportunity – access to basic services and education – remains low (see Section 3). More than half of Jordan’s children live in households from the poorest two quintiles of the income distribution. However, inequality in access to school, as well as school enrollment and achievements are low. Section 3 shows that inequality of opportunities for children and youth are most dependent on the education of the household head, as well as the location where the child is from (urban versus rural). Jordan should thus focus on implementing programs aimed at delivering higher quality of education in more remote areas, and focus on tutoring for children whose parents cannot help them with homework.

The health and education status of women in Jordan compares favorably with that of other developing countries, but women’s participation in adult HEIS, which record data on households from the year 2009. The impact of the 2008 crisis cannot be analyzed using the 2010 HEIS.

life is very limited (see section 4). Moreover, the health and education status of women in Jordan compares favorably with that of Jordanian men. But, in contrast with investments in access to basic education and health care, which have come to be viewed as universal rights, outcomes in the labor market and in political life remain very much the result of individual preference and choice, and of opportunities to participate in economic and political life. Jordan displays one of the lowest female labor force participation rates in the world. Even more worrying is the fact that the gender gap has worsened since 2006 as noted by the World Economic Forum (2014).

In light of this report, three points should be tackled in priority: (i) providing safety net programs that target the poor, (ii) providing incentives to foster women’s participation in the labor force, and (iii) providing the framework to include more systematically women in the political arena and everyday life.

First, safety nets targeted at the poor should be reinforced. Jordan seems to spend a large share of its social welfare budget on programs that are not specifically targeted at the poor, and should focus on social assistance programs that help the poor lift themselves out of a poverty trap. Such programs include means-tested programs, which include proxy-means tested interventions. In such cases, program eligibility is determined on the basis of housing and household characteristics: family composition including the number and distribution of children, household head characteristics (education, activity status, and age), spouse characteristics, housing and assets ownership.

Second, economic incentives need to be put in place to increase participation in the workforce. The diminishing role of the family-friendly public sector in the Jordanian labor market contributed strongly to increased gender inequalities, and in times of economic contractions the private sector needs to be structured in such a way that it offers the same advantages that the public sector was previously offering in order to successfully attract women. Additionally, we saw that married women had far less chances of participating in the labor market, mostly because of the burden of taking care of children: the cost and availability of daycare alternatives is an important element in the decision to participate in the labor force. Proper daycare options should be put in place. Finally, even when women are working, they often face inequality in the workplace. Strategies to increase women's attractiveness to employers should go hand in hand with policies to encourage women to work.

Third, traditional gender norms limit women's agency. Perceptions of women's roles in the home, education, employment, and politics are distinctly more traditional than the global average. The nature of gender norms, the legal framework, and the structure of Jordan's economy powerfully influence the incentives, preferences, opportunities, and ability of women to participate in work, including but not restricted to the guardianship laws restrict women's mobility and occupational choices. Jordan has piloted a few programs to increase women's agency, but it is a far cry from covering all the topics that need to be addressed.

## Rationale

It is almost impossible to find a single country, now or at an anytime in history, where all citizens of that country enjoyed full equality. Jordan is no exception. Therefore, it is tempting to ask why anyone should worry about inequality if it is a fact of life. There are three main compelling reasons for worrying about inequality. To begin with, there is a growing body of literature that supports the view that inequality of opportunity accounts for a significant part of inequality of outcomes within and between countries.

A Jordanian born to rich and educated parents is privileged over a Jordanian born to poor and uneducated parents. Second, significant levels of inequality could have large negative effects on human welfare and society, especially if inequality is associated, or perceived to be associated, with corruption. Last but not least, it is increasingly recognized that more egalitarian societies grow faster than unequal societies, negating the long-held view that with patience the fruits of development will eventually trickle down. Concern for inequality is therefore justified on ethical and developmental grounds.

Over the past ten years, Jordan has had success pursuing structural reforms in education, health and privatization and liberalization.

In addition, the Government of Jordan has been introducing social protection systems

and reforming subsidies, creating the conditions for public-private partnerships in infrastructure and making tax reforms, including tax administration and management.

However, the country faces important challenges. Macroeconomic vulnerabilities persist due to because of its energy import dependency and the disruption of gas supplies from Egypt. Regional tensions and their recent extension to Iraq and Syria are weighing down on the Jordanian economy through a widening trade deficit and weaker investor confidence.

High unemployment and a dependency on remittances from Gulf economies is an additional threat to economic stability. Finally, Jordan faces daunting short-term challenges due to the spillovers from the Syrian conflict: the deterioration of the security and human situation in Syria has forced hundreds of thousands of Syrians to flee and seek refuge in neighboring countries, and Jordan has been particularly affected by this influx of population. The Northern governorates of Irbid, Mafraq and Zarqa saw the largest influx of refugees relative to the total population, leading to increased demand for public services: education, health and sanitation, electricity, etc.

The purpose of this study is to provide a better understanding of inequality in Jordan in its various dimensions. We did this by first looking at income inequality and tried to

disentangle the global and spatial dimension of inequality by putting Jordan in its regional context and by delving into the complex structure of spatial inequality. This part of the study unveils some interesting features of inequality across urban and rural areas, as well as across governorates (Section 1).

Next, we complemented the figures about income inequality by estimating non-monetary inequality, mainly looking at inequality in terms of asset ownership and access to services (Section 2).

Inequality in wealth and access to services is likely to lead to inequalities in opportunities, which leads to an in depth analysis inequalities of opportunities faced by children (Section 3), and women (Section 4). These sections focus on schooling, health, labor market participation and social exclusion.

By better understanding the nature of inequality, the last part of the study provides some initial indications on policies that can be effective for inequality reduction (Section 5).

Inequality is a multidimensional phenomenon, and the present report will look into several of its dimensions: income inequality, unequal access to services, and inequality of opportunities. Macroeconomic studies that addressed economic inequality or income distribution in Jordan are few. The earliest studies focused on measures of the overall

economic inequality in Jordan, neglecting any decomposition across regional or socio-demographic groups (Assaf, 1979, Smadi et al., 1990). More recent studies using micro data decomposed income sources to look at drivers of inequality (Adams, 1998), factors affecting income distribution (Kharabsheh, 2001), and investigated regional inequality (Shahateet, 2006). In addition, some studies on inequality have tackled the gender imbalance between men and women and the role of the Middle East and North African (MENA) Region gender norms (World Bank, 2013, Assaad et al, 2012).

Firstly, we dispose of three measures to quantify income inequality: income, consumption, and wealth. While researchers refer to income inequality when measuring monetary inequality, there is no agreement that “income” in inequality studies should be income at all. Income inequality using income declaration is the most commonly cited measure, primarily because the data on it is the most comprehensive. However, for the purpose of measuring how inequality affects a community it is also probably the least interesting yardstick of the three. Consumption inequality, though harder to measure, provides a better proxy of social welfare. This is because people’s living standards depend on the amount of goods and services they consume, rather than the number of Jordanian dinars in their wage packet. Consumption is also thought to have diminishing marginal utility, i.e. a

poorer person will value an additional unit of consumption more than his richer cousin. Wealth is also an important metric since it can be inherited, unlike income. When wealth inequality increases, the lottery of birth becomes an increasingly important determinant of living standards.

While this report presents monetary inequality using both income and consumption, it focuses on the latter only<sup>2</sup>. Many people think that rather than income, one should look at consumption or expenditures as the true indicator of the standard of living (Milanovic, 2007).

Consumption inequality, though harder to measure, provides a better proxy of social welfare. This is because people's living standards depend on the amount of goods and services they consume, rather than the number of dollars in their wage packet. A difficulty with using annual income to measure inequality is that if everyone goes through a life-cycle current-income path, annual snapshots of income would suggest greater inequality than that which actually exists in permanent income. In addition, people may experience many transitory changes in income that would cause the distribution of annual income to indicate more inequality than actually exists (Fisher et al, 2012). Economists have thus suggested that consumption, when available and measured with acuity, may be a more

appropriate indicator of permanent income. Income inequality will be measured using the traditional set of indicators: Gini and Atkinson coefficients, deciles ratios, and decomposable General Entropy indexes.

Secondly, we look into inequality of access to services. By measuring income inequality, we are only focusing on the demand side of the problem: how unequal are households when it comes to the amount of money they can spend each month? However, households with similar income – and thus economically “equal” in what they can afford – can face very dissimilar supply structures. You may live in a rural village and be able to afford paying for secondary education; however, there is no educational facility. You may live in slum and be able to afford electricity; however, the municipality is not servicing illegal settlements beyond its administrative borders. Hence, measuring access to services approximates inequality constraint imposed by the supply side.

Thirdly, we focus on inequality of opportunities. Using the Human Opportunity Index (HOI), we attempt to measure how personal circumstances – such as birthplace, gender, characteristics of the household head, family composition, etc – impact a child's probability of accessing the services that are necessary to succeed in life (timely education, running water or sanitation). Using the inequality of opportunity we can thus compute how unequal the opportunities

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<sup>2</sup> We will disregard wealth for methodological issues and data constraints.



are for say, a girl who grew up in a single headed household in rural Jordan to an uneducated mother, to a boy who grew up in an urban family where both his parents had post-secondary education.

Lastly, we delve into gender inequality. Gender inequality is looked at through two angles: (i) inequality of opportunities as a girl – access to education and health, and (ii) inequality of outcomes as a woman – participation outside on the labor market, participation in the civil society, etc. We identify the main barriers faced by women when they want to participate in society, and look into what has been done to reduce gender inequality.

The data used for this report come from three main sources. First, income inequality and inequality of opportunities are investigated using the raw data from the latest rounds of Household Expenditure and Income survey (HEIS) of 2008 and 2010. Second, most estimates of health outcomes are derived from studies using the 2012 Demographic and Health Survey (DHS). Finally, data for international comparisons are taken from the World Development Indicators published by the World Bank.

## 1 - Income Inequality

In economic literature, there has been an increasing interest in studying income distribution to justify or evaluate economic

performance and policies. To understand what life is like in a country, it is not enough to know its per capita income or the percentage of poor people, because quality of life in a country also depends on how income is distributed. In addressing regional economic inequalities in Jordan, this section assumes that income is a direct measure of individual and household wellbeing. For international and over time comparisons, this section uses real per capita expenditure values. For comparison within the country, the real values are adjusted for changes in cost of living between governorates using the spatial price index (SPI) methodology. To compute adjusted per capita expenditure, real expenditure is divided by the number of household members, and further divided by the appropriate SPI (see Box 1 for a description of the methodology).

Why does inequality matter? Mostly because high levels of inequality can impede future growth and hence poverty reduction. Credit and risk market failures are one way this can happen. The credit-constrained poor tend to have high marginal products from investment given their low initial capital endowments, but they are unable to exploit opportunities for investment. High inequality can also foster social conflict and macroeconomic instability and impede efficiency-promoting reforms that require cooperation and trust. High inequality is thus a double blow to prospects for reducing poverty: it entails less growth, and it means that the



growth is less pro-poor. Social exclusion, discrimination, restrictions on migration, constraints on human development, lack of access to finance and insurance, corruption, and uneven influence over public actions are all sources of inequality that limit the prospects for economic advancement among certain segments of the population, thereby perpetuating poverty in the future.

Recent research has pointed to the importance of certain geographic, and initial endowments inequalities. Living in a well-endowed area will sometimes mean that a poor household can eventually escape poverty, whereas an otherwise identical household living in a poor area experiences stagnation or even absolute decline. Such geographic poverty traps are one reason that some poor areas have often seen lower than average growth and hence remain poor. Inequality also stems from disparities in human resource development. By increasing the returns to schooling, freeing up labor markets increases the incentives for work and skill acquisition. However, people with relatively little schooling, few assets, or little access to credit are less able to respond to these incentives. The disadvantages they face in these other areas mean that they are less well positioned to take advantage of the opportunities unleashed by market-oriented reforms.

The remaining of this section is organized as follows. First, data and methodology are discussed. Second, inequality estimates

in Jordan are compared with values of inequality for similar countries across the world and across the Middle East and North African region. Third, the urban-rural gap is analyzed, inequality across Jordan's twelve governorates is investigated, and convergence or divergence of mean urban and rural governorate expenditure is looked into. Then, the section focuses on inequality in the poorest areas of Jordan to understand the nature of inequality among the poor and how low inequality can coexist with high poverty. Finally, the discussion focuses on inequality and socio-economic characteristics of the household and the household head.

## *Data and Methodology*

### *Data*

This section examines the raw data provided by the Household Expenditure and Income Survey (HEIS) of 2008 and 2010. HEIS 2008 and 2010 were conducted by Jordan's Department of Statistics (DoS). The household survey is conducted every few years and covers a sample of approximately 13,000 households, collecting consumption once per quarter. The sample design of the 2008 and 2010 HEIS surveys is based on the 2004 Population Census. The sample frame includes 1,735 sampling areas distributed between urban areas (1,324 units) and rural areas (411 units). The sample is a stratified multistage random sample of 13,000 households and is representative at the

national and governorate level. The master sample is stratified such that urban and rural areas are self-independent strata. Each stratum (urban or rural) is divided into internal layers (governorates). Primary sampling units (PSUs) were systematically selected, using sampling interval and a random start. Using maps, these areas were further subdivided into a number of chunks, each with one chunk chosen randomly from each area. Finally, 8 households were selected randomly from each chunk. Most of the common questions between the two surveys were considered comparable for the purposes of calculation of expenditure aggregates.

