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Economic and Social Commission for Western Asia

Rethinking Inequality in Arab Countries

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Foreword

Policy makers in the Arab region are confronted with a significant knowledge deficit on inequality issues, which is paradoxical, given that since social and economic equality concerns have received considerable attention in constitutions and development policies of Arab countries.

Realising importance of addressing this knowledge gap, the Economic and Social Commission for Western Asia (ESCWA) and the Economic Research Forum (ERF) partnered to "rethink" the stylised "facts" of inequality in Arab countries, with the aim of presenting a holistic narrative of its main determinants and consequent policy considerations.

Using a multidimensional approach that focuses chiefly on the non-income dimensions of health, education and living conditions, the report shows that the Arab region has achieved significant human capital gains, accompanied, generally, with decreasing outcome inequalities. However, unfortunately, these gains were not closely matched with a decline in inequality of opportunity. Furthermore, the human-capital pool remains a largely untapped economic resource, resulting in stagnating per-capita incomes and rising income inequality.

The report argues further that these socioeconomic inequalities ensue from structural and institutional deficits. Arab economies tend to be disproportionately concentrated in low-value-added unproductive sectors. This is manifested in labour market informalisation, low productivity and poor growth outcomes. Moreover, the rentier nature of Arab economies has also resulted in socioeconomic arrangements that systematically favour the interests of those with more influence.

Furthermore, the report underlines the escalating fragility of rent-based growth and development models, in view, particularly, of the evolving global patterns in oil markets; patterns that should impel adopting a new enabling political-economy framework for reducing poverty and inequality.

In effect, Arab countries need to go beyond temporary fixes to address the root causes of endemic development challenges. This, in turn, depends, crucially, on achieving two strategic objectives; namely, capitalising on the youth bulge through structural transformation and reforming institutions, which in itself is also a prerequisite for structural transformation. Additionally, good governance would make for prudent policy design that effectively targets the disadvantaged and reduces poverty and inequality, while simultaneously ensuring a competitive thriving economy capable of absorbing the young and capitalising on the abundant human capital; all of which would foster political stability and enhance human development and economic growth.

It is our hope that this report would stimulate public policy discussions of inequality issues in the Arab region and lead to concrete measures that rise to the mounting challenges.

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Acronyms

AARC	Average annual rate of change
CCT	Conditional cash transfer
CI	Concentration Index
DHS	Demographic Health Survey
EFA	Education for All
EGS	Employment Guarantee Schemes
GCC	Gulf Cooperation Council
GNI	Gross national income
HDR	Human Development Report
HDI	Human Development Index
IHDI	The Inequality-adjusted Human Development Index
ILO	International Labour Organisation
IOP	Inequality of opportunity
IMF	International Monetary Fund
IMR	Infant Mortality Rate
LDC	Least developed countries
LFPR	Labour force participation rate
MDG	Millennium Development Goals
MGNREGA	Mahatma Gandhi National Rural Employment Guarantee Act
MIC	Middle income countries
MICS	Multiple indicator cluster survey
MPI	Multidimensional Poverty Index
NARA	Net attendance ratio adjusted
NEET	Not in employment, education or training
OECD	The Organisation for Economic Cooperation and Development

OPEC	Organisation of the Petroleum Exporting Countries
PAPFAM	Pan Arab Project for Family Health
PPP	Purchasing Power Parity
SBA	Skilled birth attendance
SDG	Sustainable development goals
SEM	Social Expenditure Monitor
SPF	Social protection floor
TIMSS	Trends in International Mathematics and Science
TKP	Takaful and Karama Program
UNCEB	United Nations System Chief Executives Board for Coordination
UPE	Universal primary education

Arab country codes

Country	Alpha-3 code
Algeria	DZA
Bahrain	BHR
Comoros	COM
Egypt	EGY
Iraq	IRQ
Jordan	JOR
Kuwait	KWT
Lebanon	LBN
Libya	LBY
Mauritania	MRT
Morocco	MAR
Oman	OMN
Qatar	QAT
Saudi Arabia	SAU
State of Palestine	PSE
Sudan	SDN
Syrian Arab Republic	SYR
Tunisia	TUN
United Arab Emirates	ARE
Yemen	YEM

Alpha-3 country code is based on the ISO 3166 international standard.
Available at https://www.iso.org/obp/ui/#searc.

1. Setting the Stage

A. Introduction

In global comparison, inequality is relatively low in the Arab region. This stylised fact, conventional wisdom purports, is an unsurprising result of development policies during the 1960s through to the early 1990s when social contracts directly addressed the various equity concerns of the development process, through the mechanisms of social transfers, public employment and large investments in infrastructure (Page, 2007; Ali, 2009; World Bank, 2016). Indeed, since the 1960s, the Arab region has seen consistent improvements in its human development levels. From 1960 to 2017, illiteracy rates decreased by half, average years of schooling increased from 1.3 to nearly 7, child mortality significantly declined, other health outcomes improved, and per capita income increased. Better education, increased life expectancy and higher income have led to improved capabilities and greater socioeconomic mobility. Unsurprisingly, the HDR placed five Arab countries among the top ten global achievers in human development progress over the period 1970-2010 (UNDP, 2010). Consistent with this rosy narrative, extreme income and multidimensional poverty are generally low in Arab countries, particularly those in the high and middle-income groups (UNDP and OPHI, 2018; and Abu-Ismail, 2019).

Yet, inequality is perceived as a major factor in the uprisings of 2011 (Verme and others, 2014). The World Bank calls this the 'Arab inequality puzzle' (Devarajan and Ianchovichina, 2017; and World Bank, 2015a, 2016). As argued in this report and elsewhere, there need not be an inequality puzzle if the growth story from national accounts is combined with household statistics. Many of the countries with a reported moderate level of Gini, such as Egypt, Jordan, the Syrian Arab Republic before 2010 and Morocco, record large and rising discrepancies in average expenditure between household expenditure surveys and household final consumption expenditures from national accounts, especially since the inception of economic liberalisation programmes in the 1990s. This suggests that inequality may be much higher and rising if we factor in the expenditure of the richest decile, who are typically excluded from these surveys due to significantly smaller response rates. In fact, Alvaredo and Piketty (2014) and Alvaredo and others (2017) suggest that when the share of top one per cent of income receivers is taken into account, income inequality in the region turns out to be the highest world-wide, i.e., the inequality paradox is resolved once we factor in the (uncaptured) income and wealth accrued to the top one per cent of the population. The real inequality paradox, however, is how little we actually know about the state of inequality in Arab countries, whether in income, wealth, health or education, even though equity concerns receive considerable attention in the constitutions of these countries, as well as in their development policies over the last half century.

This report aims to examine inequality in depth, and, as the title suggests, "rethink" the inequality narrative in relation to the Arab Countries. In this regard, it is important to address three questions, as we do in the following sections of this chapter. Section B addresses the first question: what do we mean by inequality and why does it matter? Secondly, as will be discussed in Section C being multifaceted, inequality lends itself to a variety of theoretical approaches and measurement frameworks; hence, the importance of clarity about what form of inequality we are interested in examining and from which theoretical standpoint. In other words: what is our adopted conceptual framework for analysing inequality? Section D addresses the third question: inequality among whom? Having provided answers to these three questions, issues related to dealing with conflict-afflicted countries and data and measurement methodologies are addressed in sections E and F. Finally, the last section summarises these discussions and provides the report's road map.

The first question is deceptively simple. Equality and equity are often used interchangeably; they, however, differ in important ways. Equality is typically defined as treating everyone the same and giving everyone access to the same opportunities, while equity refers to proportional representation (by race, class, gender, etc.) in those same opportunities. To achieve equity, policies and procedures may result in an unequal distribution of resources. According to Konow et. al. (2016) "In the social science literature on justice, the term 'equity' commonly refers to rewarding individuals in proportion to some measure of their contributions. On the other hand, people often profess a desire for equality, a common interpretation of which is strict egalitarianism, i.e., equal allocations irrespective of contributions".

These normative considerations notwithstanding, when a handful of billionaires own as much wealth as the bottom half of the world population, it is easy to infer that inequality is a major global problem (OXFAM, 2019). This has prompted economists and social scientists to express growing concern over rising economic inequality, as evidenced, for example, by the considerable academic and popular interest in contributions to the topic by Piketty (2014) and Stiglitz (2012). Clearly, opposition to current levels of inequality does not by itself allow ascertaining whether the favoured target is equality or merely less inequality (perhaps still in keeping with equity). It does, however, underscore the great importance of distributive preferences and the value of clarifying the rules governing those preferences.

Normative positions on what constitutes economic and social justice play an important role in shaping social policy outcomes and may explain, at least in part, why some societies have very different tolerance levels for higher inequality. Nordic countries, for example, are well known to have low inequality because prevailing social values generally disapprove of high social and economic disparities. In other countries, notably the United States, higher levels of inequality are perceived as a justifiable reward for individual effort and success. Moreover, while the question "why does inequality matter?" may seem groundless from an egalitarian perspective, it is still valid, even if, as evidence suggests, the poorest of the poor are better off today in absolute terms than their parents and grandparents were several decades ago.

To this fundamental question, the answer we offer throughout this report is yes, inequality matters a great deal, and, as will be discussed later, not just for normative reasons but also for pragmatic development policy reasons. In economics, for example, one of Kalecki's main insights is that due to different patterns of savings and expenditure between capitalists and workers, redistribution will necessarily have an impact on economic growth (Kalecki, 1955, 1971a, and 1971b). Lance Taylor later developed this insight in structuralist macroeconomic models in which the impact of redistribution on growth depends on whether the economy is wage led or profit led (Taylor, 1983, 1988, and 1991). As argued in Section C of this chapter, this debate is enormously important for Arab countries where, as in the case of most developing countries, evidence suggests a wage-led pattern of economic growth. Hence, even if we set aside equity considerations (and there is no reason why we should), redistribution of income to workers in the lowest quintiles will result in both higher growth per capita and faster poverty reduction. Complementing this argument, empirical work from the IMF (Berg and Ostry, 2017) points that a low level of inequality may be essential for effecting long and stable growth spells. Moreover, high levels of inequality, especially when combined with governance deficits, are also known to be associated with political instability and conflict.

Nonetheless, the more powerful argument for why we should be concerned with inequality is perhaps that social and economic deprivation outcomes, however varied, do not emerge in a vacuum; rather, as argued in chapter 5 of this report, they are the result of structural and institutional factors that perpetuate them. The World Development Report (WDR) 2006 expresses this as follows: one set of reasons "why equity and long-term prosperity can be complementary arises from the fact that high levels of economic and political inequality tend to lead to economic institutions and social arrangements that systematically favour the interests of those with more influence" (World Bank, 2005b). The World Bank suggest these "inequality traps" can generate significant economic costs for society as a whole, especially in the form of less opportunities for innovation and investment: "unequal economic opportunities lead to unequal outcomes and reinforce unequal political power. Unequal power shapes institutions and policies that tend to foster the persistence of the initial conditions", which themselves shape unequal economic opportunities and so forth (World Bank, 2005b). This framework, in which pre-existing high levels of social and economic inequalities interact with pro-rich institutional biases to produce and perpetuate existing inequalities, offers the strongest rationale for why we should be concerned over income inequality.

Yet, the economic inequality perspective, though essential, provides only a partial unidimensional view of inequality (Kanbur, 2000; Cornia and Kiiski, 2001; World Bank, 2005b). Recently, use of a multidimensional inequality perspective, based on the capability approach of the philosopher and welfare economist Nobel Laureate, Amartya Sen (Sen, 1980, 1984, 1985a, 1987, 1992, 1999, and 2009), **has been gathering momentum.** In this approach, inequality is extended to cover disparities in ability (or capability) to enjoy the basic rights and freedoms of life. Heavily influenced by this school of thought, in response to the second question, our analysis is mainly focused on inequality in the non-income dimensions of health, education and living conditions.

This perspective is important for two reasons. First, country experiences repeatedly inform us that progress in social indicators at the aggregate level is influenced not only by the quantity of public expenditure but also by its distribution. Hence, the case for achieving the Sustainable Development Goals (SDGs) is one and the same as that for reducing social inequality. Secondly, while achievements and deprivations in health and education in the Arab Countries have been closely monitored at the national and regional levels, particularly since the adoption of the MDGs, there is a large gap in our understanding of inequalities in both.

Whether a money metric or a multidimensional perspective is adopted, the main research challenge is to decide on which of the two forms of inequality to focus: inequality of outcome or inequality of opportunity, and why. Recently, most academic inequality analyses of the region have focused on inequality of opportunity. This attention is well justified, for inequality of outcome (such as in distribution of income, wealth, infant mortality, etc.) does not account for individual responsibility for outcomes. Indeed, there has recently been a growing consensus that societies seeking social and economic justice or equity in living standards should promote equality of opportunity by compensating inequalities arising from 'circumstances' beyond the control of the individual, while simultaneously letting individuals bear the consequences of actions or "efforts" for which they can be held responsible (Roemer, 1993, 1998; and Roemer and others, 2003). Moreover, both kinds of inequality, i.e., of opportunity and of outcome, are correlated, since the living standards where an individual was born may affect their future outcomes (El Enbaby and Galal, 2015; Assaad and others, 2017). However, as noted by Atkinson (2015), the best way to reduce inequality of opportunity is to address inequality of outcome. Hence, as argued later in this report, **this report takes a balanced approach with equal attention to both lines of analysis.**

Inequality among whom? As explained by Iqbal (2012), "deepening inter-group inequality" may encourage revolts and uprisings. Hence, inequality among selected demographic groups may partly explain the Arab Inequality Puzzle (Ramadan, Hlasny and Intini, 2018). Additionally, there are well-established stylised facts on gender disparities in the Arab region that have been highlighted since the publication of the Arab Human Development Reports (UNDP, 2002, and 2005a). Hence, we award special attention to gender inequalities, with chapter 4 fully devoted to this issue. Moreover, as discussed later in this chapter, the recent Arab multidimensional poverty report (E/ESCWA/EDID/2017/2) enables us to undertake fruitful analyses by offering harmonised data on health, education and living conditions for twelve Arab countries, covering at least two points in time, one in the early 2000s and the other after 2010; hence **the unique opportunity to examine trends in outcome and opportunity inequalities over time, between rich and poor wealth quintiles, men and women, rural and urban areas, and between households with highly educated and households with uneducated heads.**

B. Why does inequality matter?

Article 1 of the Universal Declaration of Human Rights states: "*All human beings are born free and equal in dignity and rights. They are endowed with reason and conscience and should act towards one another in a spirit of brotherhood*". For all those who agree with this declaration, the equal

nature of all human beings is not a matter for debate. From this perspective, Sen (1980) believes that all moral philosophies are equalitarian, even those who are not perceived as such. According to Sen, the philosophical debate is not on the desirability of equality but on the dimension along which one requires or seeks equality. In such a context, the real question is "*equality of what*". This section briefly describes this philosophical debate and positions our epistemological approach within it.

In the century before the publication of John Rawls' *Theory of Justice* in 1971, most Anglo-Saxon political philosophy literature adopted a utilitarian approach, based on the utilitarian political philosophy developed during the eighteenth and nineteenth centuries around the work of Jeremy Bentham and John Stuart Mill. The idea underlying this moral approach is that the policy maker should choose the social allocation that generates the highest sum or average[1] of individual utilities (satisfaction). If one adopts this philosophical approach, each individual is equal along the dimension of their marginal utility, which is the utility generated by the last unit of resource received. Harsanyi (1955) gives some modern theoretical foundations to this approach by showing that a risk-averse agent behind the *veil of ignorance* will always choose the same social allocation as that which a utilitarian social planner would choose.

Following Harsanyi (1955), Rawls (1971) adopts a *veil of ignorance* approach to his political philosophy. In his argument, he tries to find the principles of justice upon which the delegates of various comprehensive doctrines would agree if they were bargaining over the social contract behind the *veil of ignorance*. Rawls argues that social judgments must be made on the distribution of primary goods and not on the distribution of utilities. From his point of view, the transformation of these primary goods into utility or satisfaction is not a social justice issue but a personal responsibility issue. Thus, his principle of justice is based on social primary goods. More specifically, when comparing different social outcomes, this principle of justice requires that the following conditions are met in a lexical order:

1. **Basic liberties:** "Each person is to have an equal right to the most extensive scheme of equal basic liberties compatible with a similar scheme of liberties for others".
2. **Fair equality of opportunity:** Offices and social positions must be open to everyone.
3. **Difference principle:** Social and economic inequalities are to be arranged so that they are of the greatest benefit to the least-advantaged members of society.

Sen (1980) agrees with Rawls that social justice should not be concerned with the distribution of utilities and that satisfaction is within the realm of individual responsibility. For both Sen and Rawls, the policy maker should not be concerned with the differences among individuals in their ability to be satisfied. However, Sen believes that Rawls went too far in the elimination of individual differences. He structures his reasoning along the following lines.

- Individuals use resources, say primary goods, to achieve social functionings and get satisfaction from these social functionings;
- Because of differences in ethnicity, religion, gender, health or education, individuals may differ in their capacity to transform resources into social functionings;
- These differences matter, which is why distributive justice needs to be assessed in the space of capabilities;

- These capabilities are defined as the sets of social functionings available to each individual.

This report adopts a human development approach largely compatible with the capability approach of Sen. Thus, by extending the analysis beyond the dimension of income and by examining the distribution of education and health indicators, this report takes a human development perspective close to Sen's view. Furthermore, when considering inequality of opportunity along these dimensions, our analysis still lies within the capability approach of Sen, as we are concerned with the impact of initial conditions on the capability sets available to individuals. Lefranc, Pistolesi and Trannoy (2009) argue that the philosophical standpoint of the standard inequality of opportunity approach is that once perfect equality of opportunity is obtained, the analyst has no aversion to the magnitude of reward for effort, i.e., to the residual inequality of outcome. They further argue that one may also be concerned with the inequality of outcome, in addition to inequality of opportunity, which is the ethical position that we adopt in this report, for we consider inequality of opportunity in health and education as an important (but not the sole) component of total inequality.

To understand the standpoint of inequality of opportunity analysts, it is worth noting that equality in opportunity theories have been developed as an answer to Nozick's (1974) contribution to theories of justice. By laying down the philosophical foundations of libertarianism, Nozick (1974) presents the most prominent critique of Rawls. Disagreeing that the final distribution of resources is a matter of social justice, he takes a procedural approach in which each person is treated equally by the procedure generating the final distribution of economic advantages. For Nozick, a social allocation is just if:

- The original appropriation of nature is fair;
- Transfers among individuals are free;
- There is compensation for past injustice.

The second condition implies that no one has the right to confiscate any resource from an individual without consent. In such a context, public taxation has no moral grounds, and the policy recommendation is to have as small a government as possible.

Since Nozick's condition of non-expropriation by a taxation authority is morally very close to the Marxist view of exploitation and expropriation, the main repositioning with respect to Nozick's procedural approach came from the analytical Marxism school of thought. Cohen (1989) proposes a Marxian moral philosophy theory in which equality is sought in the space of opportunities of access to social advantages. If these opportunities are equally distributed, there is no moral justification for expropriating the product of individual labour or effort. The final distribution of resources is, thus, not a matter of social justice. Building on Cohen and other analytical Marxists, Roemer (1993) formalises positioning the political philosophy of equality of opportunity within the social choice theory in economics. Like Sen's, Roemer's work offers a bridge between the political philosophy literature and the inequality measurement literature in economics. By looking at inequality in health and education opportunity, this report is also epistemologically close to Roemer's work. However, since we look at total inequalities along these dimensions, we also differ slightly from Roemer. The epistemological position underlying our analysis is that opportunities

are not the only space for assessing inequalities. In the view of this report, inequalities of opportunity contribute to total inequality in capabilities. There are two reasons for focusing on this particular contribution to total inequality. First, differences that cannot be changed by the effort and decisions of the individual are deemed unacceptable by most. In this context, assessing the extent of inequalities of opportunity can be a good door opener to policymakers who are less concerned with inequality. Secondly, even if the policymaker seeks equality of capabilities, they may still be willing to tolerate some inequality in capability (cost) in order to increase the total capabilities available to the population (benefit). In this cost/benefit context, it is important to highlight that the inequality of opportunity component cannot produce any economic benefit, since it is not linked with individual behaviour in the economic system; only that portion of total disparities that is not connected with initial conditions can be used as an economic incentive to produce more.

C. An integrated multidimensional approach

1. Income inequality debates

As mentioned earlier, most economists would agree that there is a causal relationship between inequality and growth, even though the nature of this relationship may not be perfectly understood and views on the direction of causality may differ depending on the theoretical framework. Neoclassical literature argues that incomes are generated by one's marginal productivity. People earn what they create for society, and, in theory, demand equals supply, and factors, including labour, have a remuneration equal to their marginal productivity. How does that explain the large pay differences between Chief Executive Officers (CEOs) of companies and workers? Jensen and Murphy (1990) show that managerial pays are not correlated with firm performance and productivity. Biesebroeck (2011) ran a study on Sub-Saharan countries, concluding that differences between wage and productivity are wider in low-income countries. There are also large differences between wages of women and wages of men, although there is hardly any difference in their productivity levels (see also, Hellerstein, Neumark, and Troske, 1999).