### **Box 1: Spatial Price Index (SPI Methodology)**

Spatial price indexes (SPIs) measure the difference in prices between regions, and in Jordan's case, between governorates. SPIs adjust each household's consumption to the national average, to make sure that differences in cost of living in each governorates are accounted for. This is a methodology similar to purchasing power parity, which account for differences in prices across countries. Suppose we have two individuals, one with JOD200 in Amman and another one with JOD 150 in Balqa. Suppose a basic basket of goods costs JOD100 in Jordan on average; it costs JOD110 in Amman, and JOD90 in Balqa. It is thus more expensive to get the average food basket in Amman than it is for the country as a whole, while an individual in

Balqa will be able to afford the same basic basket for less money. Without adjusting the price with SPIs, respective income for the two individuals will be JOD200 and JOD150. If we use price deflators, the individual in Amman now has  $JOD200 * 100 / 110 = 181$  and the individual in Balqa has  $JOD150 * 100 / 90 = 167$ . Differences are less stark and inequality is lower.<sup>3</sup>

Source for SPI: <http://stats.oecd.org/glossary/detail.asp?ID=4893>

The sample of households used in this analysis was restricted to households for which information on expenditure was available for all 4 visits, leading to a total number of households of 10,961 in 2008 and 11,223 in 2010. This is to ensure that data on expenditure patterns is as close to reality as possible: with four observations, seasonality of expenditures, as well as unexpected expenses (sickness, wedding, etc), are smoothed over time and averaged.

The diagnostics and recommendations drawn in this report are thus reflective of the situation in Jordan as of 2009. The latest data available for this analysis was the 2010 HEIS, which collected information throughout 2009 among Jordanian households. One should thus be careful when reading the diagnostic

<sup>3</sup> The same methodology of spatial price indexes is used by the DoS to compute the official poverty and vulnerability estimates for the latest rounds of data processed so far, i.e. 2008 and 2010.

and recommendations of this report, as the situation since 2009 has changed, especially with the influx of refugees from neighboring countries.

## *Methodology*

This section on income inequality uses a wide array of inequality measures, and classes of measures. It presents at first the Gini coefficient, which is the most commonly used inequality measure. However, a number of alternative methods are also presented, as they provide the means to develop a more nuanced understanding of the distribution of income. Income inequality measures such as decile ratios, the generalized entropy index and the Atkinson index offer the ability to examine the effects of inequalities in different areas of the income spectrum, enabling more meaningful quantitative assessments of qualitatively different inequalities.

The Gini coefficient has been the most popular method for operationalizing income inequality in the economic literature. The Gini coefficient measures the inequality among values of a frequency distribution (for example levels of income). A Gini coefficient of zero expresses perfect equality, where all values are the same, when everyone has the same income. A Gini coefficient of one expresses maximal inequality among values – for example where only one person has all the income or consumption, and all others have none.

The Atkinson index allows for varying sensitivity to inequalities in different parts of the income distribution. This was important to Atkinson, who was concerned with the inability of the Gini framework to give different parts of the income spectrum varying weights. In his influential text *The Economics of Inequality*, Atkinson noted that inequality “cannot, in general, be measured without introducing social judgments. Measures such as the Gini coefficient are not purely ‘statistical’ and they embody implicit judgments about the weight to be attached to inequality at different points on the income scale”. Therefore, his index incorporates a sensitivity parameter ( $\epsilon$ ); which can range from 0 (meaning that the researcher is indifferent about the nature of the income distribution), to infinity (where the researcher is concerned only with the income position of the very lowest income group). Atkinson argued that this index was a way to incorporate Rawls' conception of social justice into the measurement of income inequality.

The General Entropy (GE) index, like the Atkinson index, is more correctly labeled a family of income inequality measures. It also incorporates a sensitivity parameter ( $\alpha$ ) that varies in the weight given to inequalities in differing parts of the income spectrum. Typically, four GE measures are used: these are GE $-1$ , GE $0$ , GE $1$  and GE $2$ . The more positive  $\alpha$  (the sensitivity parameter;  $-1, 0, 1$  or  $2$ ) is, the more sensitive GE $\alpha$  is to inequalities at the top of the income

distribution. The theoretical range of GE values is 0 to infinity, with 0 being a state of equal distribution and values greater than 0 representing increasing levels of inequality. Another beneficial property of the GE measure is that it is decomposable; that is, it can be broken down to component parts (i.e. population subgroups). This enables analysis of between- and within-area effects. The GE index has been used to great effect in the literature on the health effects of income inequality. The literature on income inequality measurement also includes two measures, which are closely related to the GE index. More specifically, the mean log deviation of income measure is functionally equivalent to the GE0 index and Theil's entropy measure is equivalent to the GE2 index.

### *Inequality in Jordan has remained low*

Jordan displays inequality measures rather low in comparison to that of other countries with similar per capita GDP. Inequality in Jordan, as measured by per capita expenditure from the HEIS, stands at a Gini coefficient of 33.7 percent in 2010.<sup>4</sup> This is similar in level to that of the developed European Organization for Economic Cooperation and Development (OECD) members. It is significantly lower than income inequality in the United States and the UK (which are around 40), and is likewise lower than inequality in most countries that are close to Jordan in terms of

gross domestic product (GDP) per capita – upper-middle income (UMI) countries. For example, in 2010, Colombia, South Africa and Thailand – countries that, in terms of GDP per capita (measured in purchasing power parities (PPPs) terms), are around Jordan's income level – have higher inequality: Colombia had a Gini of 54 percent; South Africa, 65 percent; and Thailand, 39 percent.<sup>5</sup>

Jordan displays inequality measures comparable to that of other Middle East and North African (MENA) countries. Jordan compares well with other Arab countries for which we have the data (see left panel of Figure 1). MENA countries are distinguished by relatively low inequality with Gini coefficients ranging between around 30 and 41, and Jordan's inequality is, if anything, in the lowest part of the distribution. It is higher only to Iraq (Gini of 30) and Egypt (Gini of 31), and remains well below inequality levels in Tunisia and Yemen (Gini of 36), and Morocco (Gini of 40).

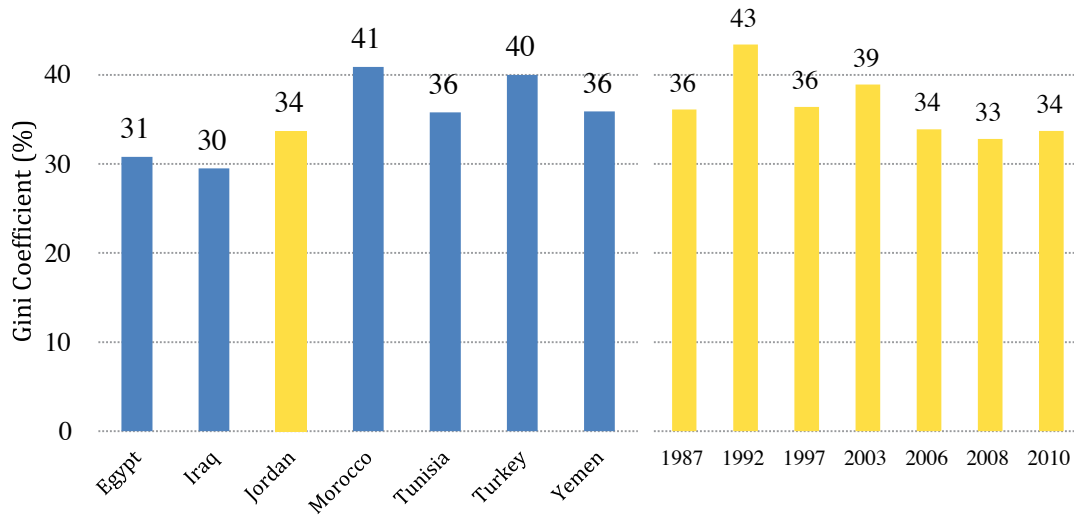
<sup>4</sup> Inequality is measured using real per capita expenditure, and without adjusting for spatial differences in prices.

<sup>5</sup> Knowledge about income distribution is usually based on inference from expenditure and income surveys. MENA and Jordan's household surveys are not all strictly comparable, given that some countries measure income inequality, while others measure consumption/expenditure inequality. While comparisons are not perfect, it is worth summarizing the different measures that have been published to date.

Figure 1: Inequality in Jordan is low by international standards

1.1. Inequality in select countries

1.2 Inequality in Jordan



Note: Egypt (2008), Iraq (2012), Jordan (2010), Morocco (2007), Tunisia (2010), Turkey (2011), Yemen (2005).

Source: World Development Indicators, World Bank (2014).

It is also much lower than Turkey, which has a higher per capita GDP of USD18.976 in 2013, and lower poverty rates of less than 3 percent.<sup>6</sup> Although we cannot be sure about the rankings because the welfare concepts and survey methodologies differ, there is no evidence that Jordan's inequality level is higher than in other countries of the Region.

<sup>6</sup> World Development Indicators, using PPP for the per capita GDP and the national poverty line for 2012.

Table 1: Different measures of income inequality using HEIS 2010

	Per capita expenditure <sup>7</sup>		Per capita income <sup>8</sup>			
	No deflators	Spatial deflators (SPI)	Total Disposable		Before social transfers	
	No deflators	Spatial deflators (SPI)	No deflators	Spatial deflators (SPI)	No deflators	Spatial deflators (SPI)
P90/P10	4.2	4.1	5.2	5.1	7.0	7.0
P90/P50	2.2	2.2	2.4	2.4	2.4	2.4
P10/P50	0.5	0.5	0.5	0.5	0.3	0.3
P75/P25	2.1	2.1	2.4	2.4	2.5	2.6
Gini	33.7	32.9	41.1	40.3	45.1	44.4
Atkinson <sub>1</sub>	16.8	27.5	24.8	24.2	31.9	31.1
GE <sub>0</sub>	18.4	17.5	28.6	27.7	38.4	37.3
GE <sub>1</sub> /Theil	20.5	19.1	38.7	37.0	47.9	46.0

Note: Spatial deflators are spatial price indexes (SPI) deflating expenditure and income to make every governorate comparable to the average standard of living in

Over the past decades, inequality fluctuated in Jordan, but reached an all-time low since 2006. Inequality in Jordan improved slightly recently, with Gini coefficients below 34 percent for the last 3 rounds of HEIS data available (2006, 2008 and 2010). However, the decrease in inequality was not smooth, with estimates fluctuating between above 36 from 1987 and 2003: inequality levels experienced a few spikes in the 1990s and early 2000s, with Gini coefficients rising above 43 percent in 1992 and 39 percent in 2003 (see Panel 2 of Figure 1). While the data does not allow us to draw any conclusions on the impact of the Syrian crisis – the latest round of data available is HEIS 2010 – we

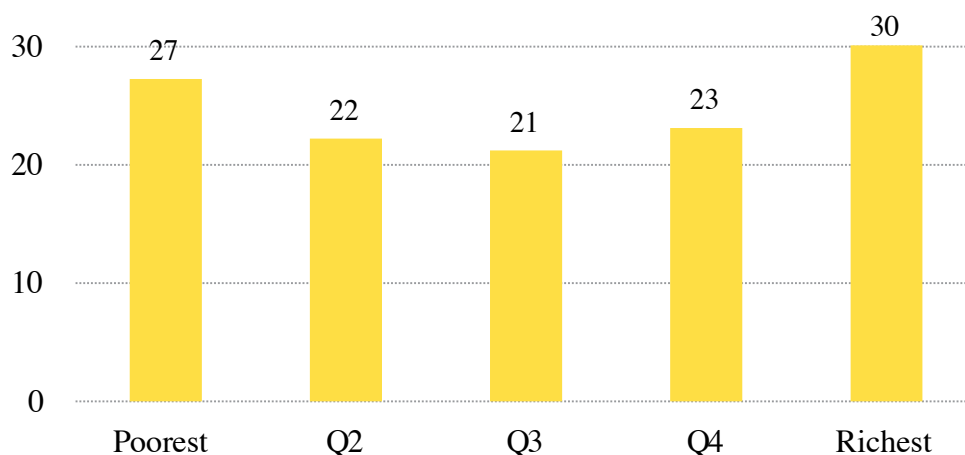
can see from Panel 2 of Figure 1 that since 2003, Jordan’s inequality level remained quite resilient to economic ups and downs in the Region.

Income inequality is higher when measured with income than with consumption. The results hold true whether one uses the decile ratios, the Gini coefficient, or the Atkinson and General Entropy class of

<sup>7</sup> Consumption is spending on all goods and services for current consumption, including alcohol and tobacco.

<sup>8</sup> Total disposable income is money income from employment, investment, government transfers, and inter-household transfers of money. Income before social transfers is total disposable income minus government transfers.

Figure 2: Share of social transfers to total income By quintile



Note: the share of social transfers to total income is obtained by dividing the amount of income received from social transfers by the total income received by the household. Source: HEIS 2010.

measures.<sup>9</sup> For the purpose of measuring how inequality affects Jordan, and to present robust conclusions, table 1 presents detailed results of inequality based on expenditure, and income before and after transfers, with and without taking into account spatial price differences. As expected, income inequality using total disposable income and the Gini measure is 7 percentage points (p.p.) higher than inequality measured with expenditure. This is consistent with most recent research, which shows that consumption inequality is lower than income inequality, and its increase is less than the increase in income inequality (Heathcote et al., 2010). This is notably due to the fact that the top decile earns comparatively much more than it can spend on average: the P90/P10 ratio is much larger when measured with income that it is when measured with expenditure: 5 versus 4

percent, meaning some in the top decile earns 5 times as much as someone in the bottom decile, while someone in the top decile spends 4 times as much as someone in the bottom decile.

Furthermore, social transfers buffer income inequality by bringing down income inequality measures by 4 percentage points. While income inequality measured with total disposable income is around 40 percent, it would be at about 45 percent without social transfers. Social protection programs thus bring inequality down by 5 percentage points or 10 percent. Social transfers have little impact on the upper-middle part of the income distribution (the P75/P25 and P90/P50 ratios are largely left unchanged), but have a large impact on inequalities between the extreme parts of the distribution: the P90/P10 ratio jump from 5 to 7 percent in the absence of

<sup>9</sup> See discussion in Section 1 on the Gini index, the General Entropy and the Atkinson class of inequality measures.



government transfers, meaning that a rich household would earn 7 times more than a poor household before transfers.

However, social protection transfers are not targeted as a whole to the poorest (see Figure 2). The bottom and top quintile receive almost the same share of their total income from social protection transfers. Given the difference in per capita income between these two opposite quintiles, this means that the richest quintile receives about 10 times more money from social welfare per capita than the poorest quintile. The data does not allow for a disaggregation of social protection by category of social transfers, especially between social assistance (targeted to the poor) and social insurance (not targeted and including mostly pensions). Given that the top quintile has a much larger share of pensioners than the other quintiles, we can assume that the larger share – and amount – of money transferred to the richest quintile is largely driven by pensions.

***Box 2: Discrepancies in published Gini indexes***

While all inequality estimates for Jordan are published using HEIS datasets, inequality measures can vary drastically from publication to publication. The discrepancies between published Gini indicators stem from two methodological choices: (i) the choice of welfare measure, (ii) the choice of methodology to aggregate income or

consumption, and (iii) whether or not data account for spatial differences in prices.

First, using income instead of expenditure data will lead to very different estimates of inequality. Higher income households tend to have expenditure patterns lower than their actual wealth, which lower inequality estimates based on expenditure. Second, the choice of items to be kept in either total income or total expenditure can lead to different estimates. While some publications use a total expenditure measures which includes alcohol and tobacco, the DoS publishes Gini indicators excluding alcohol and tobacco. Third, SPIs adjust wealth indicators so that they are all relative to the country's average price levels. By construction thus, they have a converging effect and lower most inequality measures.



Table 2: Different Gini estimates

Source	Measure used	Gini
This report	Per capita expenditure, Spatial Price Indexes HEIS 2010	32.9
World Development Indicators (World Bank, 2014)	Per capita expenditure HEIS 2010	33.7
Department of Statistics	Per capita expenditure, No tobacco, no alcohol, HEIS 2010	XX
Shahateet (2006)	Per capita income HEIS 2002	39.6

Source: Shahateet(2006), Department of Statistics, World Bank (2014).

As expected, inequality measured with spatial deflators is consistently lower than without. As mentioned earlier in Box 1, SPIs measure the difference in prices between governorates and adjust them. By construction, income and consumption will converge, and inequality will most likely go down. In all three cases: expenditure, disposable income, and income without social transfers, Gini coefficients go down by 1 percentage point. For instance, the Gini measured with per capita expenditure lowers from 33.7 to 32.9. On the other hand, SPIs have no impact on decile ratios, as the wealth measure of both, rich and poor households, are adjusted by the same coefficient for all those living in the same governorate.

## *But regional inequality remains important*

### *The urban-rural gap is low*

At first sight, the urban-rural gap in Jordan appears limited. The average per capita urban expenditure is 27 percent higher than the average rural income (see Table 3). As a consequence, urban dwellers have a slightly larger share of the country's total expenditure than their population share: 85.7 percent versus 82.6 percent. Inequalities within urban areas are however larger than in rural areas: 33.6 percent versus 27 percent. Alternate measure of inequality – namely the GE0 and GE1 (or Theil index) – show similar patterns: inequality is much higher in urban than it is in rural areas, especially when more weight is given

to the bottom of the distribution (GE0).<sup>10</sup> This is consistent with the international evidence on urban and rural inequalities: urban dwellers experience higher levels of inequality than rural households.

households is quite homogeneous across the 5 quintiles of the expenditure distribution: in 2010, 17 percent of the population is rural. The lower two quintiles have 21 percent of their population living in rural areas, and 10 percent of the top quintile is rural. As

Table 3: Urban-rural divide

	Urban	Rural	National
Mean (normalized) per capita expenditure	1.04	0.82	1
Population share (%)	82.6	17.4	100
Share of total consumption (%)	85.7	14.3	100
Inequality (Gini)	33.6	27.0	32.8
Inequality (GE <sub>0</sub> )	18.2	12.0	17.5
Inequality (GE <sub>1</sub> – Theil Index)	20.2	12.5	19.4
Between component (GE <sub>0</sub> )	-	-	0.4

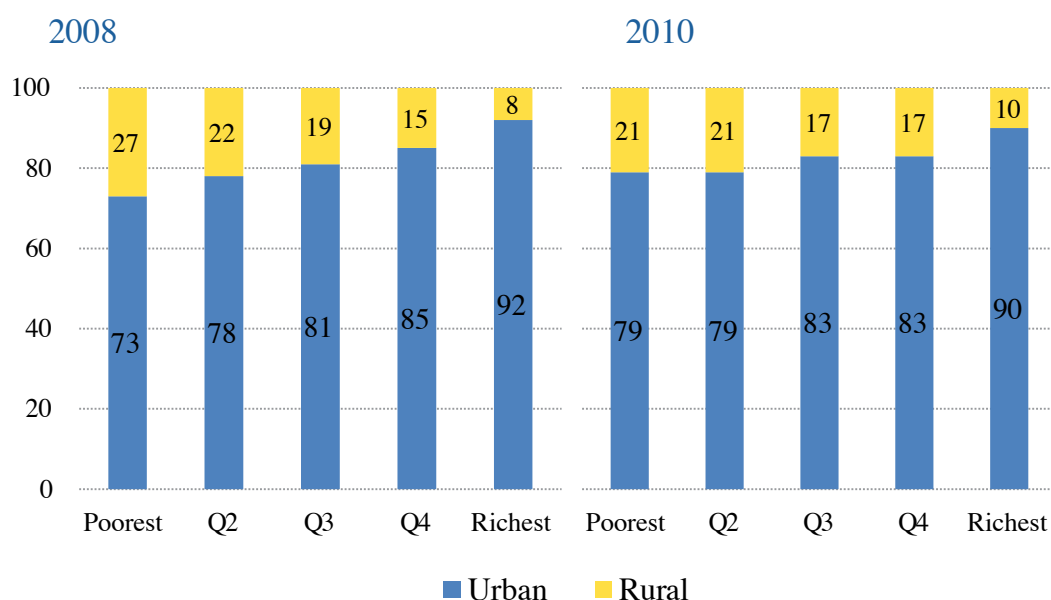
Source: HEIS 2010.

The urban-rural divide also contributes weakly to the overall inequality. Inequality is often decomposed by population groups to assess the contribution to total inequality of inequality within and between groups, for instance within and between individuals in urban and rural areas. Because the Gini coefficient cannot be decomposed into “within” and “between” inequality, we focus on the decomposable General Entropy class of indexes. Table 3 shows that, out of the total (all-Jordan) GE0 coefficient of 17.5 percent, 0.4 points (or about than 2.1 percent) are explained by the difference in mean expenditure between urban and rural areas, which is very low. Moreover, Figure 2 shows that the share of urban and rural

compared to 2008, the distribution of income between urban and rural areas has become more equal: in 2008, 27 of the bottom quintile and 8 percent of the top quintile were rural, displaying wider differences.

<sup>10</sup> See discussion in Section 1 on the Gini index, the General Entropy and the Atkinson class of inequality measures.

Figure 3: Share of urban and rural population by expenditure quintiles



Note: Per capita expenditure was deflated by Spatial Price Indexes (SPIs). Source: HEIS 2008, HEIS 2010.

### *Inequality between governorates is markedly higher*

Amman is the most unequal governorate with a Gini coefficient of 36.8 percent. It is probably driven by the large share of urban population (94 percent), which has very different levels of education, skills and assets, leading to higher levels of inequality. Governorates with higher average income then follow: Balqa, Karak, Irbid, Zarqa and Madaba have the highest levels of per capita expenditure and the highest levels of inequality, above 27 percent. Governorates with lower average income – Ma’an, Mafraq, Ajlun, Aqaba and Tafila – also present low levels of inequality, between 23 and 27 percent. The only exception to this picture

is the governorate of Jarash, where average income is relatively high, but inequality is the lowest of the country at 22.4 percent. The results and rankings are not sensitive to the choice of inequality measures chosen, i.e. Gini, Theil, or GE0 (see Table 4). These results are consistent with the rankings obtained by DoS (2013) using wealth quintiles constructed with the 2012 demographic and health survey (DHS).

Table 4: Inequality measures by governorate

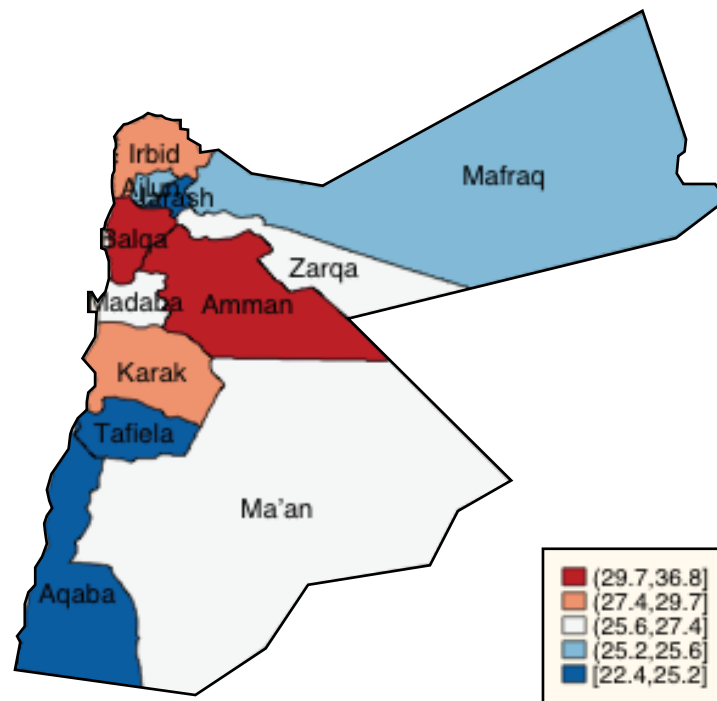
	Mean (normalized) per capita expenditure	Population share (%)	Share of total consumption (%)	Inequality (Gini)	Inequality (GE <sub>0</sub> )	Inequality (GE <sub>1</sub> )
Jordan	1	100	100	31.8	16.5	18.1
Amman	1.2	38.5	46.6	36.8	21.8	23.5
Balqa	0.9	6.7	5.8	31.6	16.2	17.2
Karak	1.0	3.9	3.8	29.7	14.6	14.6
Irbid	0.9	18.0	15.6	27.6	12.4	13.3
Zarqa	0.9	14.9	13.6	27.4	12.4	13.0
Madaba	0.9	2.5	2.2	27.2	11.7	12.6
Ma'an	0.7	1.9	1.3	26.3	11.6	11.2
Mafraq	0.8	4.7	3.6	25.6	11.1	11.2
Ajlun	0.7	2.4	1.8	25.3	10.3	10.6
Aqaba	0.8	2.2	1.9	25.2	10.9	11.5
Tafiela	0.8	1.4	1.1	23.6	8.8	9.0
Jarash	1.0	2.9	2.8	22.4	8.3	8.9

Source: HEIS 2010.

Inequality between governorates is markedly higher than inequality between urban and rural areas. Again, and because the Gini coefficient cannot be decomposed into “within” and “between” inequality, we focus on the decomposable General Entropy class of indexes. Table 4 shows that, out of the total (all-Jordan) GE<sub>0</sub> coefficient of 17.5 percent, 1.5 points (or about 8.6 percent) are explained by the difference in mean expenditure between governorates. This is much larger than the urban/rural contribution to total inequality, which was about 2 percent. These results are consistent with Shahateet (2006) who finds that regional inequalities accounted for a large part of Jordan’s overall inequality.

There is no particular relationship between governorates’ levels of inequality and urbanization rates: more urbanized governorates do not display significantly higher Gini estimates. However, there seems to be a weak correlation between income levels and Gini coefficients: governorates with higher per capita income usually display higher levels of inequality: Amman and Karak have the highest income per capita and the largest Gini estimates, while Ajlun and Tafiela have lower per capita income and inequality measures (not shown).

Figure 4: Regional inequality Gini coefficient (%)



Source: HEIS 2010.

### *Badia and camp dwellers are among the most vulnerable*

While both disproportionately poor, Badia and camp dwellers face very different situations regarding inequality. Unfortunately, none of the HEIS surveys allow for a special look into inequalities within Badia and/or camp communities. However, the most recent Demographic and Health Survey (DHS 2012) splits its statistics across Badia and camp dwellers. Both groups are disproportionately represented among the lowest quintiles of the income distribution: seven in ten Badia or camp dwellers fall into the lowest 2 quintiles of the wealth distribution. Among themselves, Badia are less unequal than non-

Badia; but camp dwellers are just as unequal as non-camp residents.

### *Less educated, prime-age employed men with large families are the worst off*

#### *Gender and marital status*

There is a reverse inequality gap between men- and women-headed households (see left panel of Figure 5). The bottom quintiles of the income distribution have the largest share of male-headed households (90 percent). On the other hand, the richer quintiles display larger shares of female-headed households: 13 and 23 percent respectively for the fourth

and top quintiles. This reverse inequality gap can be explained by the fact that richer households have a larger share of older household members, which is linked to a higher proportion of widows. The right panel of Figure 5 shows that the top quintile has 2.5 times more widows/widowers than the bottom quintile.