Stiglitz (2015) argues that the idea of merit, which is strongly linked to that of marginal productivity reflecting one's effort, does not explain the magnitude of inequality. He maintains that inequality is driven by other factors that may account for a larger share of it. Underlining the importance of institutions and public policies dealing with public goods, governance, discrimination, financial systems, labour laws, fiscal measures, and transfers, he points out that appropriate policies allow a complementarity between declining inequality and macroeconomic performance.

But if income inequality is not primarily determined by productivity, then what does cause it? Do countries become unequal as they grow richer? Who are the winners and losers of economic development? The starting point for answering these questions is to acknowledge that inequality is not just a result of development but can also affect the course of development. Not all economists would agree to this statement, however. Despite the large body of theoretical and empirical work, there is little consensus regarding governing relationships. The Kuznets' curve hypothesis is the first

documented attempt at analysing the relationship between inequality and economic growth. Kuznets (1955) suggested that modern economic development is initially accompanied by worsening income inequality, but that inequality may be expected to improve after clearing a particular threshold. The relationship between inequality (on the vertical axis) and average income (on the horizontal axis) will thus trace out an inverted U curve. Kuznets based his conjecture on the Lewis model, in which the economy is dominated in the early stages of development by a traditional rural sector where income inequality is relatively low. Growth then occurs by a shifting of surplus labour from the traditional sector to a new urban industrial sector, which usually has higher real wages. Since the shift does not lead to an increase in rural wages, income inequality grows. Eventually, however, surplus labour in agriculture disappears, rural wages start to increase and higher education and training leads to an expansion in the supply of qualified labour. As a result, the wage gap between and within sectors narrows and inequality decreases.

Up until the 1980s, this inequality growth narrative was generally accepted. Robinson (1976) described it as ‘an economic law’, while Chenery and others (1974) and Ahluwalia (1976) confirmed it as ‘a stylised fact’. However, by the 1990s, as new data on inequality appeared, problems with the Kuznets conjecture began to surface. First, the left tail of the curve appeared to be less robust and there was enormous variance in the inequality experienced during earlier stages of development. Secondly, available country time-series data showed that Asian countries, which were located closer to the bottom of the income per capita ranking in the 1960s, tended to have lower inequality. The Kuznets curve observed during the development of the currently rich countries of the world appears not to be inevitable for those countries trying to catch up. Thirdly, although income inequality in the US and Europe did decline during the 1950s and the 1960s, income distribution seems to have been getting worse since the 1970s.

However, there were also theoretical problems with the Lewis model that assumes growth influences inequality. With the development of endogenous growth models, fiscal policy and political instability channels provided a theoretical basis for feedback running from inequality to growth. Alesina and Rodrik (1994) showed that in an unequal economy with redistributive conflicts, public dissatisfaction will push for implementing redistribution policies with high taxes on capital income. This, in turn, will retard capital accumulation and reduce economic growth. A similar argument is proposed by Alesina and Perotti (1996) showing that in a poor unequal society with very scarce resources, only the upper class is capable of undertaking investment. This leads to higher growth rates, provided that the middle class is not economically too distant from the upper class in order to reduce the incentives of median voter to vote for progressive taxes.

The reverse causality is substantiated in neo-Marxist models (such as Marglin, 1984) describing income distribution as a process determined by the bargaining power of capitalist firms vis-à-vis workers, which, in turn, depends on political, institutional and economic factors. In this regard, Taylor (1988; 1990) criticises the Lewis model for its fundamental assumption that capitalist expansion creates its own demand and that there is a ready market for capitalist goods (i.e., supply-driven growth), which, he maintains, gives no role for effective demand. As is well known, if growth is profit led (driven by savings), then it would pay to

reallocate income to the capitalist class, which has a higher propensity to save. In contrast, there is plenty of evidence to suggest that developing countries are wage led and that progressive income redistribution can help accelerate the development process through stimulating aggregate demand. Formally, using a structuralist demand-driven model, Taylor (1983) shows that progressive income redistribution towards wage earners may raise growth, if the wage-goods sector is large and its output responds to demand injections.

These debates are not just academic, rather, they also influence people's lives. Assumptions of the neoclassical growth model, if one believes them, would lead us to accept that economic liberalisation, in terms of downsizing government expenditures and narrowing budget deficits, would lead to efficiency gains and poverty reduction, even though they are well known to have initial anti-poor distributional outcomes. In contrast, progressive economists argue that an active policy of income distribution towards the poor will stimulate aggregate demand and increase investment through accelerator effects. **This is arguably the case in Arab Countries, where a redistribution of income to the poor and middle classes is likely to result in both higher growth per capita and more rapid poverty and inequality reduction** (E/ESCWA/EDGD/2014/2).

2. A multidimensional approach

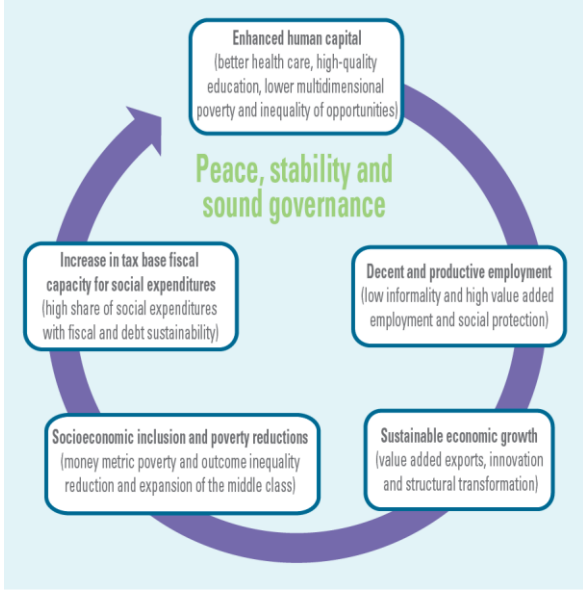
Income alone is sufficient neither for driving social inequality downwards nor for reducing inequalities in political participation. Indeed, both require a multidimensional approach. For example, in the absence of effective social policies, the decrease in inequality is often much slower than income growth (UNDP, 2013). Ali (2009) argues that a more effective course entails giving more attention to expenditure on human capital, especially on education, which is viewed as tool for social and economic grading by allowing individuals to improve their social status, as well as for effecting convergence of income classes. As such, education is a key channel through which the inequality-reducing effect of income growth materialises (Galor and Zeira, 1993). Hence, this report devotes significant attention to inequality in human capabilities.

The multidimensional approach has gained much attention since Amartya Sen first introduced the concept of capability in his Tanner Lectures on Equality (1980), offering a new perspective on poverty that is markedly different from the mainstream focus on income as the sole reason for poverty. Sen's capability approach has two main constituents, capability and functionings. The latter are states of being and doing that should be distinguished from the commodities being used to achieve them, while capability focuses on what people are 'able to do' and are 'able to be', which are referred to as their capabilities (Robeyns, 2003). Thus, "A functioning is an achievement, whereas a capability is ability to achieve. Functionings are, in a sense, more directly related to living conditions, since they are different aspects of living conditions. Capabilities, in contrast, are notions of freedom" (Sen, 1987).

The capability approach of Sen is based on researching what happens in a poor household, with his new perspective emphasising that unequal distribution of resources is the main cause of destruction of the capability and functionings of household members. From this perspective, commands over commodities determine the rights and entitlements of each person in the household (Bastos and others,

2009). Sen further clarifies that social and cultural settings, such as the gender structure, determine possession of resources within the household, as well as capabilities and their conversion into functionings of each household member. Moreover, inequality in distribution of resources affects both capabilities and functionings of each person. Thus, Sen's approach focuses on real freedom, i.e., on what people are able to do, rather than on what people should do, to alleviate their impoverished situation (Robeyns, 2003).

Figure 1.1 An illustrative diagram of an integrated approach to reducing inequality



Building on this multidimensional inequality approach, which is focused on enhancing human capabilities, this report argues that to translate economic growth into inclusive development, progress has to be made in decent employment, poverty reduction, increased social spending and improved governance. Figure 1.1 presents a simplified illustrative example of how such an inclusive development process would work. Naturally, the illustrative links may differ among countries and across time, depending on existing peculiarities. Nonetheless, based on our previous researches on inclusive growth and development in the Arab region, the figure provides a general relevant paradigm. The circular flow would begin with human capital as an instigator of the process, consistent with our human-development-centred approach. In turn, human capital is enhanced through the provision of better healthcare, as well as high-quality education and on-the job training to equip youth particularly with the skills demanded in labour market and facilitate school-to-work transition. Economic policies governed by high quality institutions would lead to human capital gains being translated into decent productive employment, which in turn supports inclusive economic growth and leads to poverty reduction and expansion of the middle class. Good governance and law enforcement would allow governments to reap the benefits of growth, widen their tax base and increase the fiscal capacity for social expenditure. In their turn, prudent targeting and management of social programmes would further reduce poverty and inequality, strengthen social cohesion and mitigate political instability risks; all of which would then feedback into enhanced human development and economic growth. Peace and stability are both prerequisites and outcomes of this process, while instability and conflict would disrupt it altogether, leading, as argued in chapter 4 of this report, to deterioration of socioeconomic conditions and reinforcement of inequalities, including gender inequalities. Yet, combined breaks in this chain, such as poor economic performance, paucity of decent jobs, deep inequalities and governance deficits, may themselves sow the seeds of political instability. Put differently, a shortfall in a single component of this process may not necessarily result in political instability, while concurrent occurrence

and endurance of shortfalls are plausible determinants of such instability.

This multidimensional approach is also crucial for analysing structural inequalities. Kanbur (2013) argues that initial structural inequalities matter in determining the equity of the growth path. Lessons from China and India show that pre-existing inequalities in access to market, natural location, infrastructure, education, and discrimination have led to unequal fruits of growth. Education constitutes an important determinant of wages and accounts for a large part of income inequality in developing countries (UNDP, 2013), with skilled jobs and higher wages being associated with higher educational attainment. Yet, developing economies are still struggling to raise enrolment rates in secondary and tertiary education, though they have done well in improving primary enrolment rates. Lessons from Egypt (Hassine, 2012) also shed light on the fact that pre-existing inequality, understood as inequality of opportunity, exogenous and outside of the control of the individual, is a significant determinant of inequality of outcome.

In chapter 5, we bring to life this analytical conceptual framework by asking whether there are impaired links at one or more of these causal chains, leading to disjunction between development policies and inequality results in the Arab region. If trends in income and non-income inequalities tend to be rigid despite growth, then that implies they are influenced by more structural issues; i.e., impaired links caused by factors such as lack of economic structural transformation, high levels of informality, poor labour market outcomes, and weak fiscal outlooks may be responsible. As argued in chapter 5, these various dimensions are all interconnected and are ultimately contingent upon the political economy framework within which they operate. Quality of institutions and natural resource dependence also contribute to the growth-inequality nexus. Income inequality can have a negative impact on security of property rights, and, therefore, reduce growth (Keefer and Knack, 2000). Natural resources dependence, on the other hand, induces lower economic growth and higher inequality (Sachs and Werner, 1995; Gylfason and Zoega, 2003). In particular, rent seeking activities and low control of corruption lead to resource diversion away from productive activities crucial to development, which, in turn, intensifies income inequality (Spinesi, 2009). Furthermore, absence of strong institutional constraints can lead different interest groups to compete over implementing their preferred redistribution policies, especially in highly unequal societies, leading to wide polarisation of social preferences, which, in turn, results in a pro-cyclical fiscal spending and fiscal deficits (Kumar and Woo, 2010).

D. What kind of inequality and among whom?

Whether income or multidimensional, which of the two main forms of inequality should be prioritised: inequality of outcome or inequality of opportunity? and why? As pointed out earlier, most recent academic inequality analysis has been focused on inequality of opportunity, since inequality of outcome (such as inequality in distribution of income, wealth, infant mortality, etc.) does not account for individual responsibility for such outcomes. In contrast, there has been a growing consensus that societies seeking social and economic justice or equity in living standards should promote equality of opportunity by compensating the

inequality arising from 'circumstances' beyond the control of the individual, while letting individuals bear the consequences of actions or "efforts" for which they can be held responsible (See Roemer, 1998, 1993; and Roemer and others, 2003).

Literature on inequality of opportunity in the region is relatively recent, but rapidly growing. Assaad and others (2016) estimate inequality in income and consumption opportunity for Egypt, Jordan and Tunisia. El-Kogali and others (2016) examine the roots of inequality in human and economic development in Morocco by focusing on inequality in early childhood development and trends over time, using several surveys conducted between 2003 and 2012. In their book on the Middle East and North Africa, Krishnan and others (2016) focus on the high degrees of segmentation in labour markets and on unequal distribution of education and infrastructure among children in their formative years. Hassine (2012) uses household-survey micro-data to assess levels and determinants of economic inequality in 12 Arab countries, focussing on sources of rural-urban and metropolitan-nonmetropolitan inequalities. Salehi-Isfahani, Hassine and Assaad (2014) investigate this topic on a regional level, focussing mainly on educational achievement. The World Bank also developed a Human Opportunity Index that calculates how personal circumstances, such as area of residence, wealth and gender, impact the probability of a child accessing the services that are necessary to succeed in life, like education, running water and connection to electricity (See Paes de Barros and others 2009; and Molinas and others, 2010). Krafft and El-Kogali (2014) analyse inequality in early childhood opportunity in twelve countries, assessing development using a variety of health and nutrition indicators.

However, recent interest in inequality of opportunity should not be at the expense of interest in inequality of outcome. As noted by Atkinson (2015), the best way to reduce the former is to address the latter, for both are correlated, with the living standards where the individual is born affecting their future outcomes (Assaad and others, 2017). Yet, there has been little, if any, attention paid to inequality trends in health, education and living conditions, whether of outcome or opportunity. **This report aims to fill this important gap in the literature as a means for assessing impact of macroeconomic and social policies at large, as well as for better understanding the root drivers of multidimensional inequality.**

Turning to the second question; inequality among whom? Understanding **inter-group inequality for selected social, economic, spatial and demographic groups (rich and poor, men and women, rural and urban, educated and non-educated, etc.) is essential for addressing the underlying political economy challenges facing the region, particularly after the Arab Spring. Nonetheless, inter-country inequalities are also important in the current context.** Overall, the Arab region has made considerable human capital gains over the past two decades, as captured by the health and education components of the Human Development Index (HDI). However, significant inter-country inequalities underlie these average region-wide achievements. Likewise, the Arab region is highly heterogeneous in terms of income per capita. Qatar, which has the highest HDI ranking among Arab countries, has a per capita gross national income (GNI) of around $117,000 (2011 PPP dollars), nearly 80 times that of Comoros. Average income per capita growth remained sluggish over the period 1990-2017 for the region as a whole, but in medium human-development

countries, it doubled over the period, while it declined from $4,170 in 2010 to $2,835 in low human-development countries. This is hardly surprising given that the latter group is made of conflict-afflicted countries, such as the Syrian Arab Republic, Yemen and the Sudan, where protracted violence appears to be wiping away years of development gains, as is also evident in the decreasing trend in years of schooling for the low human-development group since 2013. This implies that inter-country inequalities are growing at an alarming rate.

Arab countries also have high levels of sub-national inequalities in human development, especially in education and income. The inequality-adjusted HDI (IHDI) accounts for these within-country distributions of health, education, and income among the population and "discounts" the dimensions of the HDI depending on the level of inequality. Factoring in these inequalities, the Arab region loses 25.1 per cent of its HDI value in 2017 (slipping from 0.70 to 0.52). This adjustment from HDI to IHDI is one of the highest average losses globally, which places the Arab countries just behind Sub-Saharan Africa and South Asia in terms of inequality, with inequality in education accounting for the largest share of this slip. Country-level data show that inequality in education is higher in the LDCs, where the index exceeds 40 per cent.

E. Dealing with conflict-afflicted countries

The Arab region has been afflicted with long-standing conflicts, such as the Palestinian-Israeli conflict and the Iraq war. Moreover, eruption of the Arab spring in 2011 has led to a rapid escalation of conflict and violence in the region, with the Syrian Arab Republic and Yemen being two of the largest humanitarian crises globally (OCHA, 2019a, 2019b). Protracted wars in the Syrian Arab Republic and Yemen have derailed their economic and development processes, leading to extreme degradation in their living standard. Health indicators, such as life expectancy and child mortality, have deteriorated due to various factors, including direct conflict casualties, impairment of health facilities and scarcity of health providers, in addition to the indirect impact of war on health through re-emergence of morbid diseases and extreme food insecurity. Moreover, war has disrupted the education of millions of children, enfeebled the economies and generated massive waves of displacements in search of safety.

However, in times of war, collecting statistics to quantify impacts is a serious challenge due to numerous obstacles, including the costs and risks involved and absence of rule of law, which is necessary for ensuring systematic record keeping. For instance, destruction of hospitals or their impaired functionality leads to unreliable documentation and renders measurement of health outcomes, such as mortality rates, largely uncertain. Additionally, large-scale conflict-caused displacements, coupled with existence of many hard-to reach and besieged areas, render conducting country-level surveys, such as household surveys, extremely difficult and imprecise. Moreover, during wartime, security concerns may prevent people from reporting accurate information about their status or responding altogether, resulting in low response rates and limiting the value of surveys.

Our dataset, based on the latest surveys available at the time of writing, covers four conflict-afflicted countries; namely, Iraq (2011), Libya (2014), State of Palestine (2014) and Yemen (2013).

Even though the data must be treated with caution, they are still indicative and worth examining. In the particular case of in Yemen, the figures do not reflect the current state, for the civil war that erupted in 2015 and has since rapidly escalated has had a detrimental impact on human life and the socioeconomic infrastructure of the country. Yet, Yemen's crisis was gradually unfolding since the 2011 revolutions, after decades of poverty and vulnerability. Hence, examining Yemen's 2013 survey may provide useful insights into pre-civil war conditions that may have played a role in its outbreak. Unfortunately, we could not include the Syrian Arab Republic in our analysis in chapters 2, 3 and 4, due to unavailability of household surveys post 2010. Nonetheless, we complement our analysis in chapter 5 with external sources, incorporating the Syrian Arab Republic whenever possible.

It is worth noting that conflict intensity may vary across different areas within a country, impacting inequality variedly. In our analysis, such conflict peculiarities are addressed whenever possible. Thus, in chapter 2 on health inequalities, inequality-of-opportunity analysis accounts for the impact of residing in Gaza in the case of the State of Palestine and in Kurdistan in the case of Iraq. We find that living in these two areas contributes considerably to inequality in health opportunity, especially in child stunting.

In chapter 4, while focusing on gender inequalities, we address the impact of conflict on various health, education and social indicators, dealing mainly with the cases of Yemen and Iraq. We find that exposure to conflict increases likelihood of infant mortality, as well as of both stunting and severe stunting, with girls being more susceptible to stunting. Conflict and violence also cause progress in educational achievements to relapse. For instance, the decrease in enrolment rates in Yemen is marked, especially for girls. Overall, the analysis underlines that conflict exacerbates pre-existing gender inequalities and increases marginalisation of women.

At ESCWA, we assiduously endeavour to fill the data gap for the Arab region, but enduring conflicts and instabilities remain a critical challenge. While providing valuable insights, the figures and analyses related to conflict-afflicted countries in this report also form the basis for extended research once conflicts recede and new higher-quality surveys become available.

F. Data, measurement and country classification

The gap in knowledge regarding inequality in the region is in part due to data opaqueness. In most Arab countries, household statistics are scarce, sometimes of poor quality, lack comparability and are difficult to access (Bibi and Nabli, 2010). Fortunately, as a result of the Arab multidimensional poverty report (E/ESCWA/EDID/2017/2), there is now harmonised demographic and health household-level data for 12 Arab countries, covering at least two points in time: one in the early 2000s, the other after 2010. **Hence, there is a unique opportunity for examining trends in outcomes and opportunity inequalities across household characteristics (e.g., between rich and poor wealth quintiles, men and women, rural and urban areas, households having highly educated heads and households having uneducated heads).** Availability of these harmonised data sources has been a primary motivation for ESCWA and ERF to initiate this study, which seeks to rethink the conventional wisdom on Arab Inequality. These

data sources are briefly described in this section and in full detail in a separate technical annex.

The report uses a rich set of household-survey data from three types of sources: the Demographic and Health Survey (DHS) programme, the Multiple Indicator Cluster Survey (MICS) and the Pan-Arab Project for Family Health (PAPFAM) programme. These surveys collect, inter alia, representative data on population, health, education, economic activity, and living standards. Although they do not offer information on consumption and expenditure, a wealth of data pertaining to the non-income space is provided.