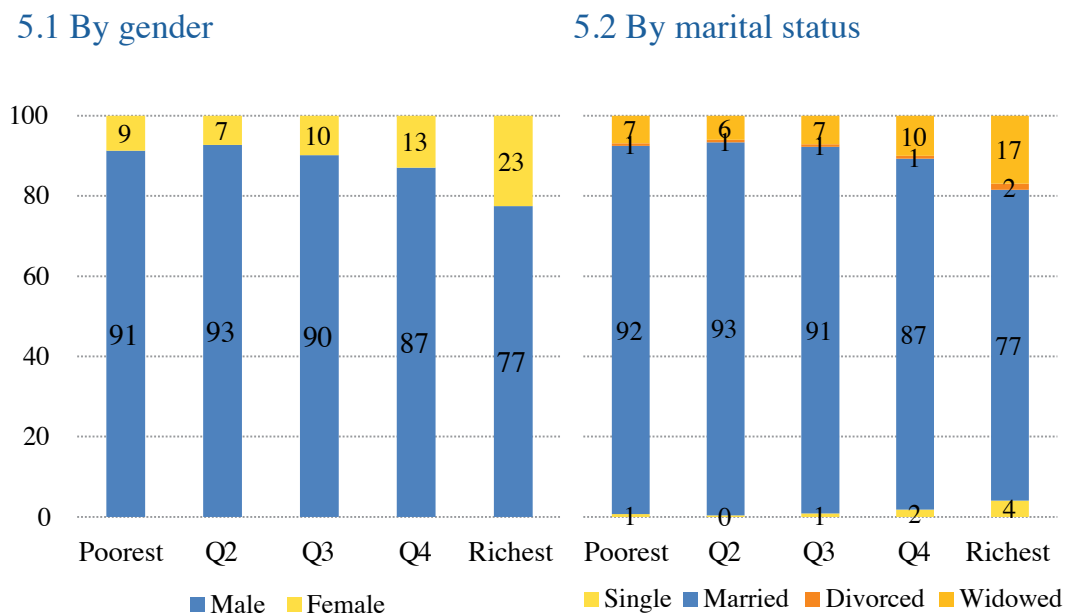
### Education

Education and income display the typical relationship: poorer quintiles have less educated heads of households (see Figure 6). 80 percent of the household heads in the poorest quintile have less completed primary school. This is almost twice the average in the top income bracket (48 percent).

In particular, educated household heads, i.e. individuals with a tertiary degree, are overly represented in the top income quintile, where 38 percent of the household heads have some sort of university degree. This is almost 5 times as much as in the lowest income quintile. While it is impossible to draw any causality link between education and income,

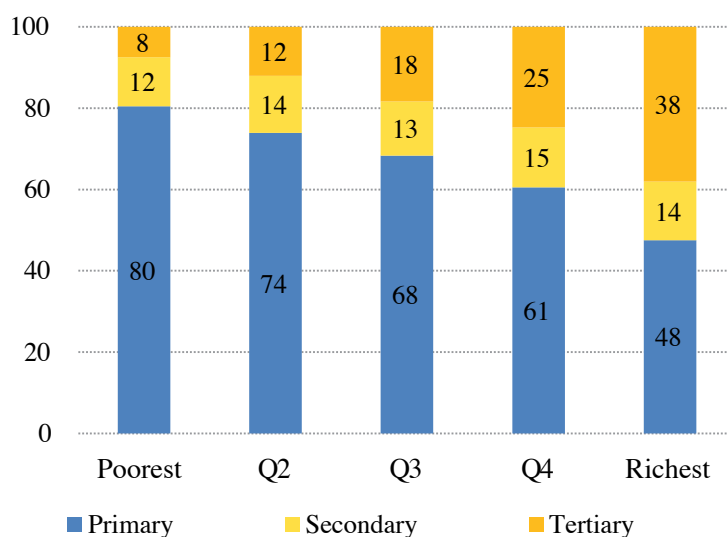
Figure 6 clearly shows that education is highly correlated with income inequality.

Figure 5: Inequality by gender and marital status of household head



Source: HEIS 2010.

Figure 6: Inequality by education of the household head



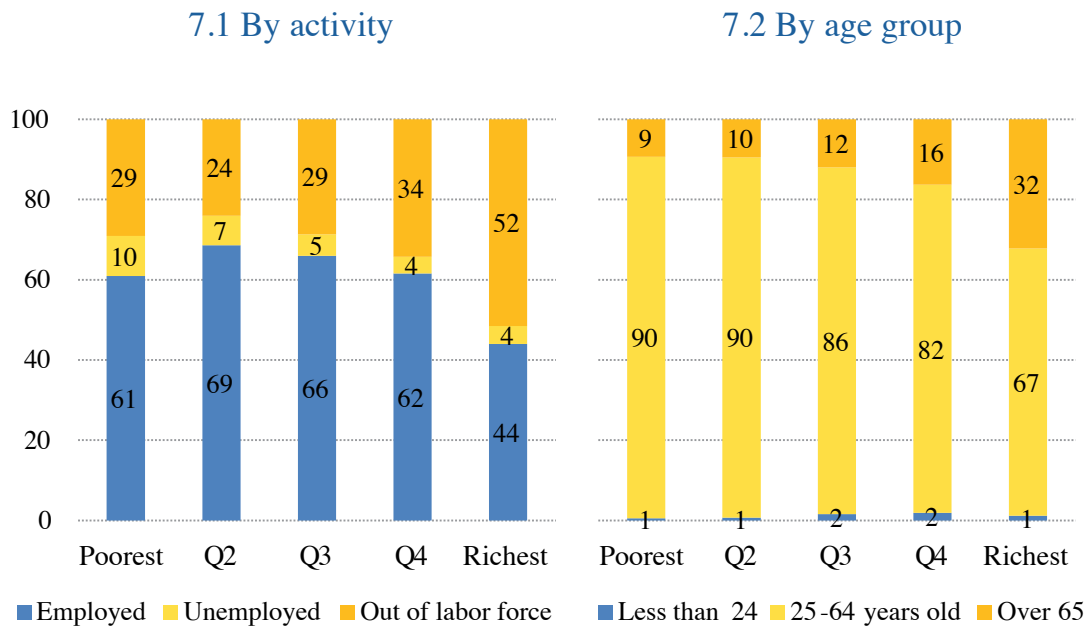
Source: HEIS 2010.

### *Economic activity and age*

Prime-age household heads engaged in the labor market are disproportionately represented in the lower part of the income distribution (see Figure 7). 71 percent of household heads in the bottom quintile are engaged in the labor market, with respectively 61 and 10 percent working or looking for work. On the other hand, over half of the top income quintile is out of the labor force (56 percent). The progression is however not linear, with the second and third income quintiles including a larger share of household heads engaged in the labor market (76 and 71 percent respectively). Similarly, the highest income brackets record the largest share of household heads over 65, i.e. one third. As a comparison, that share drops below 10 percent for the two lowest income quintiles.

These results suggest that the middle-class is the most engaged in economic activities, while the upper class has a large share of retirees.

Figure 7: Inequality by activity and age group of the household head



Source: HEIS 2010.

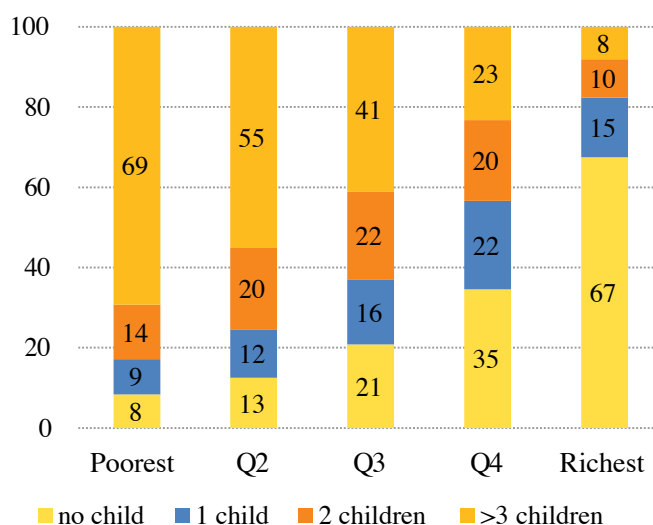
### Household composition

Larger households are over represented in the bottom income quintile (see Figure 8). Over two thirds of households in the bottom income quintile have three children or more. There is a steep gradient of number of children and quintiles: moving up each quintile, the share of households with more than three children drops by 15 percent, dropping down to 8 percent in the top quintile. The latter is actually composed essentially of childless families (over two thirds), which corresponds to the fact that there is a large share of households with retirees, who have no children left to take care of. In addition, just as nearly all household heads were married, nearly all households have at least two adults to take care of their children, hence a simple

disaggregation along the number of children only, and not the composition of adults.



Figure 8: Inequality by household composition



Source: HEIS 2010.

## 2 – Access to Services

Universal access to key goods and services such as clean water, basic education, health services, minimum nutrition and citizenship rights is a crucial step towards justice and fairness. Expanding access to these goods and services has long been a central issue in the analysis of economic development and in public policy discussions, including the Millennium Development Goals (MDGs) initiative. The chance people have to pursue the life of their choosing involves the opportunity to access key goods and services, which constitute human capital investments that expand each individual’s abilities and options. The goal of providing universal access to key goods and services is often included in national development plans, national constitutions, and international

agreements such as the Universal Declaration of Human Rights.

### *Nearly universal coverage of basic services*

Jordan achieved nearly universal coverage and good availability of water services, without differences across place of residence, nor income quintile. Access to an improved source of water is universal in Jordan: 96 percent of the population is connected to the public water network, and 90 percent of the households report weekly availability of water, irrespective of residence or income quintile.<sup>11</sup>

Moreover, living conditions are quite evenly distributed across places of residence and

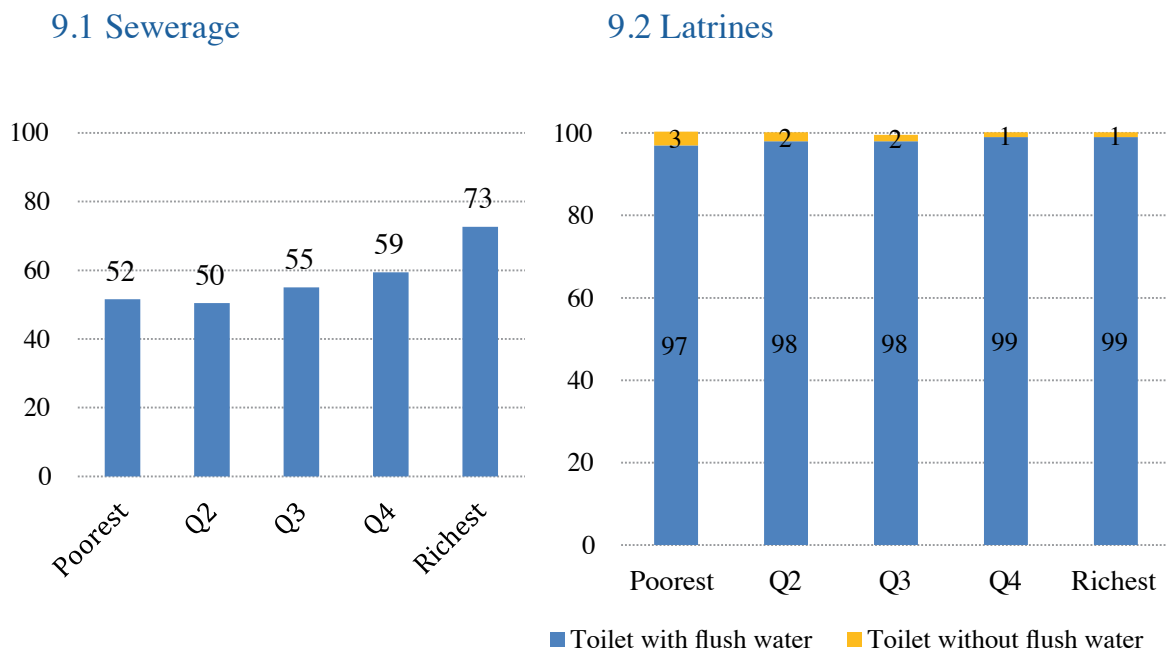
<sup>11</sup> HEIS 2010.

income quintiles. The DHS data also indicate that almost all households in Jordan have a separate room used as a kitchen (99 percent) and a separate bathroom (99 percent). In addition, nearly all households use natural gas for cooking regardless of the place of residence, and electricity reaches all households.

and rural dwellers: while 2 percent only of rural dwellers are connected to a sewerage system, 70 percent of urban dwellers are. The story is less compelling when looking at access to toilets, as both, urban and rural settings are quite similar.

On the other hand, access to sanitation varies across income quintile, with lower access to sewerage network for those in the poorest quintile (see Figure 9). Access to safe water and sanitation are basic determinants of better health, and may reinforce income inequalities, as poorer households may face worse health outcomes than better off families. The difference in access to sanitation however, is largely driven by difference between urban

Figure 9: Better access to sanitation for richer dwellers



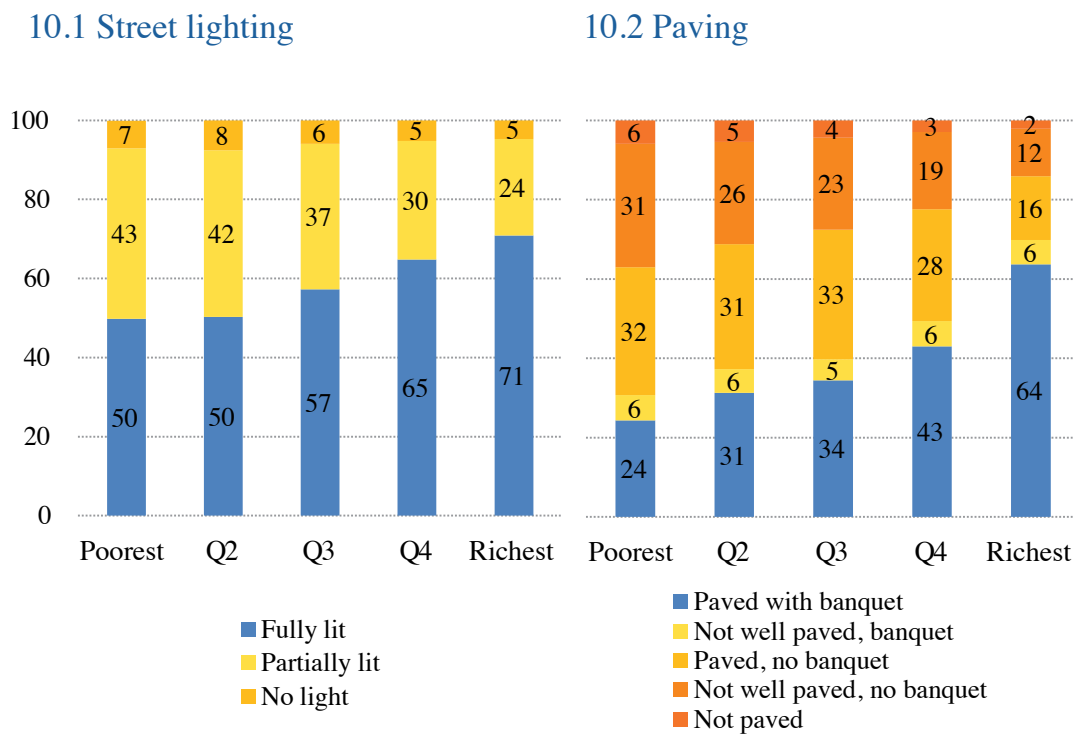
Source: HEIS 2010.