Further, household-survey data usually complement information on health or education with data on living standards and assets or durable goods in the household. These data are then used to construct a wealth index that serves as a proxy for household wealth. In the absence of income and expenditure data, the DHS programme introduced such a wealth index (Rutstein and Johnson, 2004) to determine household relative economic status. This index is generated through a principal-components analysis. Utilising information on household asset ownership, materials used for housing construction, and types of water access and sanitation facilities, it places each individual household on a continuous scale of relative wealth. The breakdown of the suggested indicators by wealth index quintiles or deciles can reveal differences between the very rich and the very poor (as measured by the wealth index) in relation to outcomes in health or education. However, it must be noted that the wealth index is a proxy for socioeconomic status that is particular to each survey and each point in time. Thus, we mainly focus on analysing the ratio of the wealth index scores (i.e., score of the richest quintile to that of the poorest quintile) or the concentration curve (CC) and its related concentration index (CI), which are based on the wealth score of the wealth index across time.

The wealth of data available in the surveys is used in the construction of selected health and education indicators used in the inequality of outcome and inequality of opportunity analysis. In health, the analysis focuses mainly on factors that have a direct effect, such as water and sanitation, as well as on child health outcomes, such as infant mortality rates and malnutrition. In education, the wealth of data is used to assess evolvement of inequality in attendance rates, completion rates and average years of schooling over time. Generally, the analyses of both outcomes and opportunity inequality focus on evolvement of inequality across the region over time.

To assess the extent changes over time of inequality, the part of the report dealing with inequality of outcome examines the levels and trends of selected indicators, as well as the gaps between different subgroups. In order to identify the most vulnerable groups of population, the analysis also considers a combination of different characteristics, such as wealth ranking of household in combination with education of household head (hereafter referred to as group of extremes 1), or location of household in combination with family size (hereafter referred to as group of extremes 2). Tables A.1-A.6 in the appendix report the ratios between different socioeconomic groups for all indicators (latest point in time).

All surveys used in this report have been harmonised to ensure comparability of calculated health and education indicators over time and across countries. The technical annex explains in detail the process of

harmonisation and provides an overview of the indicators calculated from the data.

The report focuses on 12 Arab countries (Algeria, Comoros, Egypt, Iraq, Jordan, Libya, Mauritania, Morocco, State of Palestine, Sudan, Tunisia, and Yemen) where the programmes collected comparable data for two points in time; the earlier usually between 2000 and 2007, the later between 2010 and 2015.

As defined in this report, the Arab region is comprised of highly diverse countries in terms of socioeconomic and development conditions. **Following the UNDP HDR (2018), they are classified into three groups:** the low human-development group, which includes Comoros, Mauritania, the Sudan and Yemen; the medium human-development group, which includes Egypt, Iraq, Morocco and the State of Palestine; and the high human-development group, which includes Algeria, Jordan, Libya and Tunisia. The graphs in the report, particularly in chapters 2, 3 and 4, reflect this classification, with countries ordered in the descending order of their HDI.[2]

G. Summary and roadmap

In light of growing concern about inequality and its repercussions, particularly post the Arab uprisings, this report raises three main questions. First, why does Inequality matter? Inequality is important not only from a normative and equity perspective, but also from the perspective of economics and development, especially when inequalities ensue from structural and institutional deficits, as is the case in the Arab region. Second, what type of inequality? We adopt a multidimensional approach, focussing chiefly on the non-income dimensions of health, education and living conditions. Along these dimensions, we assess inequality of opportunity and inequality of outcome, considering both to be equally important. Third, inequality among whom? We focus on several inter-group inequalities, including between urban and rural, richest and poorest, households having educated heads and households having uneducated heads, groups of extremes and genders.

Our approach to rethinking inequality hinges on two considerations. The first is that any stylised facts on income inequality should be viewed in parallel with trends in inequality in human capital (health and education); hence the appeal of multidimensionality. The second is that making sense of empirical results requires an integrated political economy perspective. This integrated multidimensional approach is of significant value in addressing effectiveness of public policy in reducing poverty and inequality. Equally importantly, it helps examine whether current development policies and their underlying political economy structures are sustainable. If not, then this approach points the direction which institutional and other economic and social reforms would need to take to reduce inequality.

With the wealth of data and the extensive analysis it provides, this report fills huge research and knowledge gaps about inequality in the Arab region. The remainder of the report is organised as follows. Chapters 2 and 3 assess thoroughly health and education inequalities of both outcomes and opportunity. Chapter 4 focuses on gender inequalities in health and education, in addition to addressing gender-based inequalities in Arab labour markets and the impact of conflict on gender inequalities. Chapter 5 provides an in-depth analysis of drivers of inequality, including poor economic structures, poor governance and rentierism. Finally, chapter 6 provides some policy and further research considerations.

2. Inequalities in Health

A. Introduction: inequalities of health outcomes in the Arab region

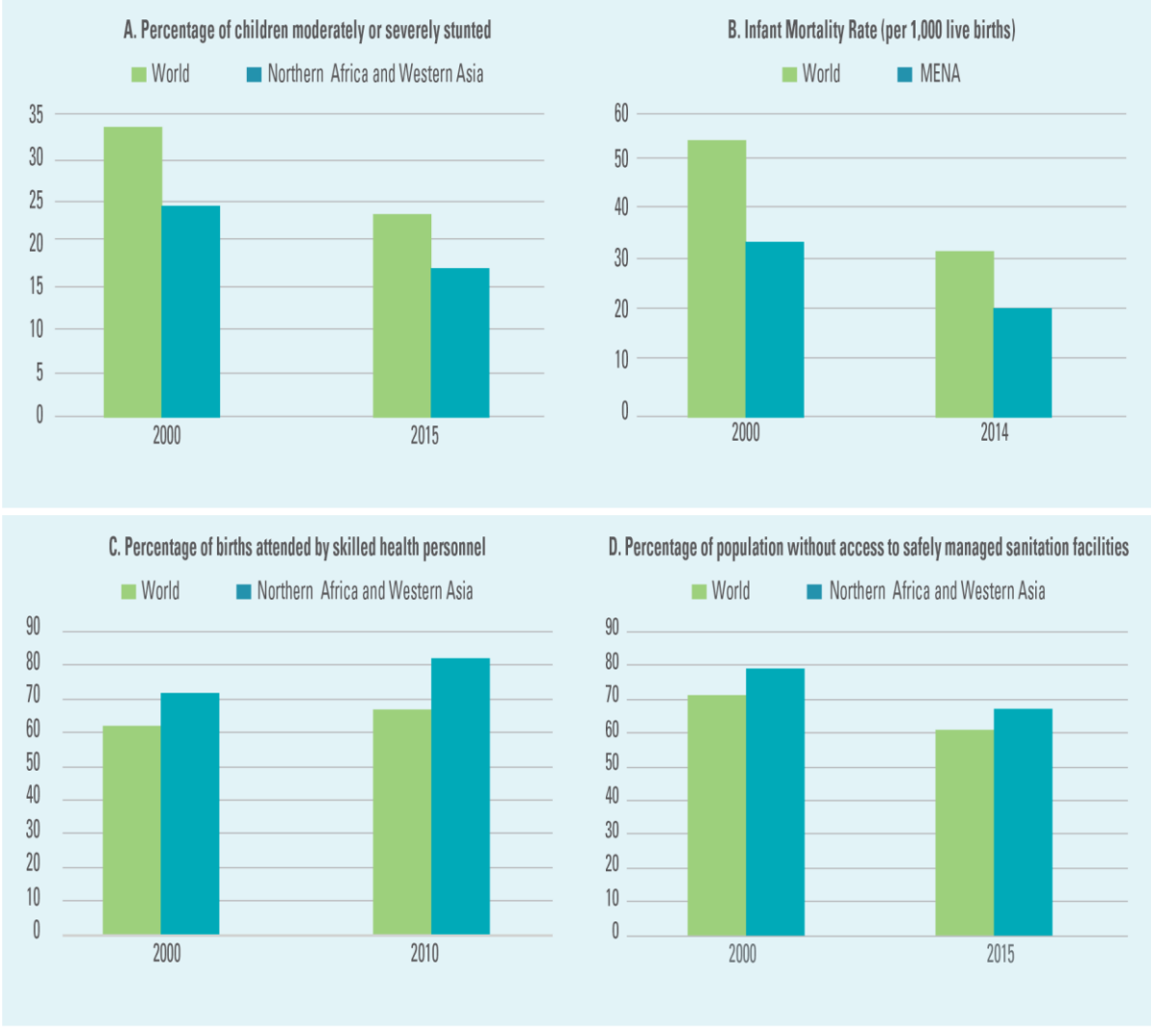
Equity of health outcomes is essential, since health inequalities limit life enjoyment opportunities and prospects of pursuing individual life plans. Over the last few decades, the Arab region has experienced various social, economic, political and demographic changes. It is well established that positive economic growth leads to improved health outcomes. This, however, is a virtuous cycle, since better health helps in return boost economic activity. Hence, improvements in health may be just as important as improvements in income levels/economic growth. Further, health is an important part of human capital; it is a prerequisite for participating in the labour market and thus generating income. Moreover, health has a direct impact on early years of education, affecting cognitive development and ability to learn of the child, which will eventually determine economic success in adulthood (Bloom and Canning, 2008). Indeed, social and economic benefits of equity in health go hand in hand.

The SDGs focus on reduction of inequality and promotion of access to health, as well as on improved health and well-being for all. However, reducing inequality is an overarching objective interlinked with several other SDGs. For example, to enable inclusive growth, it is important to ensure equal access to health and education for all. The objective of this chapter is to ascertain progress or regress in narrowing inequalities over time, as evidenced by certain indicators, some of which are also target indicators for certain SDGs (for example, SDGs 2, 3 and 6).

Measurement of health poses several challenges, as there is a wide range of measures. This chapter uses two sets of indicators: those that influence health outcomes, and the health outcomes themselves. The first set consists of three indicators, namely, access to improved water supply, access to improved sanitation, and skilled birth attendance; while the second comprises child-health indicators, such as infant mortality rate, stunting and overweight.

The Arab region has achieved great progress as per several health indicators, as well as in factors influencing health. Figure 2.1 gives an overview of progress across selected health indicators over the last 15 years for Northern Africa and Western Asia and, in comparison, globally.[3] **However, regional/national averages often conceal disparities both among and within countries.** Hence, the question arises as to whether progress benefitted all countries and all strata of society equally.

Figure 2.1 Health outcomes: world compared with Arab countries



Sources: Figure 2.1A based on Global SDG Indicators database. Available at https://unstats.un.org/sdgs/indicators/database/?indicator=3.7.2 (accessed on 14 September 2019).
Figure 2.1B based on UN Inter-agency Group for Child Mortality Estimation, 2019.
Figure 2.1C based on Global SDG Indicators database. Available at https://unstats.un.org/sdgs/indicators/database/?indicator=3.7.2 (accessed on 15 June 2019).
Figure 2.1D based on WHO and UNICEF, 2017.
Note: Figure 2.1D shows progress in access to safely managed sanitation facilities in line with SDG 6.2, where Arab countries are progressing slowly. This indicator has a stricter definition than the access to improved sanitation discussed in this chapter. As mentioned above, several household surveys date back to the 2000s; hence, a refined classification (as developed in SDG 6) is not technically possible. Therefore, we use simple definitions for improved and unimproved sanitation facilities and water supply sources.

Most literature on health inequalities in the Arab region focuses on countries or group of countries[4] and suggests that there are persistent disparities in health outcomes or in factors that affect health. UNICEF (2018) draws attention to the fact that

several regions with moderate levels of stunting (such as Latin America and the Arab Region) have wide disparities among certain population subgroups. The most extensive study of child health in the Arab region is that by Khawaja and others (2008) covering the 1990s, which finds persistent disparities across socioeconomic characteristic, despite impressive overall improvement in certain key indicators. A more recent study by Krafft and El-Kogali (2014) investigates inequalities in early childhood development, as evidenced by several health indicators, across 12 Arab countries. Hlasny and Intini (2015) also focus on early childhood development, but address a larger number of Arab countries. ESCWA (2016) carries this work forward by complementing static comparison of countries with a dynamic component. More recently, the Demographic and Health Survey (DHS) programme provides an overview of levels and trends of maternal and child health indicators across 11 Arab countries and highlights persistent disparities by socio-demographic variables (Assaf and others, 2017).

The remainder of this chapter is organised as follows. Section B addresses the factors that influence health outcomes, such as inequalities in access to water supply and sanitation, and inequalities in skilled birth attendance. Sections C and D then discuss child health outcome in terms of infant mortality rates and malnutrition, respectively. In all three sections, the analysis examines levels and trends of selected indicators, as well as ratios between different subgroups, utilising a concentration index and a concentration curve when possible. Using logistic models, Section E examines the factors affecting probability of deprivation in stunting. Section F presents inequality in child and maternal health opportunity, as measured by the dissimilarity index (D-index), and its drivers over time using the Shapley decomposition. The last section concludes and provides an overview of the main inequalities.

The chapter aims to contribute to research in two ways. First, using harmonised data, it aims to give an overview of health-outcomes and health-opportunity inequalities, as well as of the factors that influence health outcomes, across a large set of 12 Arab countries. Secondly, it aims to trace the progression of these inequalities over time. The technical annex provides more details of the data sources used for analysis and the data harmonisation process.

B. Factors affecting health outcomes

1. Inequalities in access to improved water supply and sanitation

Access to improved water supply and sanitation is an important determinant of maternal and child health, with lack of access having severe consequences (see for example Fink, Günther and Hill, 2011 or Cumming and Cairncross, 2016). Water, Sanitation and Hygiene (WASH) related infections, such as diarrhoea and intestinal parasites, have a direct impact on the nutritional status of a child. Additionally, access to improved water and sanitation facilities has indirect, non-health benefits, such as increased participation in education and economic activity. Hence, WASH interventions can have strong health, as well as social and economic, benefits (Cumming and Cairncross, 2016).

Access to improved water and sanitation is a human right and is incorporated in the MDGs and SDGs. SDG 6 is dedicated to ensuring availability and sustainable

management of water and sanitation for all. "The human right to safe drinking water specifies that water should *be 'available continuously and in a quantity sufficient for meeting requirements of drinking and personal hygiene, as well as of further personal and domestic uses, such as cooking and food preparation, dish and laundry washing and cleaning. […] Supply needs to be continuous enough to allow for the collection of sufficient amounts to satisfy all needs, without compromising the quality of water'*". (WHO and UNICEF, 2018). MDG 7, which is to ensure environmental sustainability, had as one of its targets to halve, by 2015, the proportion of people without sustainable access to safe drinking water and basic sanitation. While the target for access to safe drinking water was met globally, progress is still to be made in enabling access to improved sanitation.
In addition, some countries in the Arab region were unable to meet the MDGs by 2015.
For their part, SDGs not only distinguish between improved and unimproved sources of water and sanitation, but also adopt, in SDG 6, which has strong interlinkages with several other SDGs, including SDG 2 (no hunger) and SDG 3 (good health and well-being) a more ambitious vision for service delivery of water and sanitation.

To compare the data over time, classification into improved and unimproved sources of drinking water and sanitation facilities and measurement of access follow the WHO/UNICEF Joint Monitoring Programme. The following section analyses factors that affect child health across a sample of 12 Arab countries.[5]
As several household surveys date back to the 2000s, a refined classification (as developed in SDG 6) is not possible technically. Thus, a simple definition of improved and unimproved sources of water supply and sanitation facilities is used. Moreover, while other living-standards indicators, such as use of cooking fuel and access to electricity, have an impact on health outcomes, access to improved water and sanitation is the crucial determinant, especially for children; hence the emphasis on this aspect of living conditions in our analysis.

Access to improved water supply and sanitation varied across the countries studied. While some middle-income countries achieved near universal access to both, the LDCs still lagged. Egypt, Tunisia and Jordan achieved near universal access to both. The State of Palestine achieved near universal access to improved sanitation, but access to safe drinking water declined from 2006 to 2014. A study by the World Bank (2018b). links decreased access to improved water sources in the State of Palestine after 2000 to deterioration of piped water supply in urban areas, mainly the Gaza Strip, whereas increased access to improved sanitation was largely driven by improvements in rural areas. However, the national average conceals a vast disparity between the West Bank and the Gaza Strip: only 10 per cent of the population in the latter had access to improved drinking water sources, compared with 97 per cent in the former (State of Palestine, Central Bureau of Statistics, 2015). In Mauritania and Yemen, despite progress, a significant share of the population still did not have access to improved water and sanitation. In 2013, only 58 per cent of the population in Yemen had access to improved water (figure 2.2A).

Figure 2.2 Percentage of population with access to safe drinking water and improved sanitation for two time point

Source: Authors' calculations.
Notes: End line survey refers to the latest year for which data are available, while baseline survey refers to that close to 2000. See the technical annex for more information on data sources.

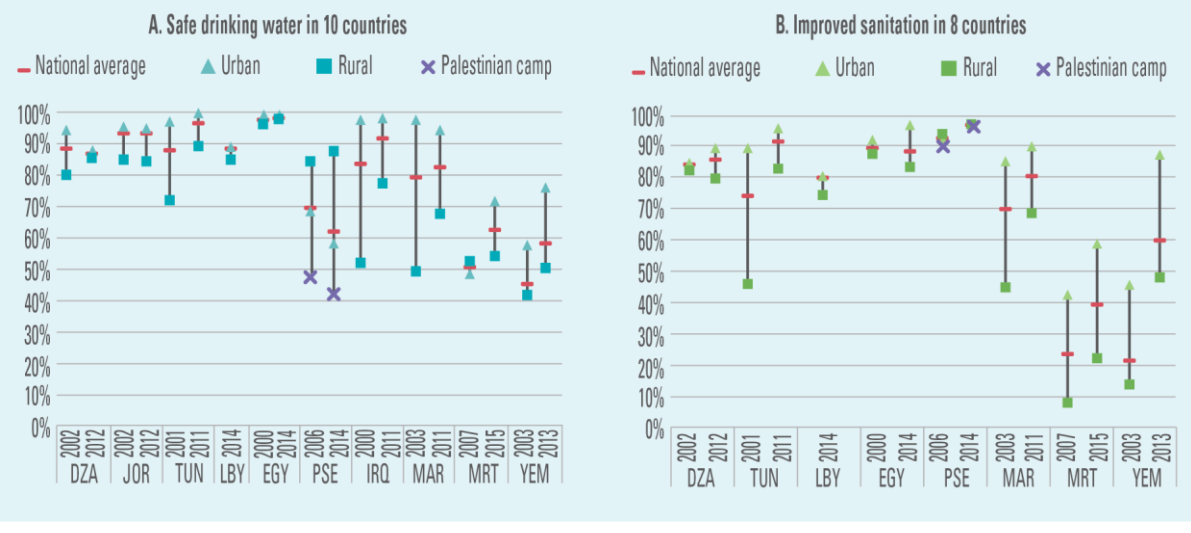
Though the rural-urban gap in middle-income countries was narrowing, access to improved water supply and sanitation remained higher in urban areas in all countries, except the State of Palestine (figure 2.3). Only one country, Tunisia, achieved an increase in access to both improved water and sanitation while managing to decrease rural-urban disparities. In all others, overall progress notwithstanding, gaps between rural and urban areas for one indicator or the other or both remained the same or even increased. Overall, urban areas still had better access to both. The State of Palestine is the only country where

access to safe drinking water and sanitation was lower in urban than in rural areas. As mentioned above, deterioration of access to services in the Gaza Strip, which is mainly urban, explains this pattern (World Bank, 2018b).

In Mauritania and Yemen, overall access to improved water supply and sanitation increased, but only for access to improved sanitation did the rural-urban gap decrease, just slightly. The largest disparities in access to improved sanitation and water persist in Mauritania and Yemen. In the latter, in 2013, 51 per cent of the rural population still did not have access to improved sanitation. However, trend analysis for these two LDCs shows that with rising access to sanitation, rural-urban inequalities decreased, although access overall was still low. This contrasts with access to water; figure 2.3 shows an overall increase, but also a slight increase in rural-urban inequality. In Mauritania, overall access to water and sanitation increased, but the rural-urban gap remained the same. A report from the World Bank, Water and Sanitation Program (2011) points to a lack of finance and indicates that priority was given to developing urban infrastructure.

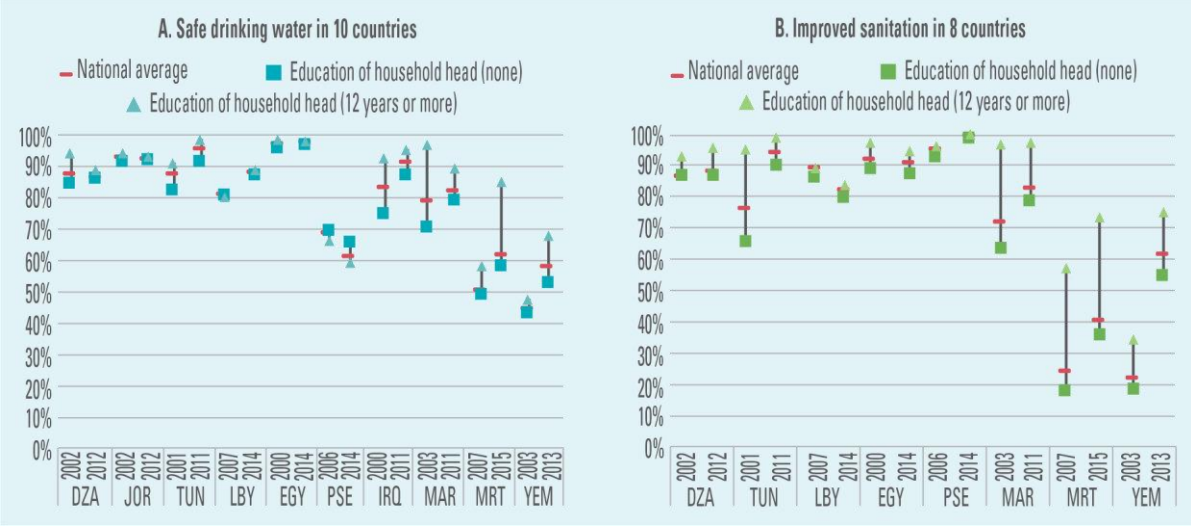
The gap between households with educated heads and households with uneducated heads widened in Yemen and Mauritania for improved water but narrowed slightly for improved sanitation (figure 2.4). Education of household head is associated with having better access, especially in the LDCs. Mauritania and Yemen had large gaps between the two groups for both types of access. Moreover, while gaps for access to sanitation narrowed for both countries over time, the divide for access to water widened. In contrast, some middle-income countries, such as Tunisia, managed to narrow the gaps, especially in improved sanitation.

Figure 2.3 Percentage of population with access to safe drinking water and improved sanitation by type of area (Urban-rural-refugee camp)



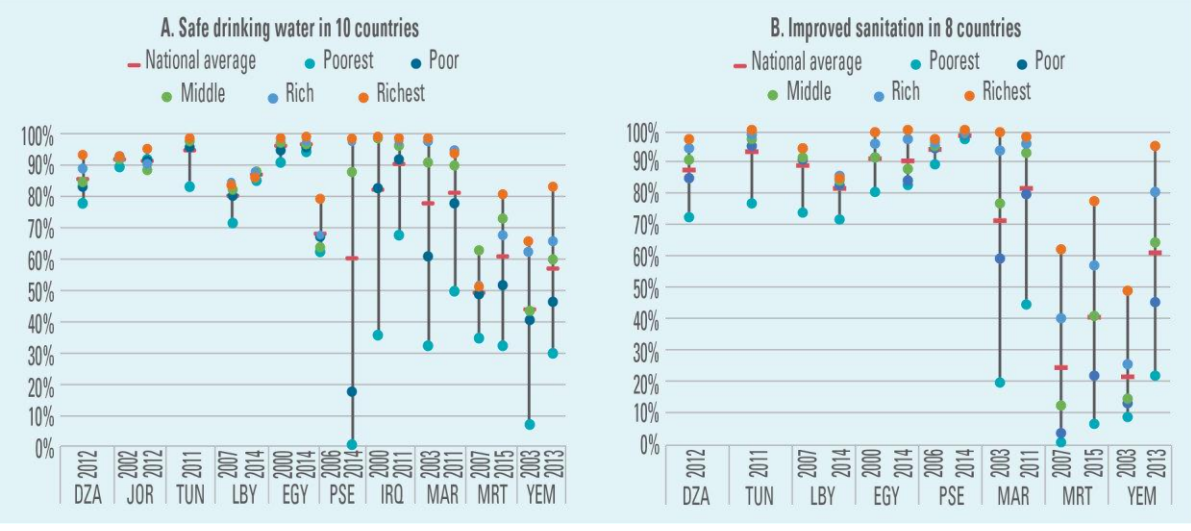
Source: Authors' calculations.
Note: In the State of Palestine, refugee camp areas were considered as a distinct stratum.

Figure 2.4 Percentage of population with access to safe drinking water and improved sanitation by education of household head



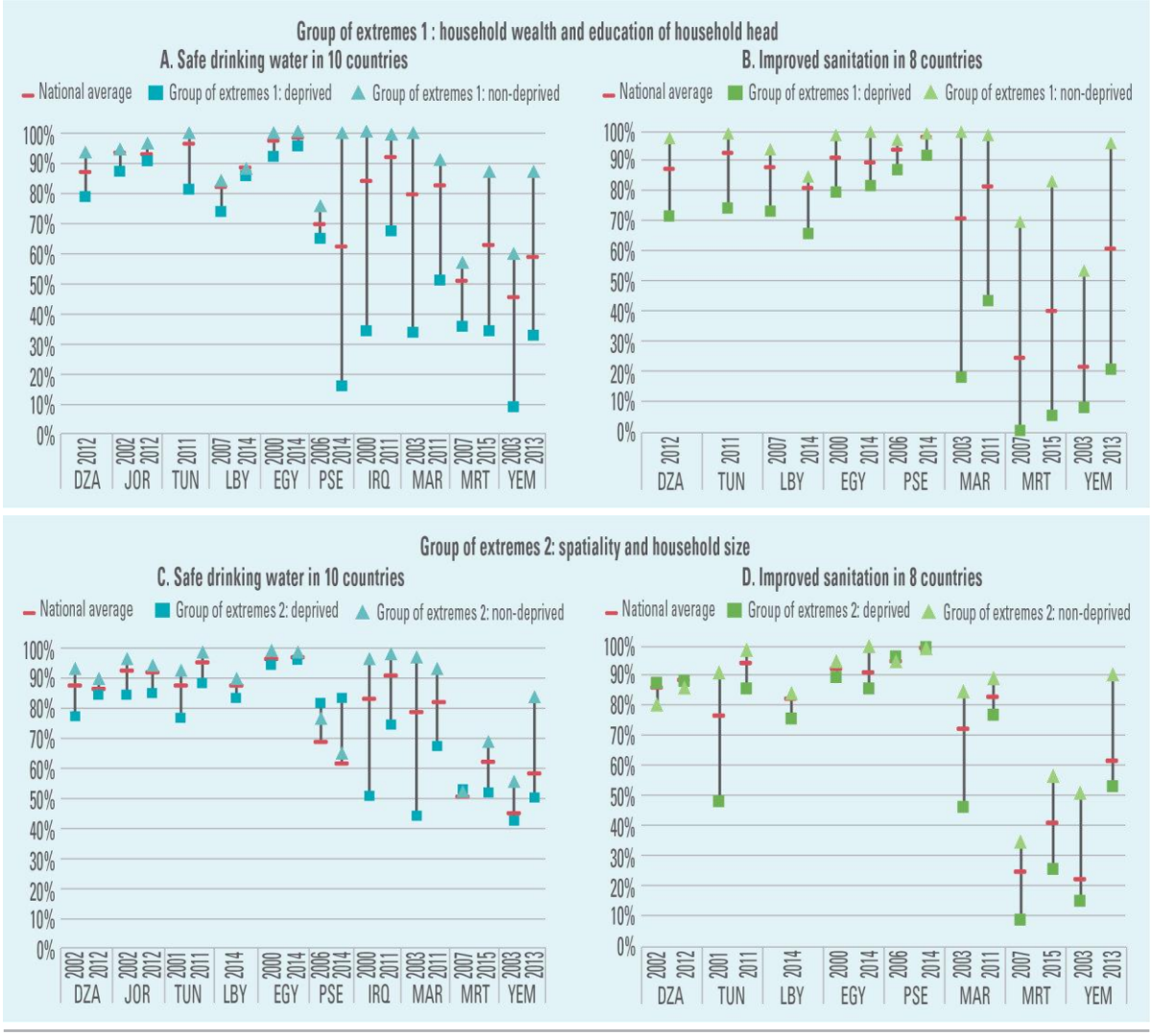
Source: Authors' calculations.
Note: In all surveys, one of the usual residents in each household is identified as the household head if his/her status is acknowledged by the other members based on characteristics such as age, sex, or economic status (ICF International, 2012).

Figure 2.5 Access to safe drinking water and improved sanitation by wealth quintile



Source: Authors' calculations.

Figure 2.6 Access to safe drinking water and improved sanitation by group of extremes



Source: Authors' calculations.

Figure 2.5 shows that gaps between the poorest and the richest quintiles narrowed across the two time points in all countries, except the State of Palestine, where they widened enormously in access to safe drinking water. It must be noted, however, that, being time and country specific, the wealth index is not comparable across the two time points. Nonetheless, inequality-gap analysis that compares the ratio of the wealth of the richest to the poorest quintiles shows that this gap was narrowing over time.

The Arab Multidimensional Poverty Index (MPI), developed by ESCWA and others (2017), indicates large disparities by area (rural-urban) of household, household size, education of household head, and wealth quintiles. **To analyse inequalities among certain population groups, those with certain**

contrasting combined characteristics are addressed. Thus, we focus on:

(a) Group of Extremes 1, comprising two subgroups:
   - Household head has no education and household belongs to the poorest wealth quintile (Deprived Group 1);
   - Household head has higher education and household belongs to the richest wealth quintile (Non-deprived Group 1);

(b) Group of Extremes 2, comprising two subgroups:
   - Household location is in a rural area and household size is 8 or more (Deprived Group 2);
   - Household location is in an urban area and household size is up to 5 (Non-deprived Group 2).

Disparities with respect to household wealth and education of household head were larger than with respect to household location and household size. Also, the LDCs generally had steady or rising inequalities between subgroups. As shown in figure 2.6, for access to safe drinking water across group of extremes 1, two countries, the State of Palestine and Mauritania, had a striking increase in inequality, while most others had a decrease. For improved sanitation, inequality across subgroups seems either steady or even rising in the LDCs, particularly with respect to household wealth and education of household head. For group of extremes 2, though it increased in Mauritania and Yemen, inequality in access to sanitation does not seem to have changed appreciably over time.

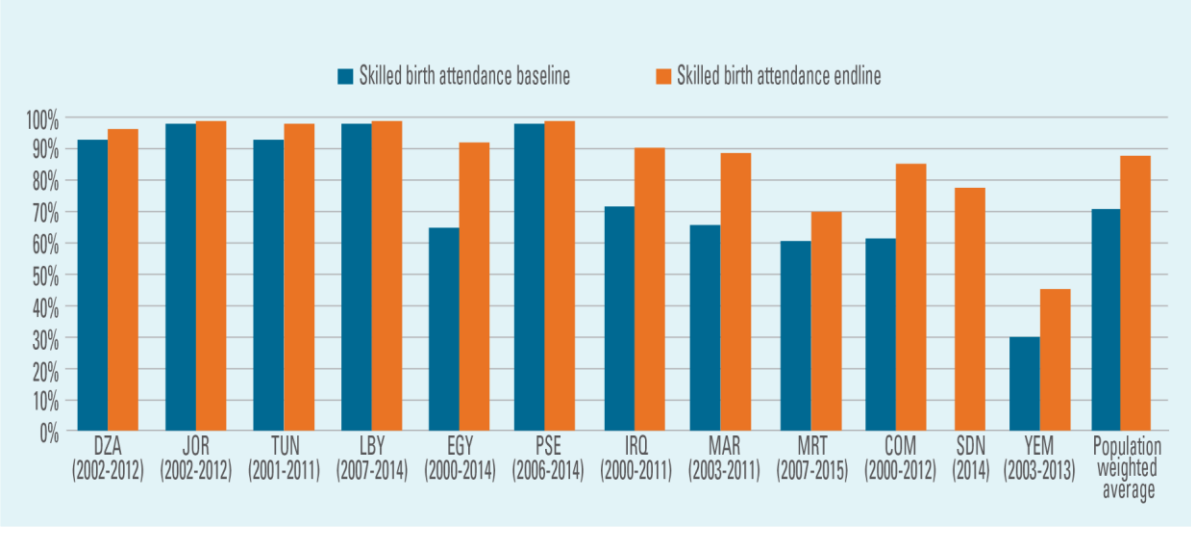
2. Inequalities in skilled birth attendance (SBA)

One target indicator for SDG 3, availability of skilled health personnel (generally, doctors, nurses and midwives) during birth, measured by proportion of births attended by such personnel, which is essential for the health of both the mother and new-borns, can be a lifesaving intervention, and is an indicator for utilisation of healthcare systems. The definition of skilled health personnel follows national definitions,[6] but generally covers those trained in providing lifesaving obstetric care, including necessary supervision, care and advice to women during pregnancy, labour and the postpartum period.

Several countries in the region achieved near universal coverage of SBA, but some, especially the LDCs, lagged. As shown in figure 2.7, Yemen stands out as the country with the lowest coverage, while a group of countries (Algeria, Tunisia, Libya, Jordan, and State of Palestine) had near universal coverage.

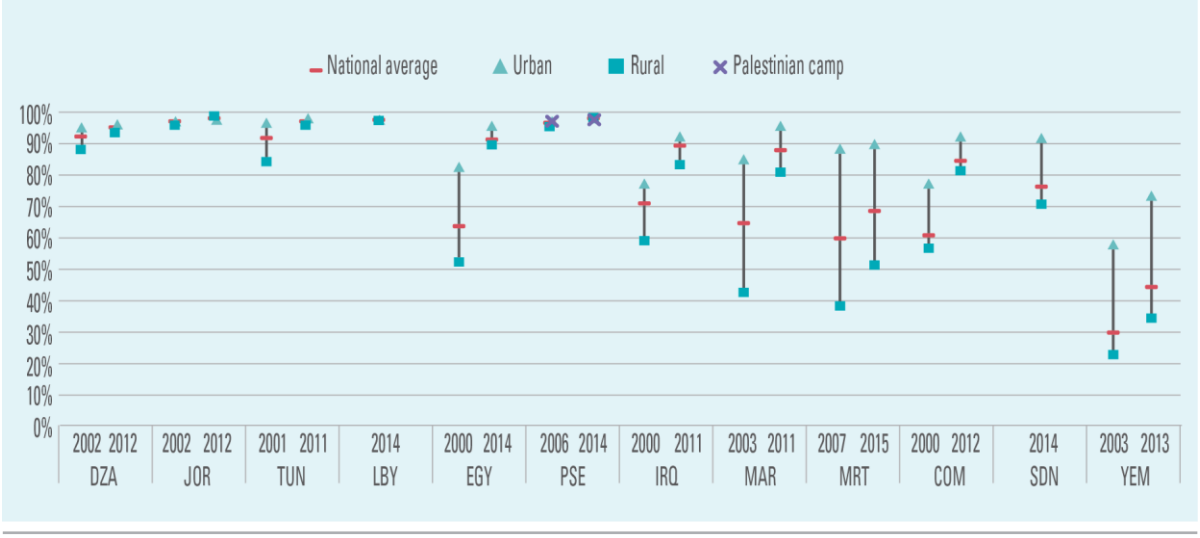
While there is extensive literature dealing with overall trends in maternal health, few studies investigate socioeconomic disparities in maternity healthcare, especially in Arab countries. However, those that do indicate persistent inequalities across different socioeconomic groups. Although the region experienced impressively declining maternal mortality rates and increasing access to maternal healthcare services, progress could conceal inequalities. Rashad and Sharaf (2016) examine socioeconomic inequalities in maternity care utilisation in Egypt, Jordan and Yemen after the Arab Spring. They find that the degree of inequality varies widely in the three countries and conclude that disparities are mostly a result of lack of economic resources and its correlates among the poor. Khadr (2009) investigates disparities in maternal health indicators in Egypt and finds that although there had been substantial progress, women across different social classes did not benefit equally.

Figure 2.7 Percentage of skilled birth attendance



Source: Authors' calculations.
Note: The reported population weighted average includes only the countries with data across the 2 points in time.

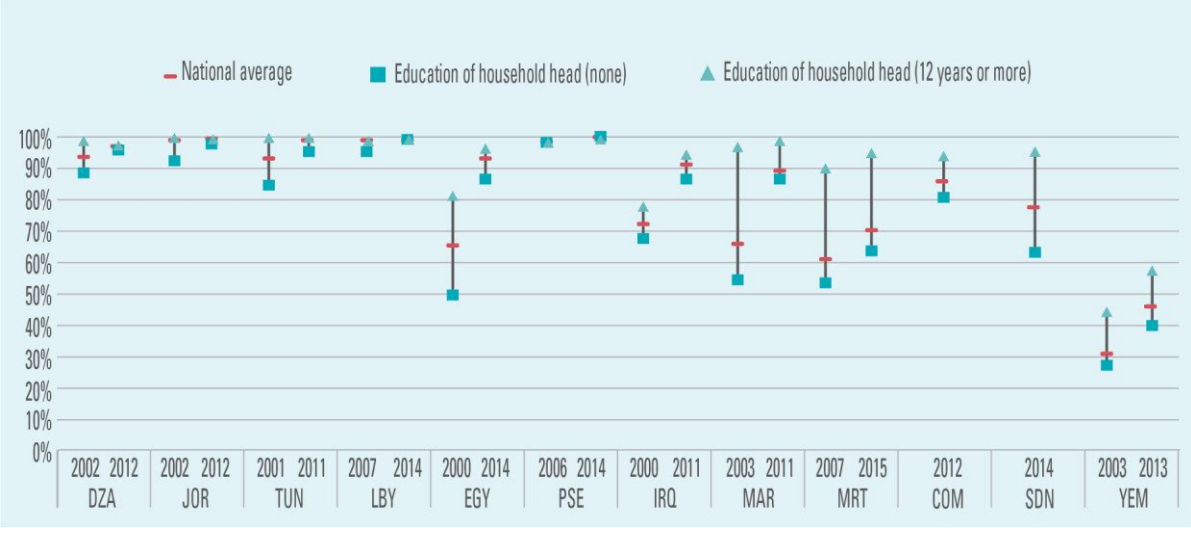
Figure 2.8 Percentage of skilled birth attendance by type of area (Urban-rural-refugee camp)



Source: Authors' calculations.

While several countries achieved near universal SBA in both rural and urban areas and rural-urban inequality decreased in all countries, gaps persisted in the LDCs, Morocco and Iraq. For disparities along spatial lines, figure 2.8 reveals that inequality between rural and urban areas decreased in all countries, with several

Figure 2.9 Percentage of skilled birth attendance by education of household head



Source: Authors' calculations.

(Jordan, State of Palestine, Algeria, Tunisia and Libya) having almost none. However, the LDCs, Morocco and Iraq still had large disparities; especially Mauritania, where the gap was remarkably high.

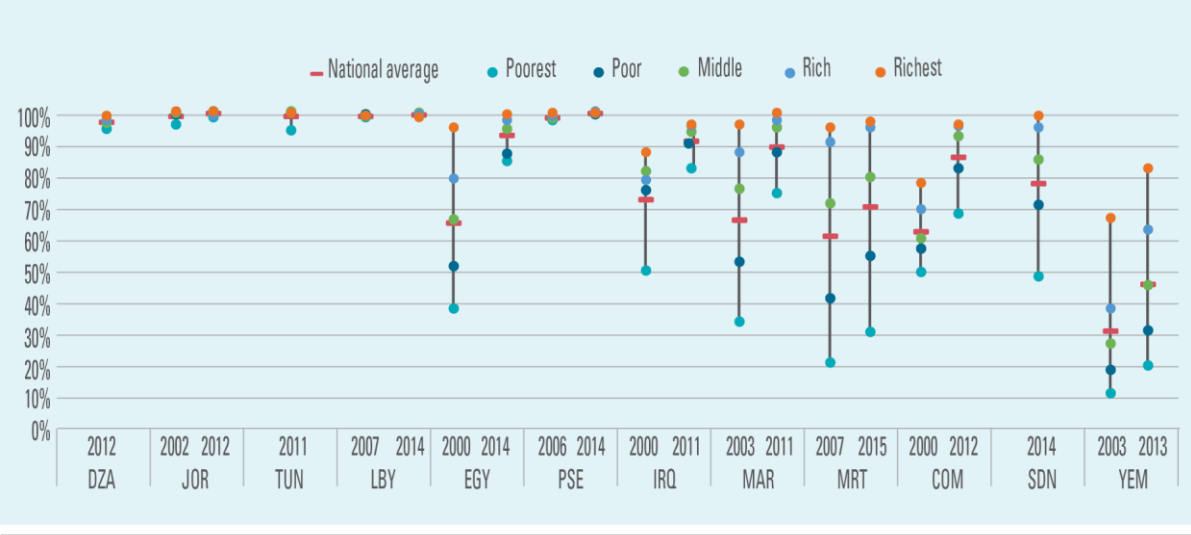
Education of household head matters most in the LDCs, while middle-income countries had little variation in this regard. Inequality between groups had decreased in all countries. Figure 2.9 shows that the education of household head did not cause any major differences in countries with high human development. However, the LDCs clearly had a gap between the two groups in SBA; there, women who live in households with educated heads were 1.5 times more likely to have their birth attended by skilled personnel. Household heads are often key decision makers in accessing skilled healthcare at time of delivery (Vallières and others, 2013) and thus their level of education matters greatly. Inequality between households with educated heads and households with uneducated heads decreased in all countries. Morocco and Egypt experienced the largest decrease.