And so does access to roads (see Figure 10). Household in the poorest income quintile are less likely to be served by fully, or even partially lit roads: half of the households in the bottom quintile only have access to fully lit roads. On the other hand, 71 percent of the top quintile has. The story is similar for paved roads, where more than a third of the bottom quintile is served by an unpaved or poorly paved road with no banquet. On the other hand, two thirds of the households in the top quintile have access to a paved road with banquet.

of the households have a television set, 93 percent have a satellite dish, 98 percent own a mobile phone (HEIS 2010). Inequality of access to services however can be seen when looking at access to computers and Internet: only 27 percent of the poorest quintile own a computer, and 2 percent have an internet connection at home. This contrasts sharply with the richest quintile, where 71 percent of the households have access to a computer and 43 percent have Internet. Similar discrepancies can be observed between urban and rural (see Figure 11).

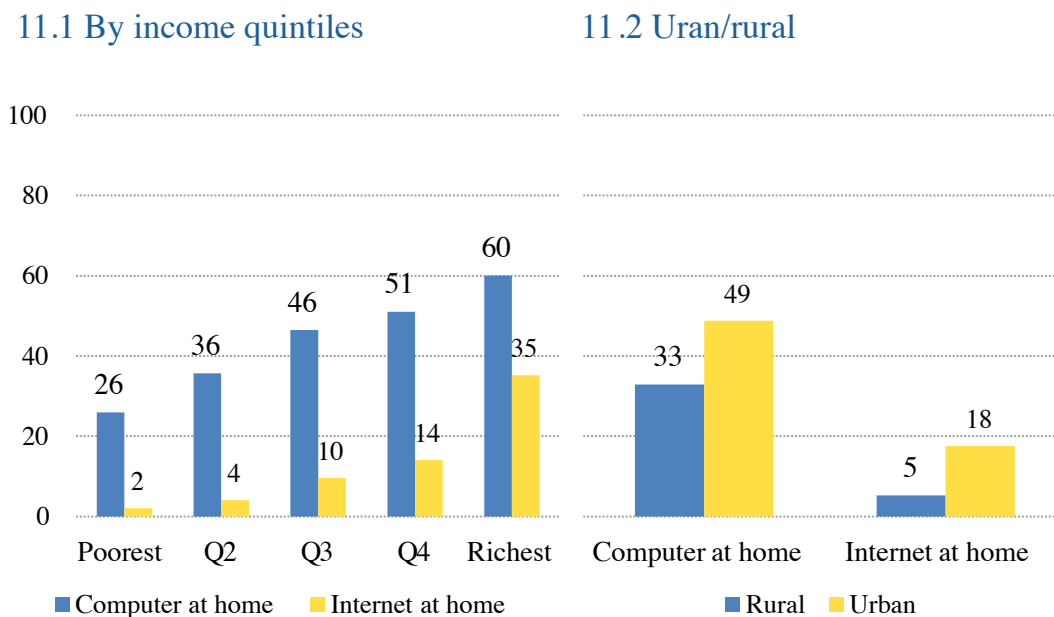
Furthermore, basic connectivity is reaching nearly all households in Jordan. 99 percent

Figure 10: Better access to roads and street lighting for richer dwellers



Source: HEIS 2010.

Figure 11: Access to computers is unequal



Source: HEIS 2010.

***Limited inequality regarding access to health and education***

Similarly, distance to educational and medical facilities is not much affected by residence or income quintile. Table 5 shows that irrespective of household wealth, 78 percent of the population lives less than 2km from a kindergarten, 87 percent of the population lives within 2km of a public primary school, and 80 percent live within 2km of a secondary public school. Similarly, residence, or whether a household resides in an urban or a rural area, has little impact on inequality or access to educational facilities. The only exception is access to kindergarten, which remains limited in rural areas: while 86 percent of urban dwellers are located less than 2km from a kindergarten, 46 percent of rural households have the same luck.

Table 5: Distance to educational facilities by income quintile

	Income					Residence	
	Poorest	Q2	Q3	Q4	Richest	Urban	Rural
Kindergarten							
<0.5km	28.0	27.4	33.2	36.0	32.2	13.8	34.9
0.5-1km	24.3	25.3	27.2	26.3	28.2	14.4	28.7
1-2km	21.3	24.0	18.9	19.3	20.5	17.9	21.6
2-4km	11.5	10.7	11.1	10.1	11.1	14.3	10.2
4-7km	3.5	3.7	3.6	3.4	3.9	9.9	2.1
7-10km	2.8	2.9	2.6	2.4	1.9	9.4	1.0
10-20km	2.4	1.9	0.8	0.7	0.9	6.0	0.4
>20km	5.0	3.5	2.3	1.4	0.7	13.3	0.4
N/A	1.3	0.7	0.5	0.6	0.7	1.0	0.7
Primary school (public)							
<0.5km	36.3	37.2	35.4	38.6	27.7	33.3	35.9
0.5-1km	32.2	31.2	34.4	32.1	27.5	31.5	31.7
1-2km	17.6	18.7	18.5	20.3	26.4	22.3	19.3
2-4km	8.9	10.1	10.0	7.1	11.8	9.0	9.6
4-7km	3.8	1.8	1.4	1.7	5.1	2.4	2.8
7-10km	0.6	0.3	0.2	0.2	0.3	0.7	0.2
10-20km	0.1	0.2	0.0	0.0	0.6	0.1	0.2
>20km	0.4	0.4	0.0	0.1	0.0	0.6	0.1
N/A	0.2	0.1	0.0	0.1	0.6	0.0	0.2
Secondary school (public)							
<0.5km	25.6	26.9	25.7	26.7	20.6	22.7	25.9
0.5-1km	27.5	26.4	29.2	27.6	25.6	24.3	28.0
1-2km	26.6	26.8	25.5	27.5	28.4	26.1	27.0
2-4km	12.6	14.2	14.2	14.1	17.4	15.2	14.1
4-7km	5.3	3.5	3.8	2.1	5.3	5.6	3.7
7-10km	1.2	0.7	1.1	1.4	1.4	2.9	0.7
10-20km	0.3	1.1	0.3	0.2	0.8	2.0	0.2
>20km	0.8	0.2	0.3	0.1	0.0	1.2	0.1
N/A	0.1	0.1	0.2	0.4	0.4	0.1	0.3

Source: HEIS 2010.

Similarly, Table 6 shows little inequality when it comes to access to public health facilities, be they hospitals or clinics.

Interestingly, there is even a reverse case of inequality with the richest income quintile and urban dwellers living further away from

Table 6: Distance to health facilities by income quintile

	Income					Residence	
	Poorest	Q2	Q3	Q4	Richest	Urban	Rural
Public hospital							
<0.5km	2.7	3.6	3.0	2.8	2.5	0.2	3.6
0.5-1km	6.0	7.5	8.7	11.5	7.4	1.2	9.7
1-2km	13.0	9.2	13.6	13.3	16.5	2.3	15.3
2-4km	15.9	18.4	19.8	21.5	25.5	5.9	22.9
4-7km	17.4	19.6	20.4	18.0	19.8	10.3	20.9
7-10km	13.7	12.5	12.6	12.1	11.4	13.9	12.2
10-20km	14.2	13.6	11.0	10.2	9.8	23.6	9.4
>20km	16.9	15.6	10.9	10.5	6.6	42.5	5.8
N/A	0.1	0.1	0.1	0.2	0.5	0.0	0.2
Public clinic							
<0.5km	19.2	18.8	19.0	17.8	10.4	19.3	17.1
0.5-1km	26.9	26.2	30.7	27.2	20.7	26.7	26.6
1-2km	26.1	28.8	26.4	30.0	31.0	23.8	29.2
2-4km	15.4	16.8	16.6	16.6	23.7	16.3	17.7
4-7km	7.5	5.4	5.0	5.4	7.8	6.3	6.2
7-10km	2.9	2.5	1.5	1.6	2.7	4.3	1.8
10-20km	0.5	0.7	0.4	0.3	1.9	1.8	0.4
>20km	0.9	0.7	0.5	0.4	0.8	1.5	0.5
N/A	0.6	0.1	0.1	0.7	1.0	0.1	0.6

Source: HEIS 2010.

public clinics, suggesting a better coverage of poorer areas by publicly funded health institutions.

### 3 – Equality of Opportunities: Children and Youth

*Most children live in the poorest income quintiles*

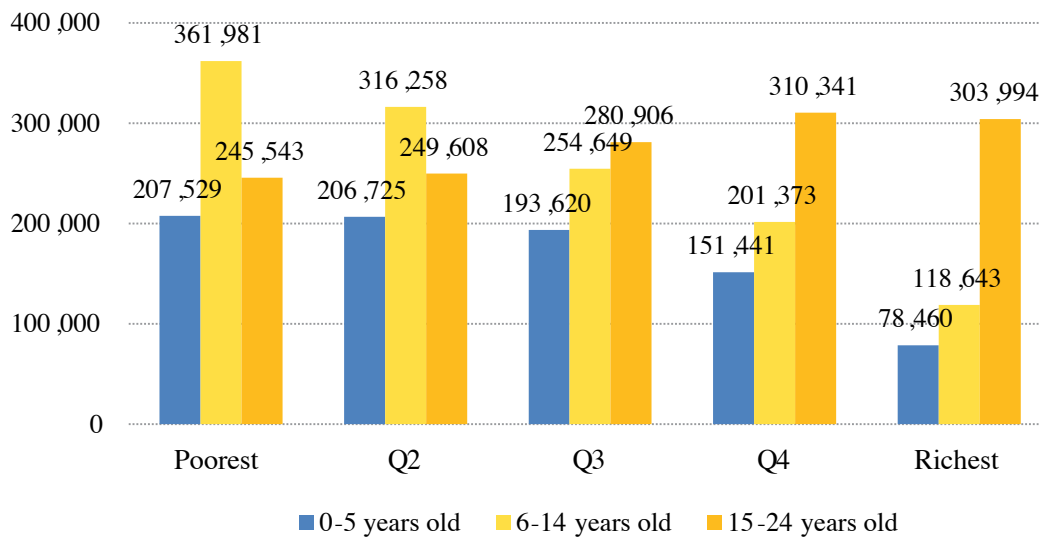
Over half of the population under 15 years

of age lives in the poorest two quintiles (see Figure 11). Over 400 thousand children under the age of 5 live in families in the poorest two income quintiles. The numbers are even higher for older children, with almost 500 thousand children aged 6 to 14 living in the poorest two income quintiles. The gradient of the latter – children aged 6 to 14 – is particularly steep, with almost one third of them living in the poorest quintile, 20 in the third quintile, and only 10 percent in the top quintile. On the other hand, youth

– i.e. individuals aged 15 to 24 – are more likely to live in the better off quintiles. The fact that half of the future youth will come from the poorest quintiles (young cohorts aged 6-14 will reach adolescent age in the coming years), population dynamics may bring forward a larger share of vulnerable youth that has been witnessed so far.

related to variables we call circumstances. Circumstances are personal, family or community characteristics that a child has no control over, and that, for ethical reasons, society wants to be completely unrelated to a child’s access to basic opportunities. For instance, most societies would agree that opportunities should not be assigned based on gender, ethnicity, nationality, parental

Figure 12: Most children are poor



Source: HEIS 2010.

The next sections will show, however, that despite the over-representation of children in the poorest quintiles, equality of opportunities – access to services and school attendance – for children and youth is very low in Jordan.

***Equality of opportunity for children and youth***

Equality of opportunity requires that access to key goods and services not be

background or religion. Instead, opportunities should be allocated non-systematically and not be detrimental to any particular social group. The Human Opportunity Index (HOI) measures the coverage rate, and then adjusts it according to how equitably goods and services have been allocated among circumstance groups.

### ***Box 3: The Human Opportunity Index (HOI)***

The HOI measures how personal circumstances (birthplace, wealth, race or gender) impact a child's probability of accessing the services that are necessary to succeed in life (timely education, running water or connection to electricity). The HOI was first published in 2008, and applied to Latin America and the Caribbean, then further extended to additional countries, including Jordan and a few countries in the MENA region. The HOI, first presented by Barros et al. (2009), combines both coverage rates and equity in a single measure. The HOI considers (i) how far a country is from the goal of providing universal access to a set of goods and services to all, and (ii) the degree to which each child in the country has an equal opportunity to access those good and services. "The Human Opportunity Index [is] a composite indicator that combines two elements: (i) the level of coverage of basic opportunities necessary for human development, such as primary education, water and sanitation, and electricity [coverage]; and (ii) the degree to which the distribution of those opportunities is conditional on circumstances exogenous to children, such as gender, income, or household characteristics [Dissimilarity index]. This index assesses the importance of both improving overall access to basic opportunities and ensuring its equitable allocation" (de Barros et al., 2009, p. 55).

The dissimilarity index (D-index) is a measure of inequality of opportunity that "measures dissimilar access rates to a given basic opportunity for groups of children defined by circumstance characteristics (specifically, children's area of residence, gender, parent's level of education, per capita family income, number of siblings, and presence of two parents at home) compared with the average access rate to the same service for the population of children as a whole. The D-index ranges from 0 to 100, in percentage terms, and in a situation of perfect equality of opportunity, D will be zero. The D-index has an interesting interpretation as the fraction of all available opportunities that need to be reallocated from children of better-off groups to children of worse-off groups to restore equal opportunity." (de Barros et al., 2009, p. 56). The Shapley decomposition of the dissimilarity index estimates the marginal contribution of each circumstance to inequality in access to opportunities, "net" of other circumstances. It calculates the dissimilarity index with all combinations of circumstances and calculates an average of each circumstance's contribution to each combination. Source: Barros et al, 2009.

Opportunities are divided into two broad categories: education and infrastructure. Table 7 shows the opportunities used and how they are defined. The circumstances that affect each of these two sets of opportunities are (i) household composition, i.e.

$$\text{HOI} = \text{Coverage of basic opportunity} * (1 - \text{Dissimilarity index})$$



the number of children (0-15 years old) in the household and the presence of both parents in the household; (ii) the household head's characteristics, i.e. education and gender; (iii) the child's gender; and (iv) whether the

distributed equitably among children. Jordan displays almost non-existent inequality of opportunities when it comes to primary school attendance, and no inequality when it comes to completion (as almost 100 percent

**Table 7: HOI and Opportunities**

Dimension	Indicator	Definition
Education	Attend school (10-14 years old)	Percentage of children 10 to 14 years of age attending to school at the time of the survey.
	Finished primary school (12-16 years old)	Percentage of children 12 to 15 years of age attending 6th grade (for 12 year-olds) and completing 6 or more years of education (for 13-15 year-olds).
Basic Infrastructure	Have access to water	Percentage of children 0 to 16 years of age living in a household with access to tap water.
	Have access to sanitation	Percentage of children 0 to 16 years of age living in a household with access to the public sewage network.

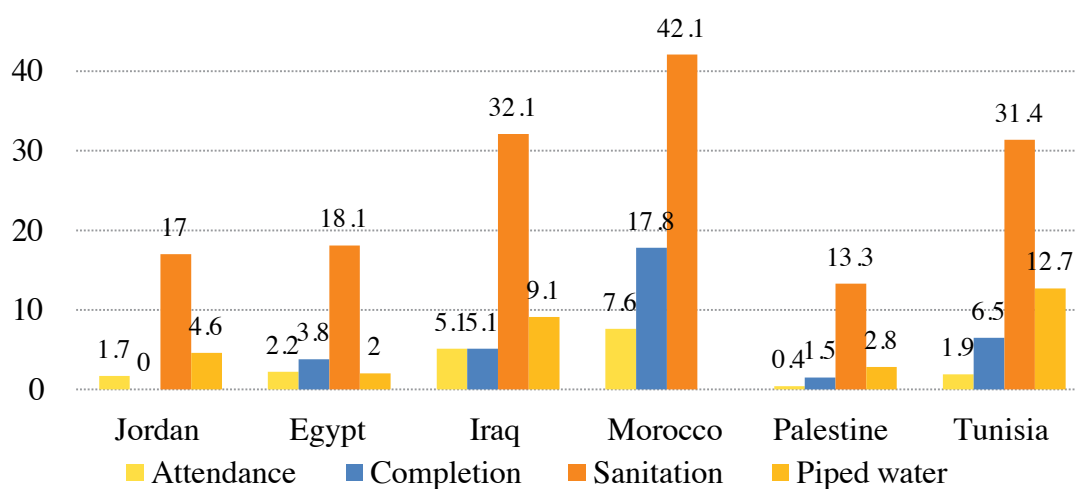
child lives in an urban or rural area.

### *Inequalities of opportunity*

Jordan had low inequality of opportunities compared to other countries in the MENA region. The distribution of human opportunities is highly varied across the Region: the playing field is almost level for children in Jordan, Egypt and Palestine, where over 95 percent of education services are available and equitably allocated, whereas in Morocco just over half (80 percent) of educational services are available and

of the children aged 12-16 have graduated from primary school in 2010). Children in MENA countries are more likely to have higher levels of equitably allocated services in education than housing: the inequality indexes for housing are lower, with the largest inequalities in access to sanitation. Jordan's situation is comparable to that of Egypt, and much better than Iraq, Morocco and Tunisia (see Figure 12).

Figure 13: Inequality index in select countries



Source: Egypt (ELMPS, 2012), Iraq (HSES, 2012), Jordan, (HEIS, 2010), Tunisia (EBCNV, 2010), Palestine (ECS, 2010), and Morocco (ENNVN, 2007).

### *Circumstances affecting equality of opportunity*

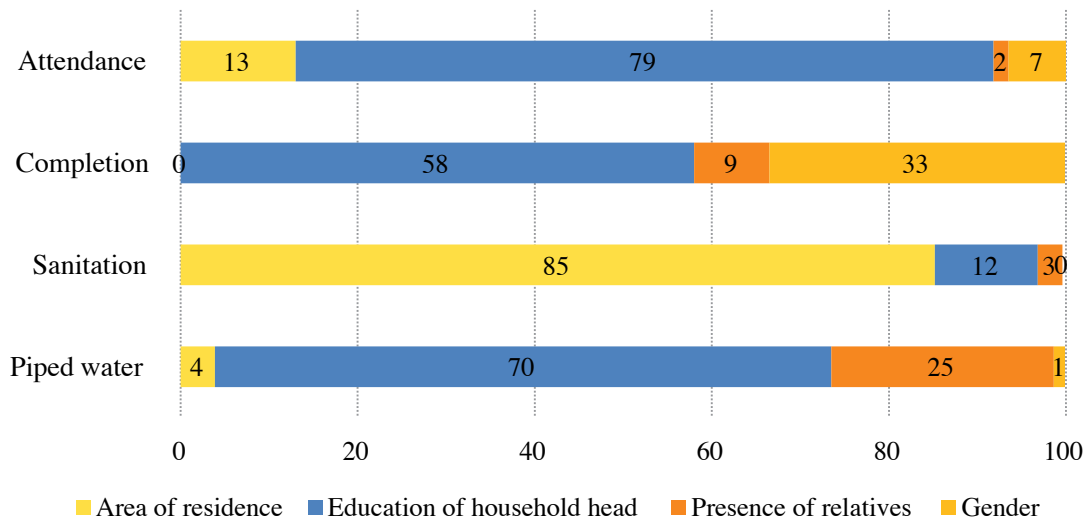
To level the playing field for all children, policy makers need to know the equality of opportunity profile for a given society to design effective public policies for accelerating the equitable expansion of human opportunities. To answer this questions, we need to analyze the main circumstances affecting equality of opportunity for access to a basic service, and the relative effect on this opportunity of a specific circumstance – such as gender, where a child lives, or their parent’s income – compared to other circumstances.

Two circumstances contribute most to inequality: education of the household head and location (see figure 13). The inequality of opportunity profile for education shows

that parental education continue to influence whether or not a child has fair access to education opportunities: 79 percent of inequalities in primary school attendance and 58 percent of inequalities in timely completion of primary school are explained by parent’s education. In short, parental characteristics affect the ability of a child to improve her situation over time and achieve inter-generational mobility. For completing sixth grade on time, the most important circumstance is again parental education, and to a lesser extent the gender of the child and number of siblings. For access to water, the inequality of opportunity is again driven mainly by parental education, which explains 70 percent of inequality of opportunity. This is in stark contrasts with most other countries in the Region, where location explains at least one third of water opportunity. For access to sanitation, the inequality of opportunity

profile is driven mainly by where a child lives (rural versus urban residence), and to lesser extent by family characteristics.

Figure 14: Contributors to inequality of opportunity in Jordan



Source: HEIS 2010.

The limited level of inequality of opportunity can be highlighted by the use of the HOI. Let's compare a girl, living in a rural, whose parents are illiterate, who lives with more than 2 siblings, with an urban boy, who has less than 2 siblings, whose parents both live at home and have at least a secondary education. The girl will be more likely to attend school (88 versus 86 percent chance), she'll be equally likely to finish primary school on-time (100 percent chance), she'll be less likely to have access to proper sanitation (63 versus 67 percent), and she'll be more likely to have access to safe water (79 versus 59 percent).<sup>12</sup>

## 4 - Gender Inequality

Given the last paragraph of the last section, girls and boys in Jordan seem to have very limited inequality of opportunities when young. Does that situation continue into adulthood? This section argues that the Region's conservative gender norms, its legal and institutional framework, and the incentives and opportunities generated by its economic structure lie at the heart of the puzzle of low rates of female participation in politics and the economy, despite a reverse gender gap in educational outcomes.

<sup>12</sup> <http://worldbank.org/visualizeinequality>

#### Box 4: Decrease in gender equality since 2006

In terms of gender equality, Jordan was performing below the median score of 142 countries surveyed by the World Economic Forum for its yearly Global Gender Gap Report and subsequently ranked 134 out of 142. In addition, its ranking worsened from 2006 to 2014, especially regarding economic participation of women.

Economic participation and opportunity	140
Labor force participation	139
Wage equality for similar work	74
Estimated earned income	137
Legislators, senior officials and managers	119
Professional and technical workers	111
Educational attainment	74
Literacy rate	69
Enrollment in primary education	104
Enrollment in secondary education	1
Enrollment in tertiary education	1
Health and survival	127
Sex ratio at birth (female/male)	94
Healthy life expectancy	134
Political empowerment	119
Women in parliament	107
Women in ministerial positions	98
Years with female head of state (past 50)	64

Source: World Economic Forum, 2014.

## *The Gender Equality Puzzle*

### *Impressive achievements in human development outcomes...*

The health and education status of women in Jordan compares favorably with that of other developing countries (see Table 8). At 50 per 100,000 live births, Jordan's maternal mortality rate is lower than the upper middle-income (UMI) countries' average of 57,

and the MENA average of 70.<sup>13</sup> Similarly, under-five female mortality rates are on par with UMI averages and 4.5 percentage points lower than the MENA average. At 50 percent, female tertiary school enrollment rates are almost 50 percent higher than the average UMI and MENA rates, reflecting the substantial investments over recent decades by the government, communities, and families in girls' health and education.<sup>14</sup>

<sup>13</sup> 2013 projections from the WHO, UNICEF, UNFPA, the World Bank, and United Nations Population Division Maternal Mortality Estimation Inter-Agency Group.

<sup>14</sup> Full data available in Annex I.

Moreover, the health and education status of women in Jordan compares favorably with that of Jordanian men (see Table 8). Health and education investments at the household level reflect largely equal treatment of daughters and sons. Jordan displays very low excess female mortality: under-five and infant mortality rates are less than 2 percentage points lower for boys

gender gap in literacy has been declining steadily since 1979, and more women in the country are literate than ever before: in 1979, the ratio of young (15-24 years old) literate female-to-male ratio was 88%, while it is over 100 percent in 2012.

Table 8: Select Human Development Indicators – Jordan and similar countries

	Jordan	UMI	MENA
Maternal mortality ratio (model estimates, per 100,000 live births)	50	57	70
Mortality rates, 0-5, ratio female-to-male (percent)	89		86
School enrollment, tertiary, ratio female-to-male (percent)	115	117	107

Note: UMI refers to Upper Middle Income countries, while MENA refers to Middle East and North African countries.

Source: World Development Indicators, 2014. Last year of data: 2012, except for maternal mortality estimates (2013).

than for girls. In parallel, the country halved maternal mortality over the past 25 years, dropping from 86 per 100,000 live births in 1990, to 50 in 2013.<sup>15</sup> As for educational outcomes: there is virtually no gender gap in enrollment, and a reverse gender gap in university attendance: preprimary, primary and secondary enrollment rates are similar across gender, and tertiary enrollment rates are higher for girls. Moreover, Jordan's

This equality is in stark contrast to the conditions in East and South Asia and Sub-Saharan Africa, in which unborn and newborn girls face lower survival probabilities than elsewhere in the world, and women typically obtain much lower levels of education.

<sup>15</sup> Model estimates from the WHO, UNICEF, UNFPA, the World Bank, and United Nations Population Division Maternal Mortality Estimation Inter-Agency Group.

Table 9: Ratio of Female-to-Male Human Development Indicators (percent)

Preprimary	96
Primary	98
Secondary	103
Tertiary	115
Infant mortality (at birth)	89
Under -five mortality	89

Source: World Development Indicators, 2014. Last year of data: 2012.

### *But low participation of women outside the home*

In contrast with investments in access to basic education and health care, which have come to be viewed as universal rights, outcomes in the labor market and in political life remain very much the result of individual preference and choice, and of opportunities to participate in economic and political life. In recent decades, expanding economic opportunities have pulled large shares of women into the formal economy worldwide: in Sub-Saharan Africa, East Asia and Pacific, Europe and Central Asia, and Latin America and Caribbean, more than 50 percent of the female population aged 15 and above participates in the labor market. In Jordan, however, as in much of the MENA region, considerable investments in women’s human capital have not been matched by increases in economic participation: Jordan ranks at the 74th place for gender equality in educational attainment and 127th for health and survival, but at the 140th place in terms of gender economic participation and opportunity according to

the latest Global Gender Gap Report from the World Economic Forum (2014). Out of the surveyed MENA countries, it is fourth on average from the bottom.