Disparities in access to SBA between the richest and poorest wealth quintiles also decreased in all countries. However, the LDCs still had remarkable gaps between the two quintiles. Disaggregation by wealth quintile is also in line with the other socioeconomic characteristics. Again, all countries had a decrease in inequality, with Morocco and Yemen having the largest decrease in the richest to poorest ratio.

Disaggregation by subgroups having combinations of extreme characteristics reveals wide gaps, especially in the LDCs, with household wealth and education of household head seeming to be important factors. Figure 2.11A and figure 2.11B shows that the Sudan, Mauritania and Yemen had the largest gaps for both groups of extremes, while the remaining countries, especially those with near universal access to

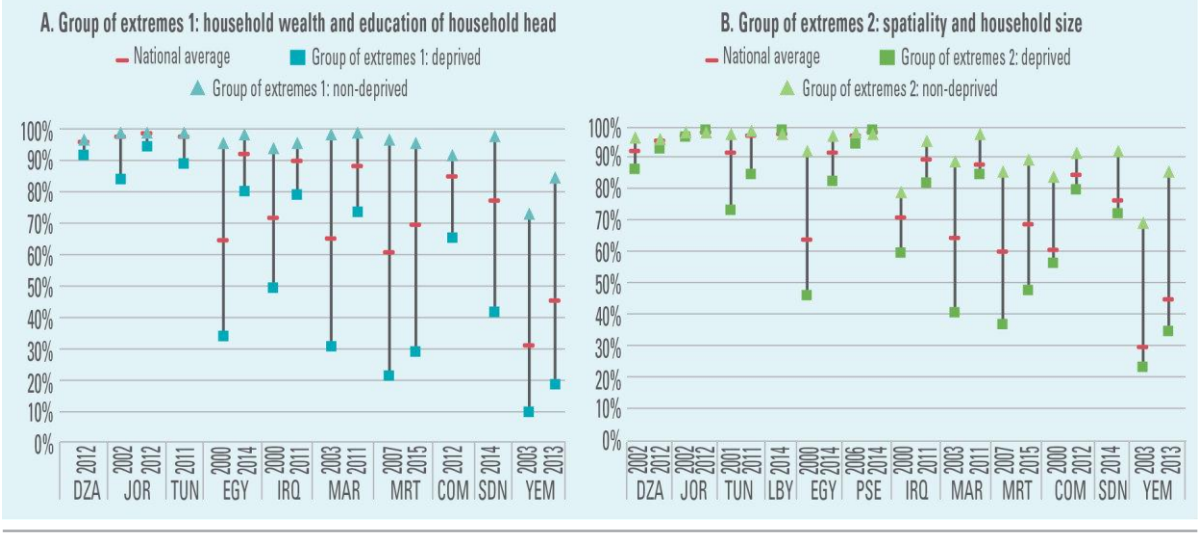
SBA, had only minor gaps. Inequalities were generally decreasing in most countries that have data for two points in time, yet gaps persisted, especially between the two subgroups of group 1. Ratio analysis reveals that gaps within group of extremes 2 (location of household and household size) were smaller than the gaps within group of extremes 1 (education of household head and household wealth).

Figure 2.10 Percentage of skilled birth attendance by wealth quintile



Source: Authors' calculations.

Figure 2.11 Percentage of skilled birth attendance by group of extremes



Source: Authors' calculations.

To sum, overall, Egypt, Morocco and Mauritania had a large reduction in inequality. In the case of Egypt, Assaf and others (2017) notes that there has been a substantial change in the Egyptian healthcare system in the previous decade, with per-capita government expenditure on health tripling from $14 to $47. However, most of the expenditure remains out-of-pocket and estimates also point out that only 8 per cent of ever-married women have any form of health insurance. Rashad and Sharaf (2016) also note that the big improvements in maternity care stemmed mainly from an increase in use of private healthcare facilities. Rashad and Sharaf (2015) also find that reliance on private healthcare providers pushes households into poverty and destitution.

The concentration index (CI), which can be constructed if the wealth index is available, is a widely used tool for assessing socioeconomic inequality. Several of the available household surveys include information on household assets, which can be utilised to create a wealth index that ranks households according to relative wealth. The concentration curve (CC), with its related concentration index (CI), can be used to quantify the degree of socioeconomic-related inequality, mainly in health variables (O'Donnell and others, 2008). The CC ranks the sample of interest by socioeconomic status. The horizontal axis begins with the poorest and progresses through the wealth distribution to the richest. The concentration index then summarises the magnitude of inequality and is defined as twice the area between the concentration curve and the line of equality (45-degree line). Box 2.2 and box 2.3 offer a graphical example of the concentration curve for SBA and stunting. The health outcome variable should be ratio-scaled, measured without an upper bound. Health variables, however, are often measured as ordinal or cardinal variables and tend to be bounded, which poses several limitations, especially when trying to carry out cross-country comparisons.[7] To simplify, the analysis here reports the negative of the concentration index for indicators that report ill health, so that the concentration index is always positive and higher inequality is reflected in a higher value.

The CI indicates that inequality in access to SBA decreased in most countries and confirms both an increase in percentage of attended births and a decrease in inequality. Figure 2.12 shows the annualised rate of changes (AARC) in percentage SBA and the negative of the concentration index over time. Most countries for which information is available for two time points for both the wealth index and the indicator present great improvements in coverage of antenatal care. In line with the summary changes of the ratios, the (generalised) concentration index confirms both an increase in percentage of attended births and a decrease in inequality. In Morocco, progress in narrowing the gaps between the different groups was large. Policies implemented by the Moroccan government in the early 2000s prioritised maternal health (Assaf and others, 2017) and this is reflected in our analysis. The big progress in SBA is partly associated with revitalisation and expansion of midwifery and use of nurse-midwives as birth attendants in Morocco, as well as a programme implemented by the government that entitles all Moroccan women to cost-free delivery in any public hospital (Lerberghe and others, 2014; Assaf and others, 2017). The decrease in inequality in SBA is also confirmed by detailed statistical analysis (box 2.2) indicating a clear decrease in socioeconomic disparities for the four countries.

Box 2.1 Using the concentration index and concentration curve to assess socioeconomic inequalities in health

Testing the difference from the line of equality

When plotting the health concentration curve, one may wonder whether it is significantly different from the 45-degree diagonal line of perfect equality. Khaled and others (2018) explain that having a concentration index equal to 0 does not necessarily mean that there is no socioeconomic health inequality in the health indicator concerned.[a] To be certain, one needs to make sure that the concentration curve has no portion that is significantly different from the line of equality.

Comparing health concentration curves

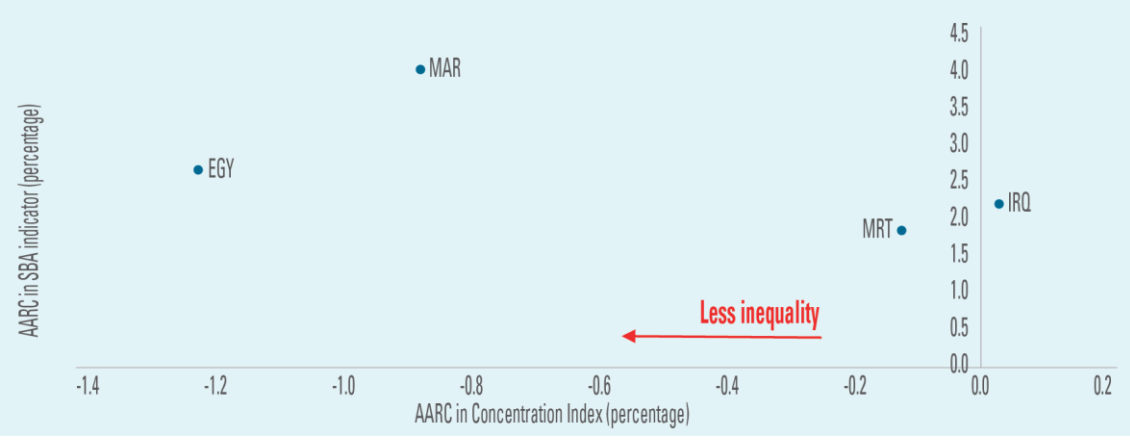
In addition of comparing concentration indices, evolvement of socioeconomic health inequalities can be monitored by **comparing health concentration curves**. Makdissi and Yazbeck (2014) prove that if two health concentration curves do not intersect, socioeconomic health inequalities will be lower for any rank-dependent socioeconomic health inequality index in the population for which the curve is higher. This means that it is impossible to find a mathematical form for the index that would reverse the result. Moreover, the result is robust and does not depend on the specific mathematical form chosen for the index, as may be the case when reporting a change in the health concentration index. In order to account for sampling variability, Khaled, Makdissi and Yazbeck (2018) propose methods to test for these dominance cases. These statistical tests consist of assessing whether there are some intervals for which one curve is significantly above the other, while the reverse does not happen on any other interval. We opt for a level of statistical significance of 5 per cent for these tests.

Applying a health achievement index

Wagstaff (2002) argues that policy makers are interested in both improving the average health outcome and decreasing socioeconomic health inequality. In this context, merely assessing changes in socioeconomic health inequalities may be misleading from a policy-making perspective. He proposes a **health achievement index that accounts for both the average health level and its socioeconomic distribution.** In order to illustrate graphically the concept of health achievement, one can use the **generalised health concentration curve,** which is the health concentration curve multiplied by the average health status. Makdissi and Yazbeck (2014) show that if one compares the generalised health concentration curves of two distributions and one curve is above the other, health achievement will be higher for the population with the higher curve. If one is interested in a health shortfall variable, then the result is the same: the shortfall is higher for the population with the higher generalised concentration curve. In this context, a decrease of the curve would be a policy improvement. Khaled, Makdissi and Yazbeck (2018) also offer a methodology to account for sampling variability for generalised concentration curves dominance.

[a] In the appendix of their paper, Khaled and others (2018) provide an interesting 10 persons example for which the health concentration index is 0 despite the presence of socioeconomic health inequality.

Figure 2.12 Average annual rate of change in skilled birth attendance and concentration index (CI-W)



Source: Authors' calculations.

Box 2.2 Using the concentration index and the concentration curve to assess inequalities in skilled birth attendance

For SBA, data are available for Egypt, Iraq, Mauritania and Morocco. For all these countries, the SBA concentration curve is statistically significantly different from the line of equality. This means that there were socioeconomic inequalities in SBA distribution in all these countries. To illustrate, the concentration curves (figure 2.13) and generalised concentration curves (figure 2.14) in Morocco for SBA depict a very good picture that is confirmed if one runs the statistical tests at the 5 per cent significance level. The technical annex provides graphs for the other three countries.

Figure 2.13 Testing the difference from line of equality (Morocco, 2003-2011)

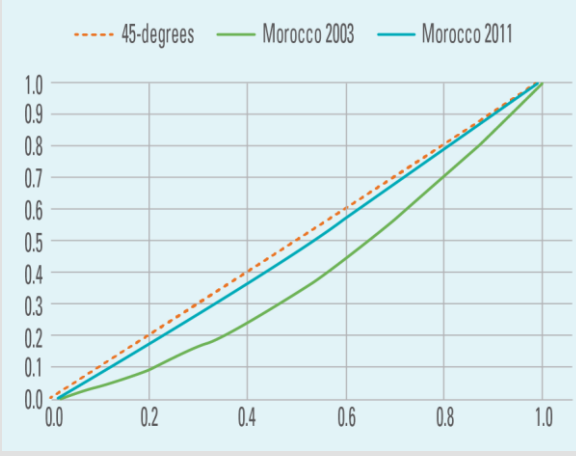
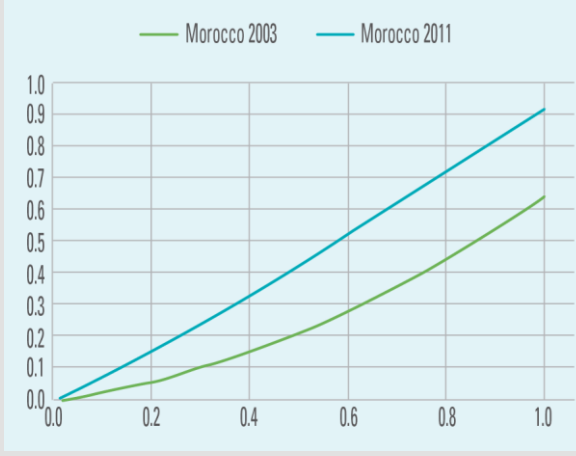


Figure 2.14 Generalised health concentration curve (Morocco, 2003-2011)



Source: Author's calculations.

There is a clear decrease in socioeconomic health inequalities in SBA in all four countries. This result is valid for any rank-dependent socioeconomic health inequality index. There is also an increase in health achievement in SBA and this result is also valid for any rank-dependent health achievement index.

C. Child health outcomes – Infant Mortality Rate

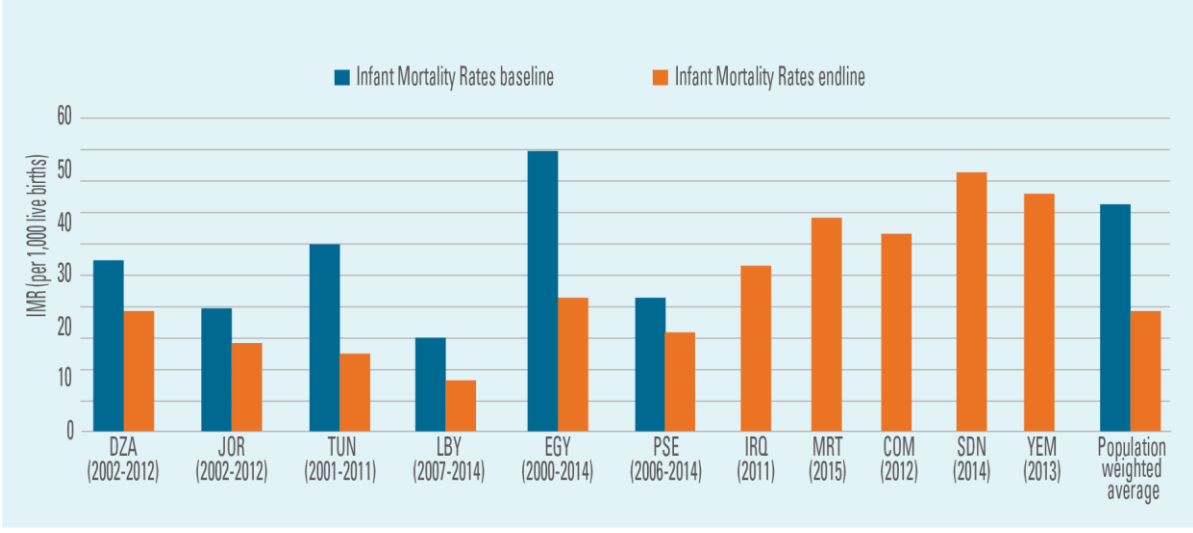
Focussing on children when examining inequalities in health outcomes is essential, since infancy and early childhood have lifelong effects on several aspects of health and well-being later in life and are an important determinant of social mobility. Increasingly, evidence suggests that returns on investment in early childhood exceed investment in education and well-being at later stages of life (Heckman, 2017). Another strand of research also suggests that inequality and socioeconomic status determine childhood well-being and intergenerational transmission of disadvantages and deprivation (Aizer and Currie, 2014 or Cabieses, Pickett and Wilkinson, 2016). Further, Ravallion (2014) finds that children and youth who live in disadvantaged living conditions (such as inadequate housing, low quality of care, insufficient food intake) are more likely to suffer impairment of human development.

Incidence of child mortality is an important indicator of the overall level of child health and development in a country. In the first 28 days of life (the neonatal period), risk of dying is highest. To prevent deaths during this period, improving the quality of antenatal care, care at time of childbirth, and postnatal care for mothers and their new-borns are essential. Deaths in the neonatal period are mainly caused by preterm birth, intrapartum-related complications or infections. After the first 28 days and through the first 5 years of life, the main causes of death are pneumonia, diarrhoea and malaria. However, malnutrition is the underlying contributing factor that makes children more vulnerable to severe diseases. (UN Inter-agency Group for Child Mortality Estimation, 2017). MDG 4 had as a target reducing child mortality by two-thirds between 1990 and 2015, and SDG 3.2 has set the target of ending preventable deaths of new-borns and children under 5 years of age. This chapter analyses infant mortality rates (IMRs) across the Arab region, with infant mortality defined as the probability of dying before the 1st birthday. IMR is defined as number of deaths per 1,000 live births.

As shown in figure 2.15, the Arab region achieved a tremendous decline in infant mortality rates. However, Iqbal and Kiendrebeogo (2014) point out that some countries performed better than others, and related these differences to disparities in country circumstances, institutions, and policies. In our sample of 12 Arab countries, all had declining IMRs, with Libya registering the lowest of all. The remaining non-LDCs had rather moderate rates between 15 and 26, except for Iraq. The greatest progress was in Egypt and Libya, where rates nearly halved. Generally, rates in all the non-LDCs declined substantially over the periods considered.

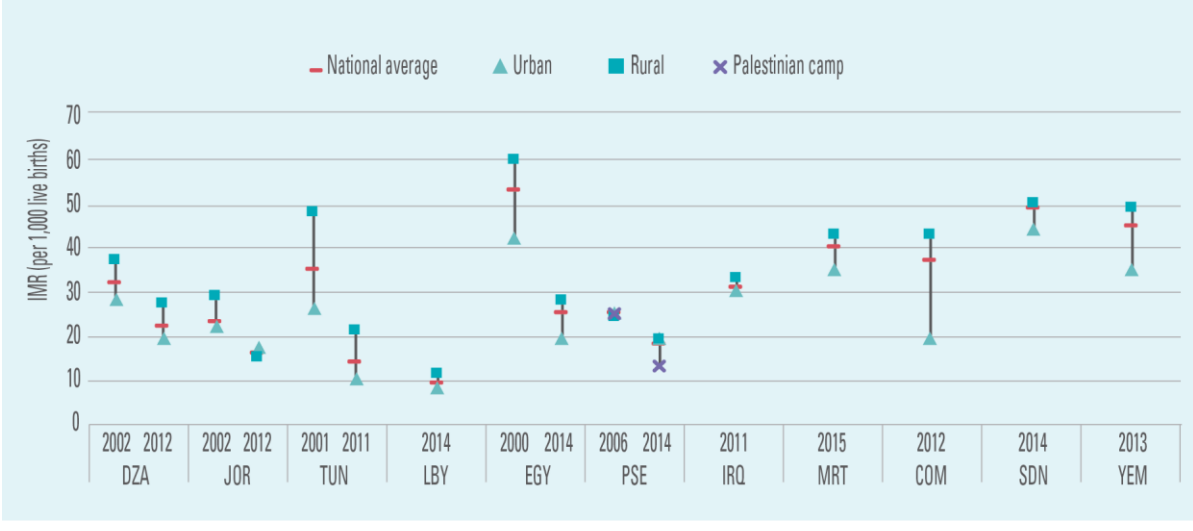
IMRs were higher in rural than in urban areas in most of the countries studied. Figure 2.16 shows that all countries, other than Jordan and the State of Palestine, had higher IMRs in rural areas, with Tunisia and Comoros having the widest gaps. In terms of temporal trend, Jordan managed to close the gap, while in the remaining four countries for which data for two time points are available, the gaps remained steady, although the overall IMR dropped.

Figure 2.15 Infant Mortality Rate



Source: Authors' calculations.
Note: The reported population weighted average includes only the countries with data across the 2 points in time.

Figure 2.16 Infant Mortality Rate by type of area (Urban-rural-refugee camp)

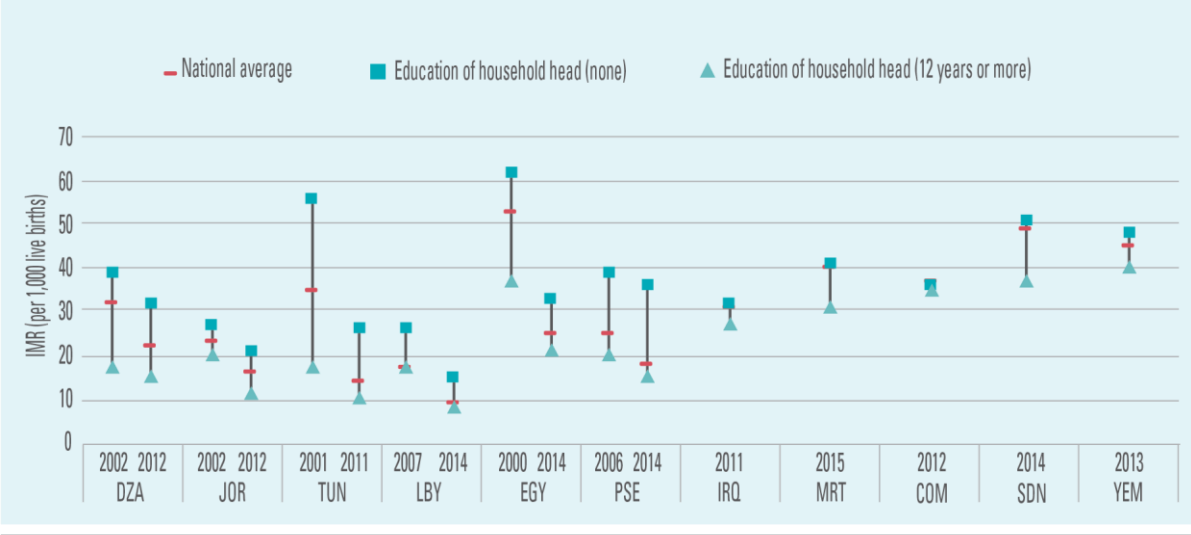


Source: Authors' calculations.

Gaps with respect to educational level of household head were rather moderate in countries with higher IMRs, like Comoros and Iraq, while countries with lower IMRs had larger gaps. For example, IMR in households in Tunisia and the State of Palestine where the head had not received any education was more than twice higher than for households

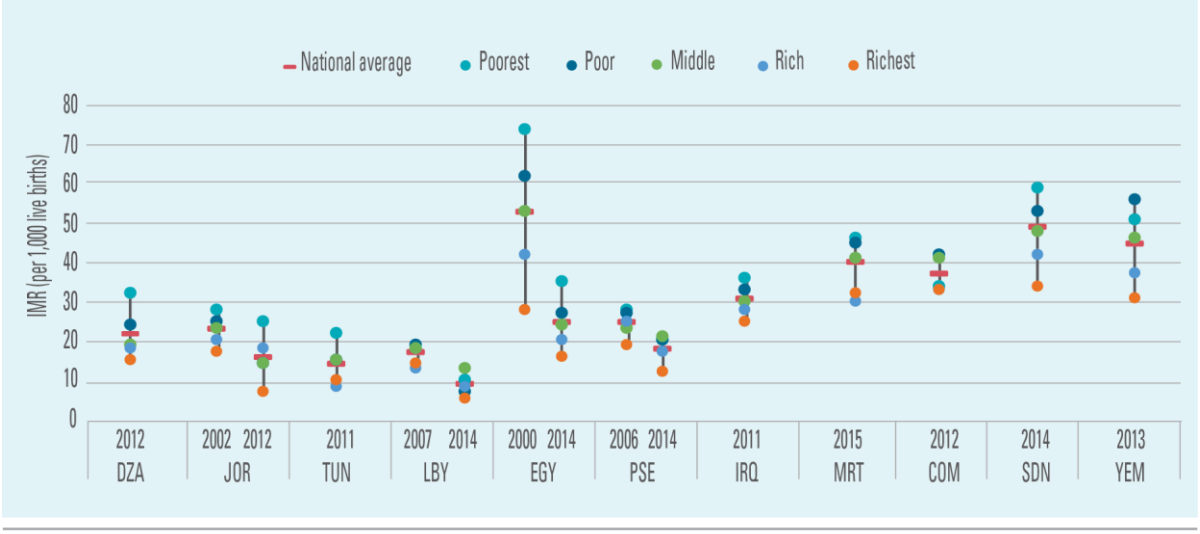
where the head had at least 12 years of education (figure 2.17). In terms of temporal trend, although the rate dropped in Jordan, Libya, and the State of Palestine while inequality between the two segments increased. Tunisia, and to a lesser extent Algeria and Egypt, experienced a decline in IMR along with a decrease in inequality.

Figure 2.17 Infant Mortality Rate by education of household head



Source: Authors' calculations.

Figure 2.18 Infant Mortality Rate by wealth quintile



Source: Authors' calculations.
Note: For only few countries, data are sufficient for establishing the temporal trend, as this requires both the assets to calculate the wealth index and a full birth history.

As shown in figure 2.18, **despite an overall decrease in IMR across the countries examined, only Egypt had a marked decline in inequality between the poorest and the richest quintiles;** in all other countries with data for two points in times, inequality increased, as in Jordan, for example.

D. Child health – Malnutrition in the Arab region

The Arab region has experienced numerous changes and progress in human development over the last few decades. However, undernutrition and micronutrient deficiencies remain a challenge in several countries. Although incidence of chronic malnutrition (stunting) has decreased, prevalence of diet-related non-communicable diseases, such as obesity and diabetes, is increasing. Various countries experience a nutrition transition, marked by an increase in consumption of unhealthy food, combined with an increase in prevalence of overweight, mainly in the middle-to-low-income countries. The 12 countries analysed can be categorised into three major groups according to nutritional status: countries in advanced nutrition transition, such as Tunisia and Algeria; countries in nutrition transition, such as Comoros, Egypt, Jordan, Libya, Morocco, and the State of Palestine; and countries with significant undernutrition or complex emergency situations, such as Iraq, the Sudan and Yemen (WHO EMRO, 2011). Nutrition transition affects an increasing number of countries and socioeconomic groups within countries. Further, both types of malnutrition, under- and over-nutrition, have a high impact on public healthcare, as well as on social and economic systems.

The three most common anthropometric measures used to assess nutritional status of children are:

- Stunting (low height-for-age), which reflects chronic malnourishment;
- Wasting (low weight-for-height), which reflects acute malnourishment;
- Underweight (low weight-for-age), which is a proxy for general malnourishment.

While wasting and underweight can be treated, chronic malnutrition (stunting) in early childhood has severe irreversible effects, as well as increasing likelihood of children dying from common infections and frequency and severity of infections, and contributing to delayed recovery (UNICEF, 2018). Further, it is associated with impaired cognitive ability and reduced school and work performance (United Nations Department of Economic and Social Affairs, 2018). Undernutrition contributes to nearly half of all deaths in children under 5, translating into the loss of about 3 million young lives a year (International Food Policy Research Institute, 2016). The following analysis considers only inequalities in stunting over time, as this is an irreversible event and has lifelong impacts. Detailed analysis of wasting and underweight is beyond the scope of this report.

Furthermore, another emergent form of malnutrition is overweight (high weight-for height), resulting from energy intakes exceeding energy requirements of the child.

This section will first analyse prevalence of stunting and then prevalence of child overweight, considering levels and trends across two time points. Thereafter, prevalence is disaggregated by several socioeconomic

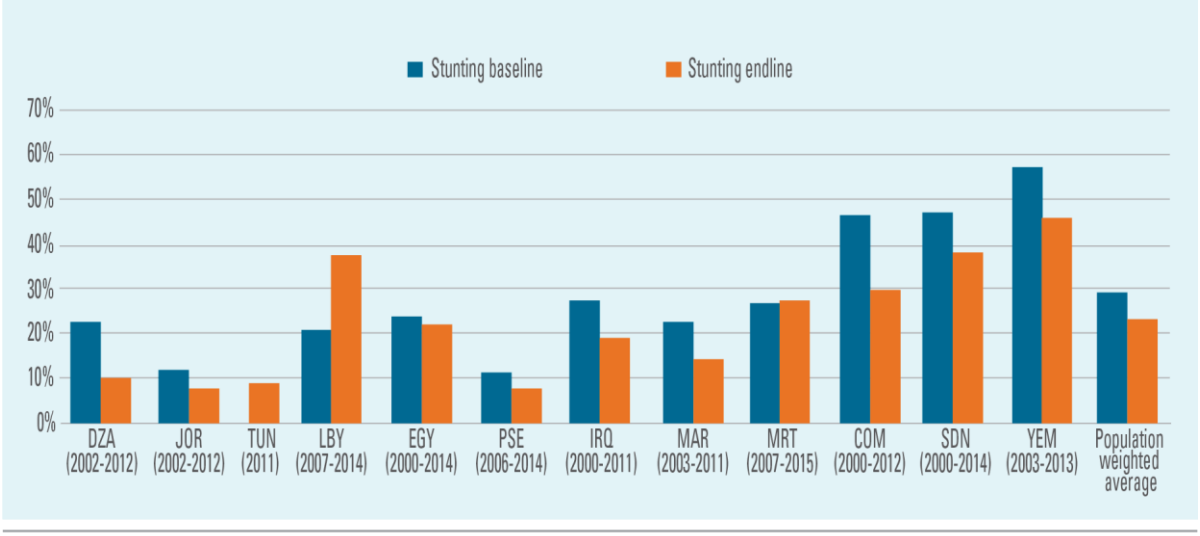
characteristics, such as type of area of residence, education of household head, wealth quintiles, and households that meet combined criteria. The technical annex provides an overview of data sources and years considered.

1. Child health outcomes – Chronic malnutrition (stunting)

Overall, prevalence of stunting dropped across all countries over the periods considered, except for Mauritania and Libya. Figure 2.19 indicates that most countries experienced a decrease in prevalence, with the regional (population weighted) average dropping from 29.5 per cent in the baseline surveys to 23.4 per cent.[8] However, a few countries do not follow this trend; Egypt had a relatively steady high prevalence over time, while Mauritania and Libya had an increase.

Algeria had the largest improvement, with prevalence declining by over half, while almost every other child was affected by malnutrition in Yemen and this figure is likely to have worsened, given the current state of conflict. Up until 2013, the numbers for stunting were declining over time in Yemen. Qirbi and Ismail (2017) point out that prior to the current conflict, despite a fragile healthcare system that relied on out-of-pocket expenditure, improvements were seen in certain health outcomes. However, in March 2015, health outcomes, such as life expectancy, started to decline and levels of malnutrition and child mortality have increased since. The Yemen 2017 Humanitarian Needs Overview reports that 3.3 million children and pregnant or breastfeeding women suffer acute malnutrition, including 462,000 children under 5 who suffer severe acute malnutrition. This constitutes a 63 per cent increase in malnutrition since late 2015 (Food Security International Network, 2017).

Figure 2.19 Prevalence and trend of stunting

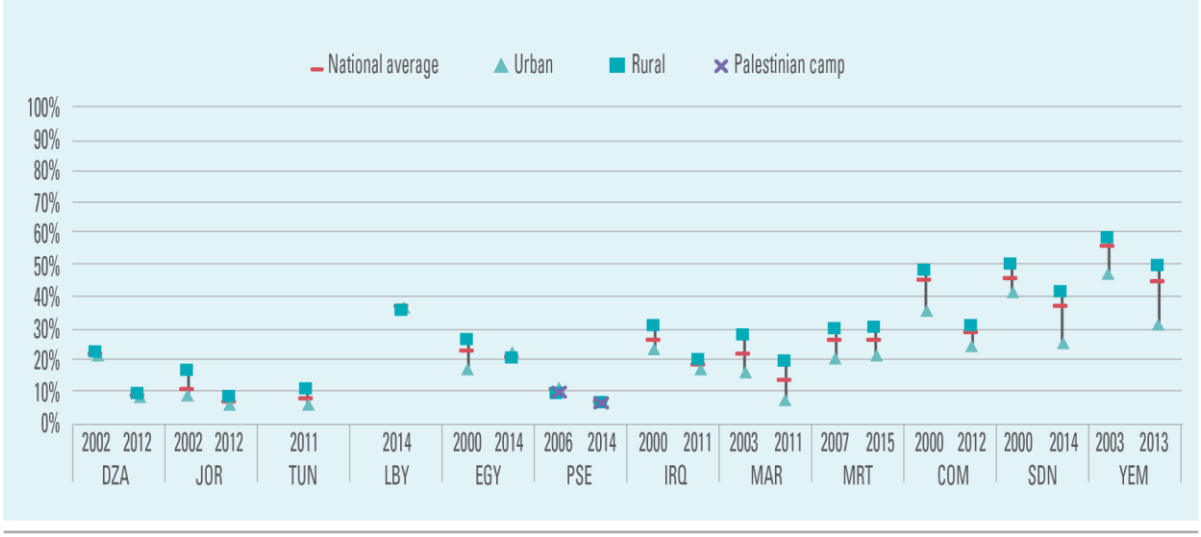


Source: Authors' calculations.
Note: The reported population weighted average includes only the countries with data across the 2 points in time.

Most middle-income countries had small disparities between rural and urban areas, while the LDCs had a higher incidence of stunting in rural areas and larger and persistent rural-urban gaps. Figure 2.20 displays prevalence by area. Most of the non-LDCs had very little difference between rural and urban areas, apart from Morocco where children in rural areas were 2.3 times more likely to be stunted than in urban areas. The results are in line with global findings that indicate that urban areas have on average lower rates of stunting than rural areas. However, research also suggests that socioeconomic inequality is higher in urban areas (Van de Poel, O'Donnell and Van Doorslaer, 2007). In contrast, children in urban areas in Egypt and the State of Palestine had a higher rate. Trend analysis shows that gaps increased in most of the LDCs (except Comoros) and Morocco.

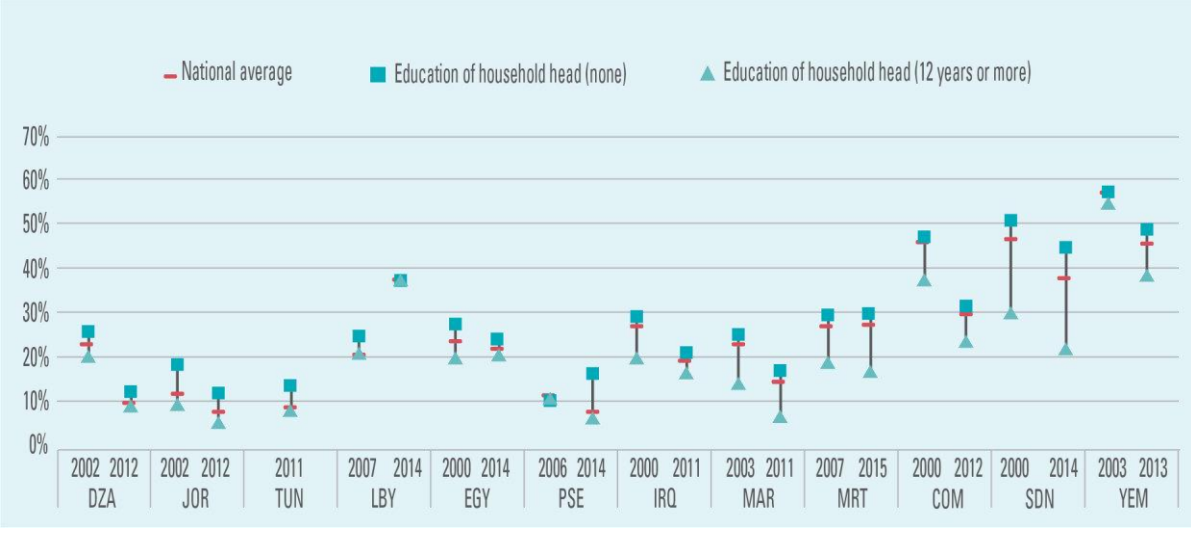
As in spatial inequalities, most middle-income countries had small disparities between households with educated heads and households with uneducated heads. However, trend analysis shows persistent and even increasing gaps in the LDCs. Figure 2.21 depicts prevalence of stunting by education of household head, indicating an increase in inequality between the two groups over time. Strikingly, the State of Palestine also had a large increase in stunting in households with uneducated heads. Parental education is an important factor in improving child health outcomes. Rather than focusing only on the education of the mother, the present analysis focuses on the educational attainment of the household head, who having an elevated status in the family is likely to affect the behaviour of the mother and thus the outcome for the child (Daoud and others, 2017).

Figure 2.20 Prevalence of stunting by type of area (Urban-rural-refugee camp)



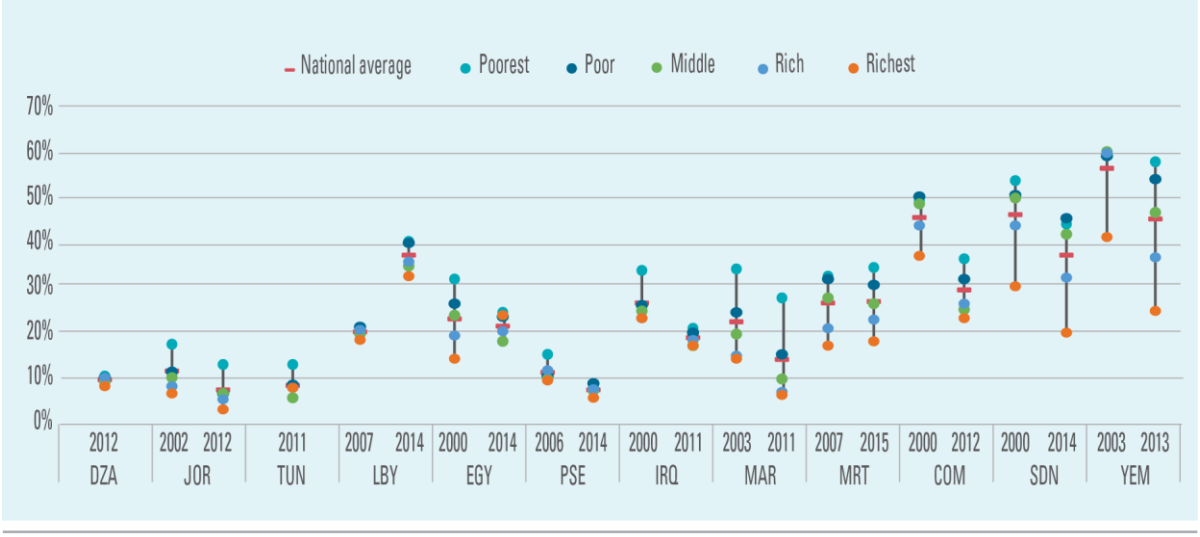
Source: Authors' calculations.

Figure 2.21 Prevalence of stunting by education of household head



Source: Authors' calculations.

Figure 2.22 Prevalence of stunting by wealth quintile



Source: Authors' calculations.

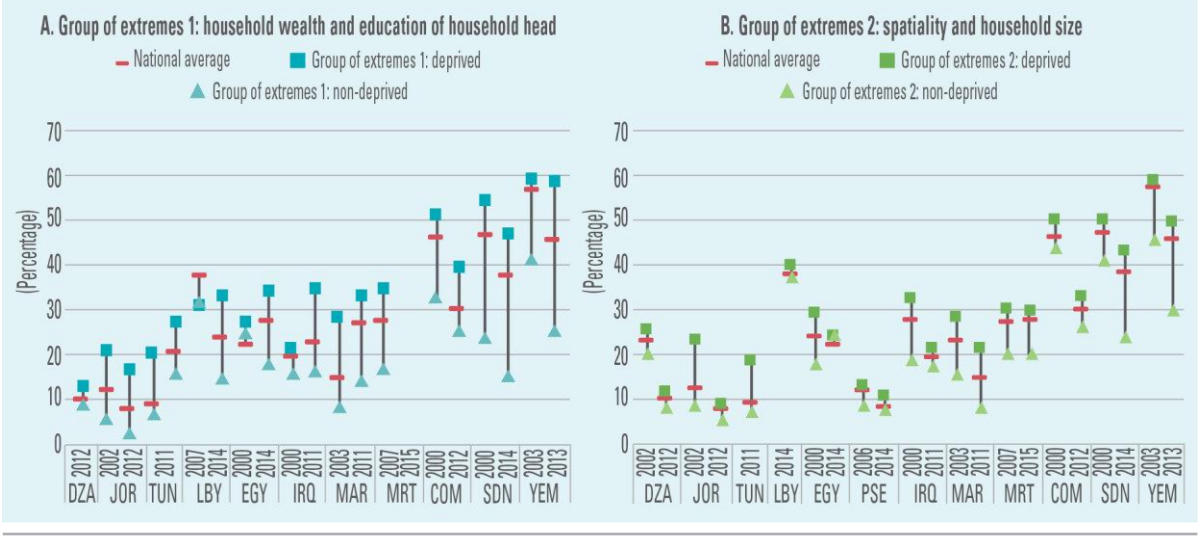
Disparities across wealth quintiles were small in middle-income countries, but larger in the LDCs. Again, gaps between the poorest and richest quintiles increased in several LDCs over time. Middle-income countries, such as Tunisia, Egypt, and the State of Palestine, had only little variation in stunting between wealth quintiles, whereas Comoros,

the Sudan and Yemen had stark and growing disparities.

The results show a mixed picture of inequality in stunting within the different groups of extremes. Figure 2.23A shows that Yemen, the Sudan and Morocco had the largest gaps with regards to education of household head and wealth quintile. The LDCs had the largest gaps between big rural households and small urban households. Morocco, the Sudan and Yemen had an increase in inequality over time for both groups considered, while inequality remained steady in Mauritania.