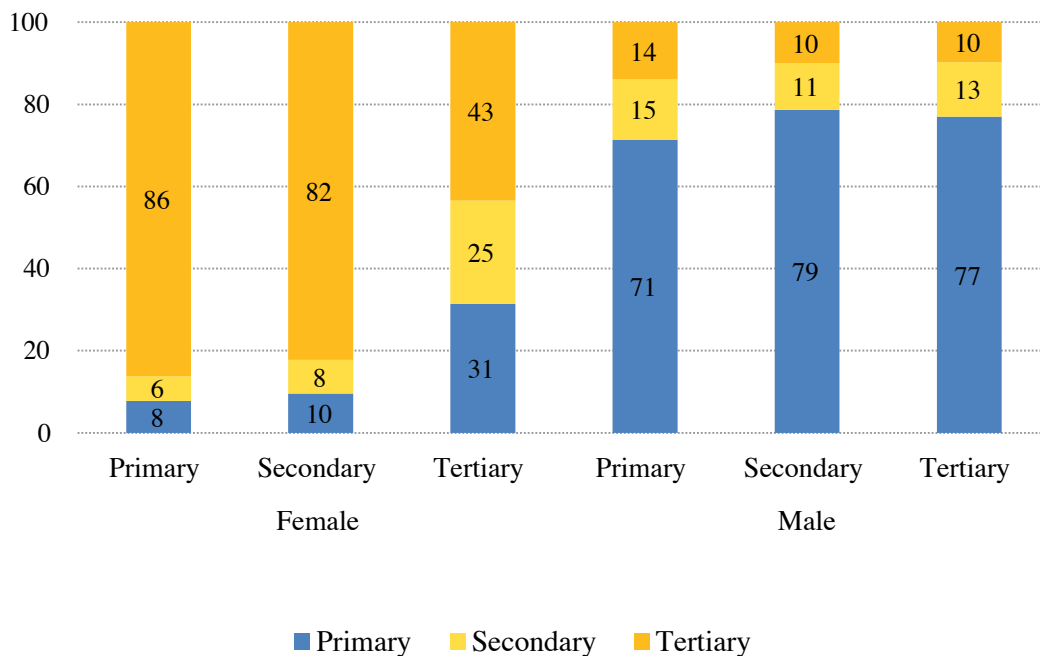
Jordan displays one of the lowest female labor force participation rates in the world. According to the World Bank, Jordan has the fifth lowest female participation rate among 185 countries and territories that report such data (World Development Indicators). The only countries with lower reported labor market participation rates are Syria, Iraq, Algeria and Palestine, suggesting a pattern specific to the MENA region.

Female labor market participation rates are one third of men’s on average. Data from the HEIS 2010 show that 21 percent of women of working age are either working or looking for work, while the proportion among the male population is 82 percent. These numbers are consistent with those obtained by Assaad et al. (2012) using the 2010 Jordanian Labor Market Panel Survey (JLMPS). This is especially paradoxical given Jordan’s huge investments in female education.

Moreover, the gender gap in market participation is markedly higher for the most vulnerable women, i.e. those with low education or from the poorest quintile (see figure 14). For every woman with at most a primary education level, six men with the same

education background are working. On the other hand, the ratio among men and women with tertiary education is three to four, and partly explained by very large unemployment rate for women: unemployment rates are 45 percent for women and only 15 percent for men. Similarly, the gender gap in labor market participation narrows with income: while it is 1-to-5 for the lowest quintile, it becomes 1-to-2 for the richest. Finally, the fact that educated women are more likely to be unemployed than uneducated women suggests that women face considerable barriers to employment entry across a wide range of educational choices. Furthermore, Jordan was one of the last 5 countries in terms of closing the economic participation and opportunity gap (World Economic Forum, 2014).

Figure 15: Labor market participation by gender and education



Source: HEIS 2010.

The “marital-status gap” in labor force participation (relative difference in labor force participation between married and never-married women) is high. While 29 percent of never married women are engaged in the labor force, the number drop to 15 percent for married women. Once again these gap are largely influenced by education, and married women with primary education are 50 percent more likely to remain out of the labor force than their married counterparts, while married women with tertiary education are 4 times more likely to remain out of the labor market than non married highly educated women. In contrast, male employment rates rise significantly with marriage, in accordance with the predominant gender roles in Jordanian society of men as breadwinners and women as homemakers.

However, and irrespective of marital status, Jordanian women aspire to be employed. In a 2010 World Bank survey of Jordanian female community college graduates entering the workforce, 92 percent said that they plan to work after graduation, and 76 percent reported that they expect to be working full-time. These numbers are consistent with attitudes reflected in the 2005 World Values Survey in which 80 percent of women in Jordan disagreed with the statements, “A woman with a full-time job cannot be a good mother” and “Having a full-time job interferes with a woman’s ability to have a good life with her husband.”

Figure 16: Labor market participation by gender and income quintile



Source: HEIS 2010.



## *Barriers to Female Participation*

Much of the literature on female participation in Jordan is concerned with the barriers Jordanian women face in the labor market, either from prevailing social norms about women's mobility and the sorts of jobs deemed acceptable for them or from the discrimination they face in the private sector (Miles (2002), Peebles et al. (2007), Kalimat and Al-Talafha (2011)). Conscious of these barriers, the National Employment Strategy is trying to make amendments to increase female labor market participation (see Initiative 1).

### *Initiative 1: the National Employment Strategy*

The Government has begun implementing a National Employment Strategy focused on addressing the above constraints and on increasing female participation by: (i) targeting several of its vocational and micro-finance programs toward unskilled and semi-skilled females; (ii) approving the new Social Security Law which provides for a new maternity insurance scheme which is financed by both male and female payroll contributions to eliminate discrimination in hiring decisions; and (iii) expanding public kindergarten schooling and the provision of day care franchises to address the acute shortage of day care spaces and quality issues. Source: World Bank, 2014.

## *Economic incentives dampen participation in the workforce*

In 2010, two thirds of women work in the private sector. The share of women employed in the public sector increases sharply with educational level: while 12 percent of women with less than primary education work for the government, as much as half of women with tertiary education are employed in the public sector. This is largely due to state policies, which supported a large public sector to increase employment for educated women, from the mid-1970s to the early 1990s. These policies were intended to reduce the conflict between reproductive and productive responsibilities by providing a generous maternity leave and requiring institutions that hired a certain number of women to provide day care. The curtailment of public sector hiring that accompanied structural adjustment in Jordan contributed to limiting the employment possibilities for educated women.

### *Initiative 2: Jordan's Innovations in Shared Social Security*

Jordan's parliament recently passed a broad social insurance reform law, which extends coverage to micro firms and adds unemployment, health, and maternity benefits to the package. Until recently, the full cost of the maternity benefit including 10 weeks of paid maternity leave was borne by the employer. This cost created disincentives for

employers to hire women and may well have contributed to the very low level of female participation in Jordan's private sector. The reform entails financing maternity benefits through a 0.75 per- cent levy on payroll taxes on all workers, regardless of gender. Both employers and employees contribute to a "Maternity Fund," which is managed by the Social Security Corporation (SSC).

The diminishing role of the family-friendly public sector in the Jordanian labor market contributed strongly to increased gender inequalities. Although formal private sector employment rose significantly during the period of shrinking public sector opportunities, the private sector has not provided a hospitable environment for women in general and for married women in particular. Much of the recent increase in private sector employment for women has been in temporary positions that women either leave of her own accord or are induced to leave by their employers upon marriage. Peebles et al. (2007) show that the highly protective legislation on women's working conditions and maternity leave led employers to avoid hiring married women, let employers discriminate against married women out of conviction that their marital responsibilities would prevent them from being as committed to their jobs as men or young unmarried women, maintained a social insurance legislation that treats women as dependents rather than independent workers even when they work, and kept practices that confine women to occupations that are

closely associated with their more traditional roles in the household such as education and health care.

Furthermore, the promise of non-monetary benefits from the public sector deters some women from working alternatives in the private sector. These benefits include social security, health insurance, greater job security, and paid sick leave. Once these factors are taken into account, it is no surprise that educated young people, especially women, are attracted to the public sector. In Jordan, more than 80 percent of women working in salaried public sector jobs have postsecondary education; the corresponding share for salaried private sector jobs is 60 percent. The higher public sector benefits have economy-wide effects on productivity and growth because they distort the market incentives to efficiently allocate skills to their most productive use. Public sector jobs are distinctly better compensated than equivalent private sector positions, particularly for the highly educated. However, as young people graduate from high school and university, the creation of new positions in the public sector has not kept pace. As a result of the compensation gap, many young people are prepared to remain unemployed in the hope of eventually finding a job in the public sector, leading to a phenomenon called "wait unemployment." This pattern is partly responsible for the extremely high unemployment rates, most pronounced among youth and more educated individuals' women.

For married women with children, the cost and availability of daycare alternatives is an important element in the decision to participate in the labor force. In the past, employers tended to prefer hiring men (or single women) to avoid paying for maternity leave: women workers are entitled to maternity leave with full pay for ten weeks including rest before and after delivery. The Social Security Law introduced a socialized payroll deduction in place of the direct payment from employers, but the effects of the previous disincentive can still be seen in the unemployment figures today. In addition, the cost and availability of daycare alternatives is an important element in the decision to participate in the labor force.

### *Initiative 3: New Work Opportunities for Women (NOW)*

The Jordan New Work Opportunities for Women (NOW) pilot was designed explicitly to support a rigorous impact evaluation. The pilot randomly assigned 1,347 female community college graduates of the 2010 cohort to one of three labor market interventions: a 3-week soft-skills training course for 300 women, a 6-month job voucher offer for 300 women, a dual training and job voucher offer for 300 women, and a control group for 499 women. The job voucher offered a firm a 6-month wage subsidy conditional on hiring a graduate. Early results from the midline survey indicated that employers responded to clear financial incentives: the

job vouchers induced a 39 percent rise in female employment. Moreover, 57 percent of women expected to keep their jobs after their vouchers expired. In contrast, the training program received extremely positive feedback from trainees, yet had no significant effects on employment. A detailed survey was then undertaken to verify and understand the long-term impacts of the pilot. While the pilot succeeded in its objective of increasing female labor force participation and helping young women accrue work experience, the majority of the jobs did not translate into permanent employment. The pilot highlighted critical constraints to young job seekers in Jordanian labor market regulations: the minimum wage and the requirement to register workers in social security limited the willingness of many firms to retain these young graduates after the wage subsidy expired. To identify other effective alternatives to facilitate the school-to-work transition, an extension of the pilot is underway which involves an employee screening and matching intervention that develops signaling mechanisms for jobseekers, reduces the search costs for employers, and connects jobseekers with employers. Source: World Bank, 2013.

Even when women are working, they often face inequality in the workplace. Many women are employed in the informal sector (for example, as domestic or agricultural workers), and as such, they are not covered by the labor codes. This lack of protection leaves them vulnerable to exploitation

and unfair employment practices. Jordan recently amended its labor code to include domestic workers and agricultural workers, thus guaranteeing these groups the monthly payment of salaries and minimum wages, sick leave, and a maximum 10-hour working day (UN Women 2011).

Strategies to increase women's attractiveness to employers should go hand in hand with policies to encourage women to work. For example, evidence from the US Earned Income Tax Credit (EITC) program suggests that tax and benefits systems can be reformed so that they do not penalize women for choosing to work, or penalize firms for employing them. Such reforms have been shown to promote women's labor force participation. In addition, policies such as internships and scholarships can change employers' attitudes toward women workers through practical experience while giving women the skills and experience that they require to succeed in the modern workplace. In Jordan, a recent pilot, Jordan NOW (New Work Opportunities for Women), provides employability skills training and a short-term incentive for firms who employ young women. While early results suggested that the incentives for firms increased short-term employment and valuable labor market experience, the pilot also revealed that labor market regulations limited the sustainability of these results (see Initiative 3).

### *Traditional gender norms limit women's agency*

Perceptions of women's roles in the home, education, employment, and politics are distinctly more traditional than the global average. The value placed on women's roles within the household is evident from data from the 2005 World Values Surveys: two thirds of Jordanian women agree that "being a housewife is just as fulfilling as working for pay". However, while women and men can hold relatively similar views on the role of women, younger and more educated cohorts are less supportive of the housewife stereotype.

The nature of gender norms, the legal framework, and the structure of Jordan's economy powerfully influence the incentives, preferences, opportunities, and ability of women to participate in work. Jordan's puzzle of low rates of female workforce participation is closely linked to its relatively traditional gender norms, common religious identity for the bulk of the population, legal framework, and economic structure characterized and influenced by dominant public sectors. Focus group discussions directed by Miles (2002) report how gender norms surrounding women restricted mobility, household care burdens, occupational segregation, and son preference constrain women's economic participation in communities. Miles reports, for example, how families more often reserve their scarce *wasta* (special connections) to help their

educated sons secure good jobs, as opposed to their educated daughters.

Guardianship laws restrict women's mobility and occupational choices. For instance, in Jordan, an unmarried woman over the age of 18 does not need permission to apply for a passport, but a married woman of any age requires her husband's permission. These laws make work and travel more difficult for women than for men, and thereby constitute a major barrier to women's full participation in political and economic life (see Initiative 4). The laws also limit women's access to capital for business purposes.

#### *Initiative 4: The Family Book - A Record of Guardianship*

In accordance with the Jordanian Civil Status Law 9 (2001), a woman's guardianship must be recorded in the family book (daftar al-a'ilah). After marriage, the woman is transferred to her husband's family book. The daftar is needed for nearly all official arrangements, including voting for or running for elected office, the registration of children for schools or universities, obtaining civil service jobs, and access to social services. Only recently has legislation allowed widows and divorcees to start their own daftar books. However, the hold of guardianship remains. Divorcees and widows under the age of 40 still are considered to be dependent on their guardians, and if they refuse that guardianship, they are not entitled to any financial maintenance. Source: World Bank, 2013.

Girls and boys face similar minimum age of marriage officially, but unofficially girls are more likely to be married under age. Until 2001, the legal age for marriage in Jordan was 15 for girls and 16 for boys, but following demands by civil society groups and women's rights activists; the law was amended so the minimum age for both boys and girls is now 18. The amended law, however, leaves room for exceptions for the marriage of boys and girls between the ages of 15 and 18 if the judge deems it would "benefit both spouses". According to the Chief Islamic Justice Department's (CIJD) annual report, marriages involving brides below the age of 18 constituted 12.6 percent of marriages in 2011. These numbers are corroborated by UNFPA's 2010 figures (10.1 percent). Delaying marriage potentially can improve a woman's decision-making power within the household by enabling her to satisfy her aspirations for education and choice of work, and be more mature when she chooses her partner (Jensen and Thornton, 2003).

Jordan made progress regarding domestic violence. The ability to leave a marriage or to seek some other form of protection becomes even more important when a woman is being subjected to domestic violence. Jordan, along with Egypt and Morocco, made some legislative progress in this area: "honor killings" and the light sentences handed out to male perpetrators have been highlighted by recent ongoing reforms. Under the 1960 Jordanian Penal Code, killings carried out in



a “fit of rage” attracted a maximum prison sentence of only 2 years. In 2009, to deal with honor crimes, the Jordanian government restructured its legal system to create special courts that could impose longer prison sentences. Recent cases have seen sentences of 10 years being given to some perpetrators (Kelly and Breslin, 2010). Implementation of these domestic violence laws however, is often a problem, because in MENA, as in other Regions, women are reluctant to pursue claims.

Women are stigmatized and afraid to pursue claims against family members, especially in matters of inheritance. The Jordanian government instigated a new strategy to improve enforcement of inheritance rights. Under the provisions of a new provisional Personal Status Law of 2010, the property of the deceased must be registered immediately in the name of the female relative. Moreover, Article 319 mandates a three-month waiting period, starting from the deceased’s date of death, during which a woman cannot waive her inheritance rights. The waiting period temporarily alleviates the social pressure put on women by relatives to waive these rights (Husseini, 2010). While this approach is innovative, but further study is needed to gauge its effectiveness and replication possibilities. Another Jordanian initiative in the same spirit provides tax breaks for living bequests or gifts to daughters.

Other initiatives to improve access to justice

include legal aid clinics and mobile courts. One such initiative, the Jordan Center for Legal Aid, was piloted with support from the World Bank and other donors. From 2009 to 2011, the center provided free or reduced-cost legal counseling for 700 people and legal representation to 180 people. The center was housed within offices of another nongovernmental organization that provided social welfare services. This pairing had the unintended effect of enabling women to seek legal advice without attracting attention and hostility from their communities. The Jordan Center for Legal Aid together with the Jordan Bar Association created the first pro bono lawyers’ association. This association will help implement a system of “one-stop shops” to provide legal aid and counseling, thus increasing access and quality of service. The Ministry of Social Welfare recently agreed to refer poor women in need of legal assistance to the Justice Center for Legal Aid (World Bank, 2010).

Lack of female participation in the judicial process is another issue. Jordan initiated strategies to increase its number of female judges. In 2006, Jordan launched an initiative to bring more women into the judiciary. As of 2010, the country had 48 women judges, representing 7 percent of all judges, which may seem a relatively low number but represents an improvement over earlier statistics (Euromed Gender Equality Programme, 2010).

## 5 – Recommendations

This report shows a multifaceted picture of inequality in Jordan, and depending on which aspect one focuses on, the conclusions are quite different. On the one hand, income inequality is quite low, compared to international standards as well as the MENA region. Inequality of opportunity for children are quite low as well, meaning that place of birth has a limited impact on school attendance and achievements. However, Jordan remains highly unequal when looking at gender opportunities.

Geographic inequality remains low as shown in Section 1. There are no drastic differences in inequality levels between governorates, or between urban and rural areas.<sup>16</sup> However, a more careful analysis of the contribution of social transfers to total income shows that social protection transfers are not targeted as a whole to the poorest. In order to lessen inequalities, properly targeted social protection programs should be reinforced, in order to reach the poor in a more efficient manner. Such programs include, but are not limited to, means-tested social assistance, i.e. programs that take into account pre-transfer wealth to determine eligibility. While these programs have country-specific formulas, a number of indicators are usually shown to be

correlated with poverty and social exclusion, especially family composition, including the presence of children. Reforms towards more child-sensitive social protection programs should be put in place.

Jordan achieved nearly universal coverage and good availability of water services, without differences across place of residence, nor income quintile (see Section 2). Similarly, access to health and education facilities is rather equality distributed across income quintiles. However, while there are few differences in terms of access to health and education, there may be some quality of services issues that this report cannot discern, due to the limited information included in the data. Given that Jordan seems to have universal access to education and health services, one should focus on quality of service delivery across geographic zones and income quintiles.

On the other hand, access to certain services, such as sanitation, road network and street lighting, connectivity (cell phones and internet), turns out to be more unequally distributed across quintiles. Programs emphasizing access to services and connectivity should thus focus on a subset of services to be delivered: sanitation, and good transportation services for those who are not well serviced. In addition, connectivity has been shown to foster growth – see the roll out of cell phones in India for instance and its incidence on growth and economic

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<sup>16</sup> However, one should not forget that the present report uses data from the 2010 HEIS, which record data on households from the year 2009. The impact of the 2008 crisis cannot be analyzed using the 2010 HEIS.

development – and should be emphasized in order to foster a more pro-poor growth.

Children and youth are overrepresented in the bottom quintile, but inequality of opportunity – access to basic services and education – remains low (see Section 3). More than half of Jordan’s children live in households from the poorest two quintiles of the income distribution. However, inequality in access to school, as well as school enrollment and achievements are low. Section 3 shows that inequality of opportunities for children and youth are most dependent on the education of the household head, as well as the location where the child is from (urban versus rural). Jordan should thus focus on implementing programs aimed at delivering higher quality of education in more remote areas, and focus on tutoring for children whose parents cannot help them with homework.

The health and education status of women in Jordan compares favorably with that of other developing countries, but women’s participation in adult life is very limited (see section 4). Moreover, the health and education status of women in Jordan compares favorably with that of Jordanian men. But, in contrast with investments in access to basic education and health care, which have come to be viewed as universal rights, outcomes in the labor market and in political life remain very much the result of individual preference and choice, and of opportunities to participate in economic and political life. Jordan

displays one of the lowest female labor force participation rates in the world. Even more worrying is the fact that the gender gap has worsened since 2006 as noted by the World Economic Forum (2014).

In light of this report, three points should be tackled in priority: (i) providing safety net programs that target the poor, (ii) providing incentives to foster women’s participation in the labor force, and (iii) providing the framework to include more systematically women in the political arena and everyday life.

First, safety nets targeted at the poor should be reinforced. Jordan seems to spend a large share of its social welfare budget on programs that are not specifically targeted at the poor, and should focus on social assistance programs that help the poor lift themselves out of a poverty trap. Such programs include means-tested programs, which include proxy-means tested interventions. In such cases, eligibility is determined on the basis of housing and household characteristics: family composition including the number and distribution of children, household head characteristics (education, activity status, age), spouse characteristics, housing and assets ownership.

Second, economic incentives need to be put in place to increase participation in the workforce. The diminishing role of the family-friendly public sector in the



Jordanian labor market contributed strongly to increased gender inequalities, and in times of economic contractions the private sector needs to be structured in such a way that it offers the same advantages that the public sector was previously offering in order to successfully attract women. Additionally, we saw that married women had far less chances of participating in the labor market, mostly because of the burden of taking care of children: the cost and availability of daycare alternatives is an important element in the decision to participate in the labor force. Proper daycare options should be put in place. Finally, even when women are working, they often face inequality in the workplace. Strategies to increase women's attractiveness to employers should go hand in hand with policies to encourage women to work.

Third, traditional gender norms limit women's agency. Perceptions of women's roles in the home, education, employment, and politics are distinctly more traditional than the global average. The nature of gender norms, the legal framework, and the structure of Jordan's economy powerfully influence the incentives, preferences, opportunities, and ability of women to participate in work, including but not restricted to the guardianship laws restrict women's mobility and occupational choices. Jordan has piloted a few programs to increase women's agency, but it is a far cry from covering all the topics that need to be addressed.

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## Annexes

### *Annex 1: Inequality indexes*

#### *The 90/10 ratio*

The 90/10 ratio is the ratio between real per capita income of the household at the 90th percentile and the real per capita income of the household at the 10th percentile of the distribution. This measure could be looked at as a ratio of two location measures that do not make use of all observations. The 10th percentile value, for example, is not affected by other percentiles. In other words, other percentiles may increase or decrease without affecting the value of this measure. The importance of this measure stems from its use by the World Bank in comparing the gap between rich and poor in each country or between groups of countries. However, this measure has a shortcoming in that it does not make use of all the values of income observations. As a result, the values of this ratio should be interpreted with caution. Since thresholds of grouped data are subject to change according to the length (or height) of class, our inequality measures were not affected by these changes. For this purpose our statistic is not sensitive to the changes in coding thresholds.

An important advantage of this measure is that it enables sensitivity analyses; for example, the correlations between population health and the 75/25, 75/50, 50/25 decile ratios

may be compared. This allows researchers to examine which sections of the income spectrum may be most important as a social determinant of health. For instance, the 75/25 ratio measures the gap between the lower middle and upper middle class, the 75/50 ratio measures the gap between the upper middle class and median value, and finally, the 50/25 ratio measures the gap between the lower middle class and the median income.

#### *Gini index*

The coefficient is a measure of inequality developed by the Italian statistician Corrado Gini and published in his 1912 paper "Variabilità e mutabilità". It has widely been used as a measure of income inequality, but can be used to measure any form of uneven distribution. The Gini coefficient is a number between 0 and 1, where 0 corresponds with perfect equality and 1 corresponds with perfect inequality. The Gini coefficient is used to show the degree of economic inequality, as expressed by income data, between different geographical regions. It can also be used to show how economic inequality has been changing over a period of time. It is most easily calculated from unordered size data as the relative mean difference.

#### *Atkinson family of inequality measures*

More precisely labeled a "family" of income inequality measures, the Atkinson index allows for varying sensitivity to inequalities

in different parts of the income distribution. This was important to Atkinson, who was concerned with the inability of the Gini framework to give different parts of the income spectrum varying weights. In his influential text *The Economics of Inequality*, Atkinson noted that inequality “cannot, in general, be measured without introducing social judgments. Measures such as the Gini coefficient are not purely ‘statistical’ and they embody implicit judgments about the weight to be attached to inequality at different points on the income scale”. Therefore, his index incorporates a sensitivity parameter ( $\epsilon$ ); which can range from 0 (meaning that the researcher is indifferent about the nature of the income distribution), to infinity (where the researcher is concerned only with the income position of the very lowest income group). Atkinson argued that this index was a way to incorporate Rawls' conception of social justice into the measurement of income inequality. In practice,  $\epsilon$  values of 0.5, 1, 1.5 or 2 are used; the higher the value, the more sensitive the Atkinson index becomes to inequalities at the bottom of the income distribution.

An intuitive interpretation of this index is possible: Atkinson values can be used to calculate the proportion of total income that would be required to achieve an equal level of social welfare as at present if incomes were perfectly distributed. For example, an Atkinson index value of 0.20 suggests that we could achieve the same level of social

welfare with only  $1-0.20=80\%$  of income. The theoretical range of Atkinson values is 0 to 1, with 0 being a state of equal distribution.

### *General Entropy class of measures*

The GE index, like the Atkinson index, is more correctly labeled a family of income inequality measures. It also incorporates a sensitivity parameter ( $\alpha$ ) that varies in the weight given to inequalities in differing parts of the income spectrum. Typically, four GE measures are used: these are GE $-1$ , GE $0$ , GE $1$  and GE $2$ . The more positive  $\alpha$  (the sensitivity parameter;  $-1, 0, 1$  or  $2$ ) is, the more sensitive GE $\alpha$  is to inequalities at the top of the income distribution. The theoretical range of GE values is 0 to infinity, with 0 being a state of equal distribution and values greater than 0 representing increasing levels of inequality. Another beneficial property of the GE measure is that it is decomposable; that is, it can be broken down to component parts (i.e. population subgroups). This enables analysis of between- and within-area effects. The GE index has been used to great effect in the literature on the health effects of income inequality. The literature on income inequality measurement also includes two measures, which are closely related to the GE index. More specifically, the mean log deviation of income measure is functionally equivalent to the GE $0$  index and Theil's entropy measure is equivalent to the GE $2$  index.

## *Annex 2: the Human Opportunity Index (HOI)*

### *Computing the Penalty for Inequality of Opportunity*

Computing  $P$  requires identifying all circumstance groups with coverage rates below the average rate; we refer to them as the opportunity-vulnerable groups. For each opportunity-vulnerable group,  $k$ ,  $M_k$  is the number of people with access to a good or service needed for its coverage rate to equal the average rate, while  $\bar{M}_k$  is the number of people in group  $k$  with access.  $M_k - \bar{M}_k$  is then the opportunity gap for the vulnerable group  $k$ . The penalty is the sum of the opportunity gaps of all vulnerable groups (called the overall opportunity gap) divided by the total population ( $N$ ):

$$P = 1/N \sum (M_k - \text{mean}(M_k))$$

Intuitively,  $P$  can be interpreted as the percentage of people whose access would have to be reassigned to people of the groups with below-average coverage rates to achieve equality of opportunity. If all groups had exactly the same coverage rate, that penalty would be zero, and no reassignment would be needed. As coverage approaches universality for all groups, that reassignment becomes smaller.

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For further information,

United Nations Development Program  
Ishaq Al Edwan street  
Building no. 16  
Opposite to Shmeisani Police station.  
Jordan

E-mail: [registry.jo@undp.org](mailto:registry.jo@undp.org)

Website: [www.undp-jordan.org](http://www.undp-jordan.org)