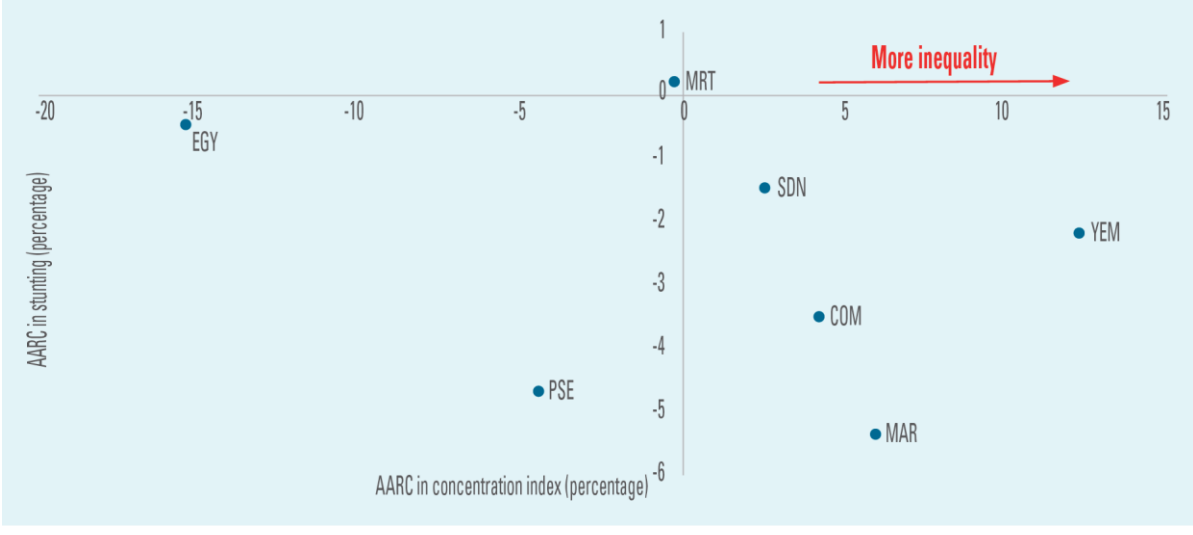
The concentration index shows that the level of inequality increased for most countries, despite an overall decrease in stunting. Figure 2.24 presents the average annual rate of change (AARC) in stunting and in the negative of the concentration index (CI-W). Egypt achieved a large decline in the concentration index, which means that prevalence of stunting is less unequal for the endline year than for the baseline year. The scatterplot shows that several countries are clustered in the lower right quadrant of the graph, indicating that the level of inequality increased, despite an overall decrease in stunting. Thus, prevalence of stunting is more concentrated at the bottom end of the wealth distribution in endline-survey data than in the baseline-survey data. Statistical tests also confirm the results and show an increase in socioeconomic inequalities in stunting for the Sudan, Comoros, Yemen and Morocco (all countries in the lower right quadrant in figure 2.24). For the State of Palestine and Mauritania, no clear conclusion is possible, while Egypt clearly had a decrease in inequalities. See box 2.3 for more details regarding statistical tests.

Figure 2.23 Prevalence of stunting by group of extremes



Source: Authors' calculations.

Figure 2.24 Scatter of average annual rate of change (AARC) in the negative Concentration Index (Wagstaff) and the prevalence of stunting



Source: Authors' calculations.

Analysis of the later household surveys provides a mixed picture of socioeconomic disparities among Arab countries. For some, like Egypt, there were no distinct prevalence patterns across socioeconomic characteristics, but there was an impressive decrease in inequality. However, this decrease is explained by an increase of stunting in more advantaged groups (such as urban, wealthiest, and households with educated heads). Ecker and others (2016) suggest that absence of clear patterns across socioeconomic characteristics in Egypt could to some extent be explained by the coverage of the food subsidy system, the local health environment, and the differential impacts of the crises in the 2000s. Other countries, like Jordan, had very high inequality and high disparities with regard to education of household head. Morocco is a constant outlier, having large disparities along all socioeconomic characteristics, concealed by a relatively moderate average of stunting. It must also be noted that the data are quite outdated for countries in conflict, like Iraq, Libya and Yemen. Most likely, prevailing conflicts have severely impacted health in all these countries.[9]

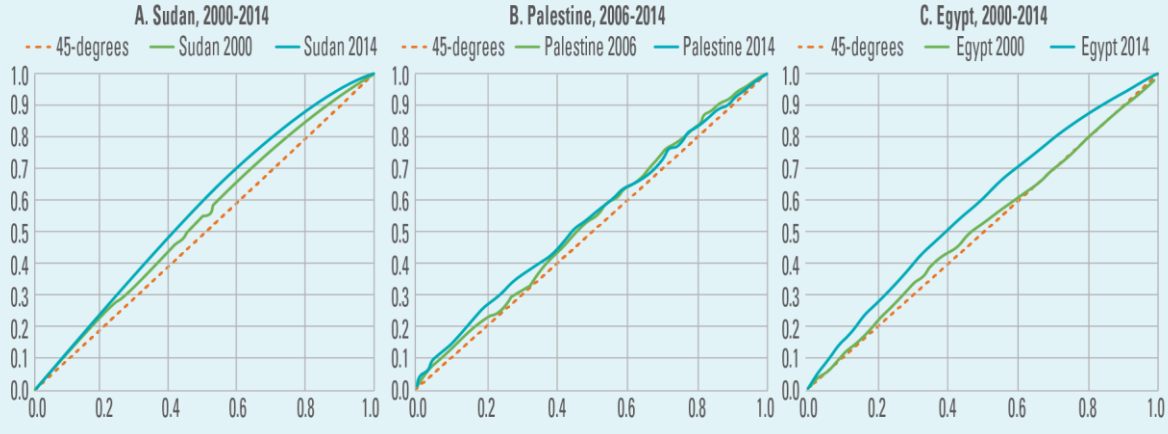
2. Child health – Overweight

If a child is too heavy for his or her height, s/he suffers from overweight, which is often caused by excessive calorie intake compared with metabolic needs or activity level. In the long term, overweight increases risk of diet-related non-communicable diseases. The Arab region is one where prevalence of overweight has been increasing over time (UNICEF, WHO and World Bank Group, 2018).

Box 2.3 Using the concentration index and the concentration curve to assess socioeconomic inequalities in child stunting

Results show that the child stunting concentration curves for Comoros, Egypt, Mauritania, Morocco, the Sudan and Yemen are all clearly significantly different from the line of equality, which indicates socioeconomic inequalities. The figures below show the example of the Sudan and the State of Palestine and Egypt, while the graphs for the remaining countries are provided in the technical annex.

Figure 2.25 Concentration curve for the Sudan, the State of Palestine and Egypt



Source: Author's caluclations.

When applying statistical tests and comparing initial time points with later time points, we can differentiate three cases.

1. For Comoros, Morocco, Yemen and the Sudan, there is over the period an increase in socioeconomic inequalities.
2. For the State of Palestine and Mauritania, there is no dominance of a curve over the other, which indicates that even if some indices point to an increase of socioeconomic inequalities, it is possible to construct other indices that will point to the opposite and vice versa.
3. For Egypt, there is over the period a robust decrease in socioeconomic inequalities.

For all the countries under investigation, the shortfall in child stunting is decreasing over the period, which indicates that all possible rank-dependent shortfall indices displaying aversion to socioeconomic inequality are decreasing. This very important result has the following implication: if one chooses any cut-off in social ranks and computes the incidence of child stunting in the group of people with a socioeconomic status lower than that rank, there will be a decrease in incidence of child stunting.

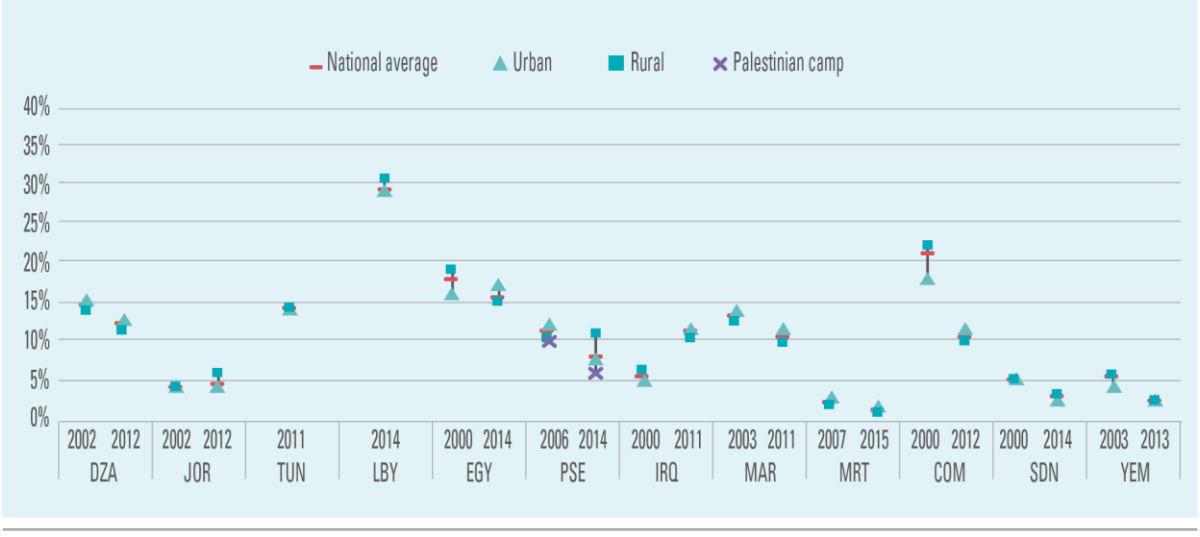
Figure 2.26 shows a mixed pattern of prevalence and trend of overweight in Arab countries. While incidence of overweight decreased in most countries, Libya experienced an increase. In most of the LDCs, prevalence of overweight decreased

over time. Even though the number halved over time, Comoros is among the few African countries with an overweight rate above 10 per cent. Moreover, Comoros also had a high rate of stunting. Coexistences of a high rate of stunting with a high rate of overweight can be a proxy marker of the double burden of malnutrition, which is a typical characteristic of populations in the nutrition transition phase (WHO, 2017). Libya was also affected by this double burden, with an increase in both stunting and overweight rates over time.

Figure 2.26 Prevalence of overweight (>2 SD)

Source: Authors' calculations.
Note: The reported population weighted average includes only the countries with data across the 2 points in time.

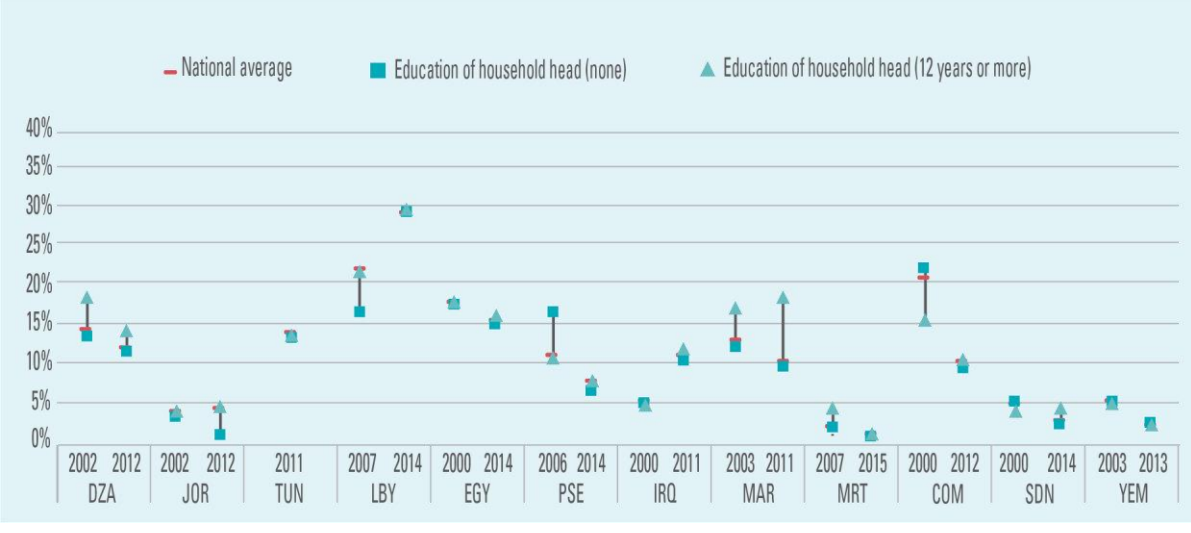
Figure 2.27 Prevalence of overweight by type of area (Urban-rural-refugee camp)



Source: Authors' calculations.

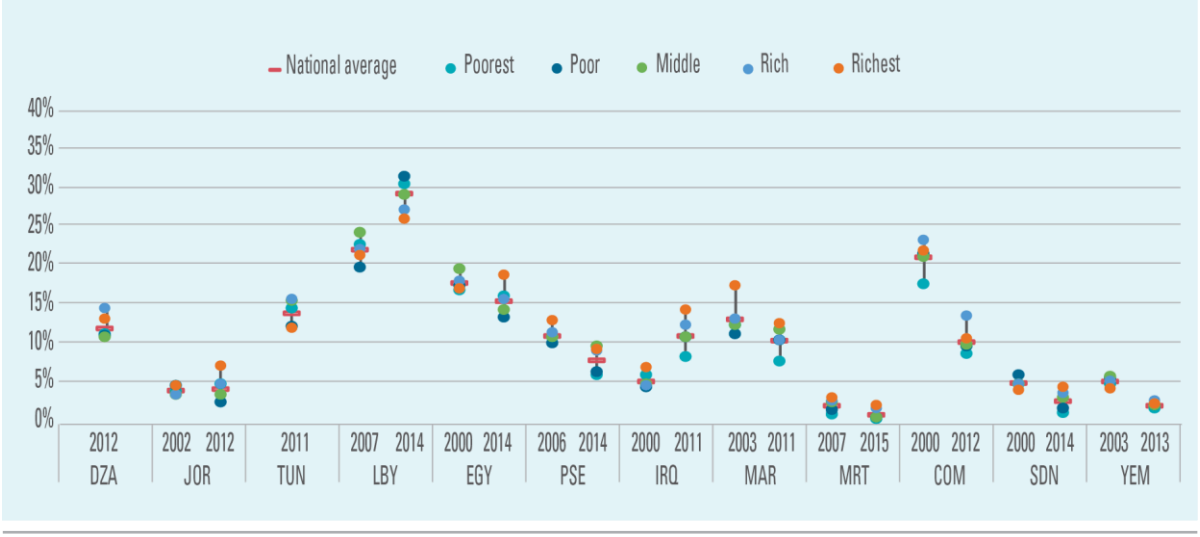
There is no clear pattern as to whether overweight was more common in rural or urban areas. Figure 2.27 shows that there was no large variation in prevalence of overweight between rural and urban areas for most countries. In the Sudan, Jordan, the State of Palestine, and Libya, overweight was more common in rural areas, while the opposite is true for the remaining countries. In terms of temporal trend, the ratios indicate that inequality increased in some countries, such as in Jordan and the Sudan.

Figure 2.28 Prevalence of overweight children by education of household head



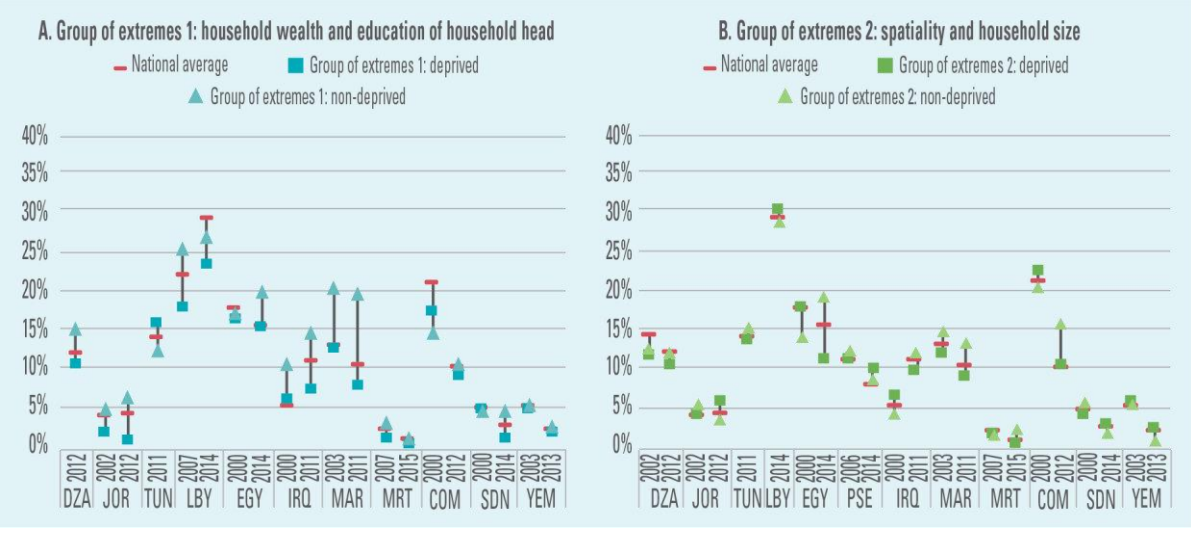
Source: Authors' calculations.

Figure 2.29 Prevalence of overweight children by wealth quintile



Source: Authors' calculations.

Figure 2.30 Prevalence of overweight children by group of extremes



Source: Authors' calculations.

As figure 2.28 indicates, **in several countries, disparities exist between households with educated heads and households with uneducated heads, but the link between education of household head and malnutrition is unclear.** Overweight seems generally higher in households with educated heads relative to non-educated heads. Yemen is the only country where households with uneducated heads had a slightly higher prevalence of overweight. As for temporal trend, Libya and Mauritania had an increase in inequality, while most other countries managed to narrow the gap. However, overall, the picture is mixed.

Disaggregation by wealth quintile exhibits no clear temporal pattern; in most countries, disparities were rather small, with no large changes over time.

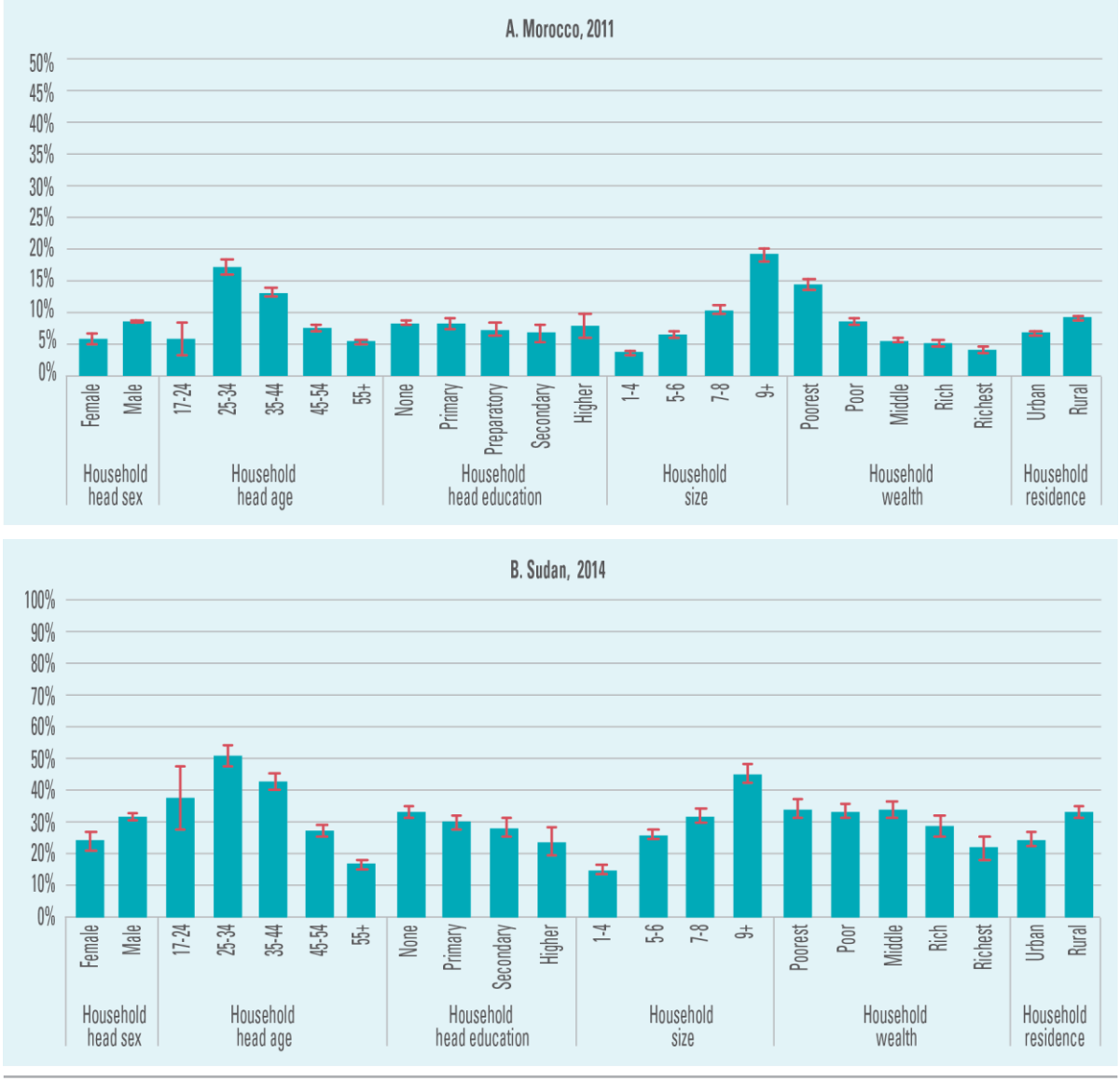
Considering groups having combined characteristics shows that in several countries, children from rich households with educated heads may suffer more from overweight. This is particularly evident in the cases of Morocco and Iraq. Inequalities increased in Morocco and Iraq while the remaining countries had only little gaps with a slight increase in inequality over time (figure 2.30). In Morocco and Iraq, children in the non-deprived group were almost 3 times more likely to be overweight than children in the deprived group.

E. Determinants of probability of deprivation in stunting

This section assesses determinants of deprivation in health in relation to household socioeconomic characteristics. Using a logistic regression to analyse likelihood of deprivation, the aim is to discern the key determinants of the probability of being deprived in health and how their magnitude/importance changed overtime. The health indicator used as a dependent variable is

stunting, as defined in the Arab Multidimensional Poverty Index (MPI) at household level, i.e., a household is considered afflicted if it has any under-five child suffering moderate or severe acute stunting. Assessing the probability of being deprived for a specific socioeconomic group compared with other groups and the changes over time provides insight into the drivers of inequality in a multivariate model. The methodology is described in detail in the technical annex, along with the results of the logistic regression.[10]

Figure 2.31 Probability of deprivation in stunting: cases of Morocco and the Sudan



Source: Authors' calculations.

Table 2.1 below presents the results for ten countries; with six having results for two time points. The findings are as follows:

1. Large households (at least 9 members) and those in the poorest wealth quintile faced a higher probability of deprivation in almost all countries, and this persisted across the two time points considered for the countries for which data are available.
2. A larger probability is associated with the household head being 25-34 years of age, and this holds across countries and time. As the indicator is defined at household level, this finding and the decline in probability of deprivation with age of household head are explained by the demographic structure and fertility and age.
3. Female-headed households have a significantly lower probability of deprivation, except for Iraq. For household wealth and size, the results confirm the expected gradient: probability of deprivation declined significantly when comparing the poorest with the richest households, and larger with smaller households.
4. Probability of deprivation was significantly higher in rural areas, and this is the case in all countries, except for the State of Palestine where urban areas and camps had a higher probability.

The above indicates that monetary poverty as proxied by the wealth index, sex and age of household head, type of area of residence (urban, rural, camp) and household size are important aspects to consider when designing social protection schemes and health programmes geared towards reducing stunting and addressing inequality. However, the pattern across countries and time for gender of household head and type of area of residence is less clear. Figure 2.31 presents the findings for the most recent year, comparing Morocco, a middle-income country, with the Sudan, a LDC.

Comparing probability of deprivation for the two time points indicates that for **all countries examined, except for Mauritania, there was an improvement in stunting.** Moreover, as shown in table 2.1, probability of deprivation declined for almost all socioeconomic groups. Exploring whether all groups benefited equally requires assessing the difference in probability and magnitude of decline across groups.
In terms of household wealth, Jordan, the State of Palestine, Egypt, Libya, Morocco, and the Sudan experienced a higher reduction in probability of deprivation among the poorest, which contributed to reducing inequality.
In contrast, in Iraq, Jordan, Comoros, and Yemen, the decline of probability of deprivation was slightly higher among well-off households.
In terms of education of household head, reduction in probability of deprivation was slightly higher for the poorest households, as in Jordan and the State of Palestine, or the poorest and richest households benefited equally, as in Morocco, the Sudan, and Yemen. For household size, reduction in probability of deprivation was higher among large households in Egypt, Jordan, Morocco, and the State of Palestine, while in the Sudan, Comoros and Yemen, the opposite is observed. These findings point to the key household characteristics to consider when addressing deprivation and inequality in health. However, specific policy prescriptions and evaluations of former policies would vary across countries. Figure 2.32 shows a plot of probability of deprivation by household wealth and household size for the two time points for the Sudan and Morocco.

Figure 2.32 Change in probability of deprivation in stunting by household wealth and education of household head

Source: Authors' calculations.

Table 2.1 Probability of deprivation in stunting

Probability of deprivation in stunting (Percentage)																		
		State of Palestine		Jordan		Egypt		Iraq	Morocco		Tunisia	Sudan		Mauritania		Comoros		Yemen
		2006	2014	2002	2012	2000	2014	2011	2003	2011	2011	2000	2014	2007	2011	2000	2012	2013
Sex of household head	Female	8.6				13.7	7.3	22.6	10.1	5.9		50.5	24.3	35.1			16.1	25.1
	Male	11.9				16.8	12.4	18.9	13.2	8.7		57.4	31.9	38.1			22.5	35.2
Age of household head	17-24	14.3	13.0	17.5	4.0	23.1	27.1	31.8	23.9	5.8	3.2	54.9	38.1	49.1		49.8	37.7	40.7
	25-34	26.5	16.7	20.4	10.8	31.6	28.0	33.5	28.0	17.5	13.8	63.2	51.4	40.9		52.2	34.8	58.7
	35-44	12.9	7.4	10.9	4.3	21.0	15.3	20.4	16.9	13.4	7.2	58.8	43.1	37.8		50.7	25.2	41.9
	45-54	5.9	2.3	3.4	1.1	10.3	5.0	13.3	8.3	7.6	2.4	55.8	27.5	37.3		45.8	13.1	26.3
	55+	6.3	4.2	2.6	1.4	12.4	4.9	16.2	10.2	5.4	0.7	49.0	16.8	34.4		47.2	7.7	24.2
Education of household head	None	11.2	11.0				12.3	21.4		8.5	3.7	60.4	33.4	39.7	38.7	50.3	21.3	35.7
	Primary	11.0	7.2				14.6	19.8		8.4	2.8	53.8	30.1	33.8	35.6	47.8	16.9	35.8
	Preparatory	12.2	6.6				11.0	19.0		7.4	4.4	-	-	-	-	-	19.9	-
	Secondary	12.1	6.0				11.7	17.0		6.9	1.6	52.9	28.4	31.4	32.0	46.6	12.0	33.2
	Higher	12.7	5.3				13.1	16.3		8.0		46.4	24.1	-	-	43.0	17.5	29.7

Probability of deprivation in stunting (Percentage)																		
		State of Palestine		Jordan		Egypt		Iraq	Morocco		Tunisia	Sudan		Mauritania		Comoros		Yemen
		2006	2014	2002	2012	2000	2014	2011	2003	2011	2011	2000	2014	2007	2011	2000	2012	2013
Household size	1-4	4.5	3.0	3.1	1.7	8.4	7.9	7.8	6.0	3.7	2.1	49.8	14.9	30.6	33.1	45.3	10.1	15.2
	5-6	8.5	5.1	6.5	3.1	11.7	12.8	13.8	10.2	6.6	3.2	55.9	26.3	36.8	37.1	45.1	17.2	25.6
	7-8	10.5	6.6	8.5	4.4	15.7	18.8	15.5	14.0	10.6	4.9	59.5	32.3	35.6	38.2	47.0	22.2	31.1
	9+	19.6	13.6	14.9	6.6	35.3	40.5	31.1	23.7	19.5	11.4	58.7	45.4	41.1	42.7	52.9	31.6	48.9
Household wealth	Poorest	15.7		11.5	6.0	20.1			18.6	14.8	4.2	61.6	34.5	47.0	47.8	53.2	27.0	43.3
	Poor	12.0		8.2	2.7	17.3			13.6	8.6	3.2	60.8	33.7	44.3	42.8	52.6	23.0	41.1
	Middle	10.7		7.6	3.2	16.3			11.2	5.7	1.8	61.5	34.5	38.7	39.3	48.8	14.5	36.3
	Rich	11.2		5.9	2.5	15.3			8.8	5.1	3.2	56.6	29.1	30.2	34.0	48.8	19.3	29.4
	Richest	8.9		4.2	1.3	11.6			9.5	4.3	2.4	42.8	22.0	25.4	28.1	42.8	15.2	22.4
Household residence	Urban	13.0		7.1		14.3				6.8	2.6	56.1	24.9	38.8		43.3		
	Rural	9.5		10.1		17.8				9.3	3.7	57.9	33.5	36.5		50.9		
	Camp	12.0																

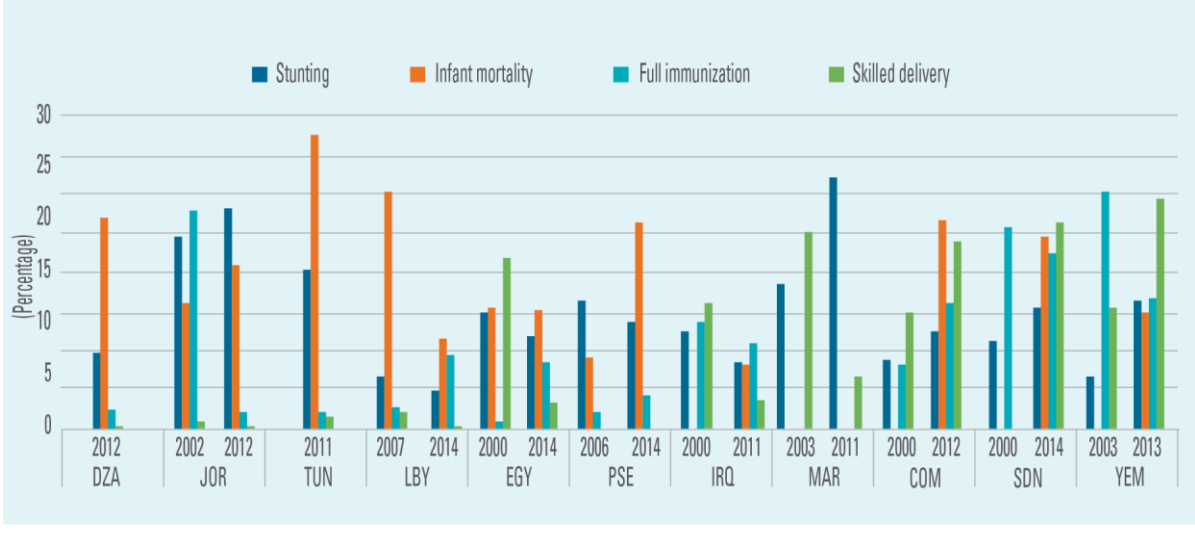
Source: Authors' calculations.
Note: Only probabilities based on significant coefficients are shown.

F. Inequality in child and maternal health opportunity

The preceding analysis of inequality of outcome in 12 Arab countries between 2000 and 2014 indicates that significant progress was achieved in child and maternal health. In addition, several countries managed to reduce inequalities, though some persisted, particularly between poor and rich and between households with educated heads and households with uneducated heads. Moreover, inequalities were more pronounced in the LDCs and countries emerging from conflict, and for several indicators, disaggregation by wealth quintile and education of household head indicates considerable persistent gaps.

Socioeconomic inequalities due to circumstances at birth, which are beyond the control of the individual, are regarded as fundamentally unjust and tend to stoke feelings of marginalisation and social discontent. In this section, we examine how circumstances at birth shape selected child nutrition and health indicators, with a focus on four circumstantial factors; namely, gender, educational level of household head, household wealth and type of area of residence (urban, rural). Inequality of opportunity is measured by a dissimilarity index (D-index)[11] that ranges from 0 to 100, with higher values reflecting a higher degree of inequality. Contribution of each circumstantial factor is then examined using Shapley decomposition. The analysis is conducted for 11 Arab countries, and, where data permits, trends are assessed. The technical annex provides a detailed explanation of the methodology.

Figure 2.33 Dissimilarity index (D-index) for selected health indicators (Percentage)



Source: Authors' calculations.
Note: Available data did not allow constructing the specified indicator in the following cases: Infant mortality for Iraq 2000, Comoros 2000, the Sudan 2000, Yemen 2003 and Morocco 2011; skilled delivery for the Sudan 2000 and the State of Palestine 2014; child full immunisation for Morocco 2011. In the cases of the State of Palestine and Morocco, where the missing data are for the later year, the D-index for the earlier year is not reported in the graph, but is 0.73 for skilled delivery in the State of Palestine 2006, and 18.62 and 2.38 for infant mortality rate and child full immunisation in Morocco 2003, respectively.

Health opportunity and its main driver depend on the indicators and vary widely among countries. Yet, in general, inequality of opportunity persists in the Arab region, and in many countries, inequality of opportunity in infant mortality, stunting and child immunisation increased over time. Across countries with two time points, IOP in infant mortality increased over time, except for Libya and Egypt. Figure 2.33 shows that in most countries, the highest levels of IOP among the selected indicators were in infant mortality rates. For stunting, there is wide variation among countries; while IOP decreased in countries such as Libya, Egypt and the State of Palestine, it increased in Jordan, Morocco and the LDCs. IOP in child immunisation increased in several countries, including Libya, Egypt and Comoros. IOP in SBA decreased in most countries, apart from Comoros, a LDC, and conflict-ridden Yemen. Hence, while outcome analysis generally shows downward trends in inequalities, inequality of opportunity shows higher incidences of increasing inequality, suggesting that the two inequality measures are not necessarily moving in tandem in the region.

In the following sub-sections, these indicators and their drivers are discussed separately. Conflict may have a detrimental impact on health, for example, increasing chronic malnutrition, especially among children. This is closely linked to the ruin wrought by conflict on health facilities and water and sanitation infrastructure, in addition to restrictions on humanitarian aid dispatches and healthcare access. Nonetheless, conflict intensity may vary across different areas within a country, impacting inequality variedly. To capture such conflict peculiarities, our analysis accounts for the impact of residing in Gaza in the case of the State of Palestine and in Kurdistan in the case of Iraq. Gaza is a relatively high conflict intensity area in the State of Palestine, as opposed to the case of Kurdistan, which, due to relative peace and security, tends to fare better than other regions in Iraq in terms of health and other socioeconomic indicators.

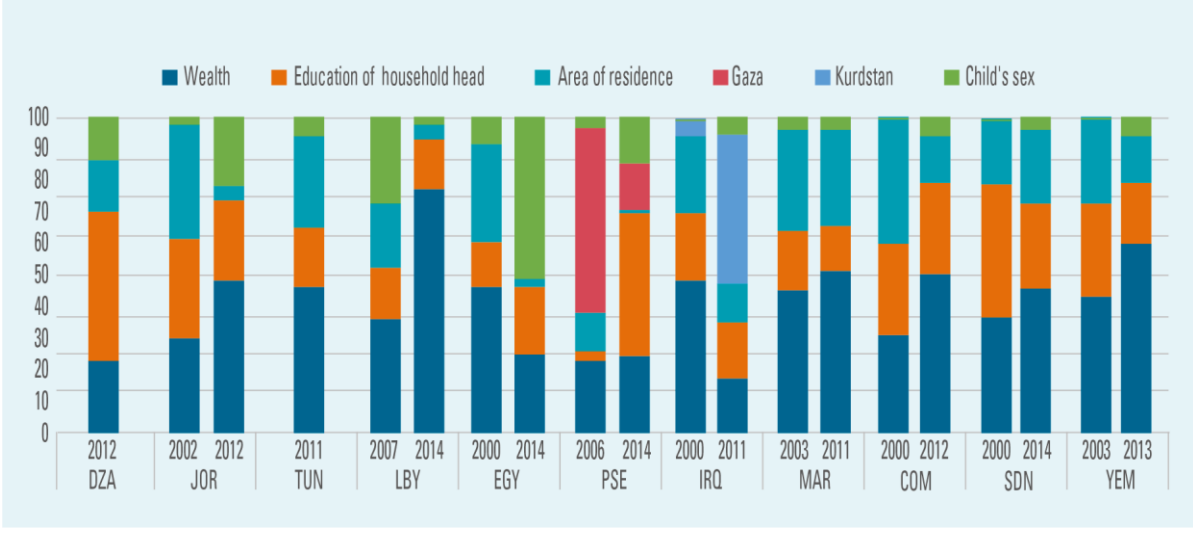
1. Stunting

Most countries recorded a decline in overall prevalence of stunting; yet, variations in IOP existed within them. As shown in figure 2.34, wealth and education of household head were generally the key drivers of inequality in stunting. A change in drivers of likelihood of child stunting is noticeable across countries where there are two surveys. Thus, contribution of household wealth rose considerably in Libya and the LDCs but decreased in both Egypt and Iraq; while contribution of education of household head increased in several countries, most remarkably in the State of Palestine where it became a main driver.

For the State of Palestine, contribution of residing in Gaza to IOP in stunting decreased in 2014 relative to 2006. For Iraq, contribution of being in Kurdistan is high and has increased in 2011 relative to 2000. Both cases show that residing in areas of different conflict intensity contributes markedly to inequality of opportunity within the affected country.

Nonetheless, generally, contribution of type of area of residence was moderate and decreased over time in most countries. Contribution of gender was fairly low in most countries. Egypt stands out as an exception, with contribution of gender soaring to become a main driver and warrants further investigation.

Figure 2.34 Shapley decomposition for stunting (Percentage)



Source: Authors' calculations.

2. Infant mortality

Notwithstanding a decline in infant mortality rates, IOP in infant mortality increased over the time period under consideration. As depicted in figure 2.33, infant mortality had the highest levels of IOP among the selected indicators. Wealth and education of household head were generally the main drivers. Overall, contribution of household wealth increased and remained particularly sizeable in the LDCs. The State of Palestine stands out as an exception with contribution of household wealth declining, in parallel with considerable rises in contribution of education of household head.

Education of household head was a main driver of inequality in infant mortality in middle-income countries, such as Algeria, Tunisia, and Jordan. Spatial inequalities generally declined, most remarkably in Jordan, but remained moderate across the vast majority of countries. As in the case of stunting, residing in Gaza, in the case of the State of Palestine, and in Kurdistan, in the case of Iraq, contributed to IOP in infant mortality. However, their contributions to IOP in infant mortality are markedly lower than for IOP in reducing stunting. Gender contributions were relatively low in most countries.

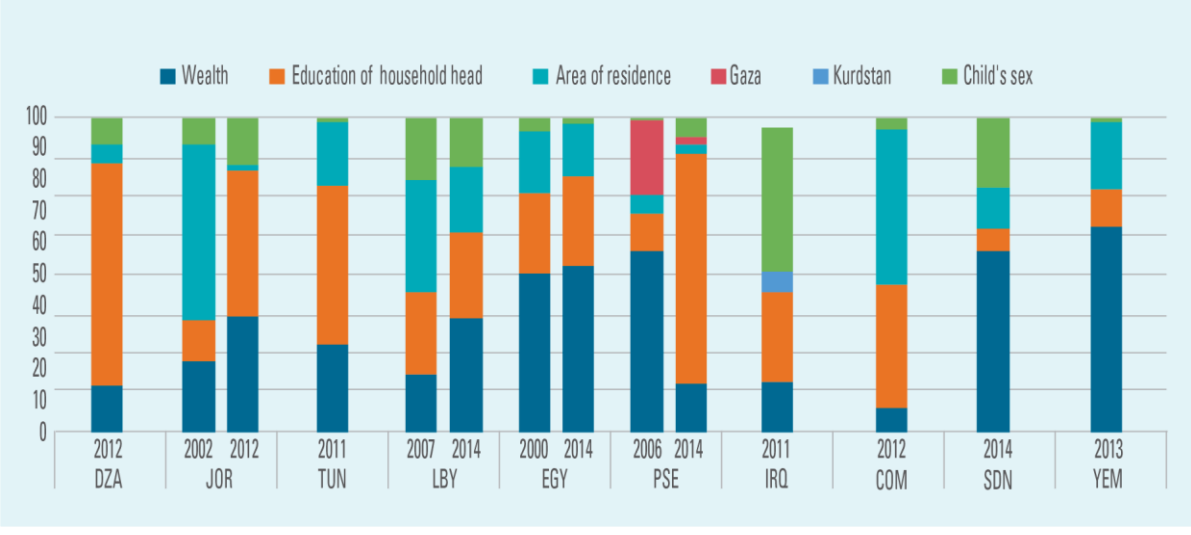
3. Child immunisation

Child immunisation rates improved significantly. Yet, there remained variations in IOP. In most countries, household wealth, education of household head and type of area of residence played a substantial role. Contribution of wealth rose significantly in several countries, such as Jordan and Comoros, but remained fairly steady across others.

Despite being a key driver of immunisation, contribution of education of household head decreased over time, except for the State of Palestine. A similar decreasing pattern is marked for type of area of residence in the cases of Jordan and the Sudan, as opposed to the

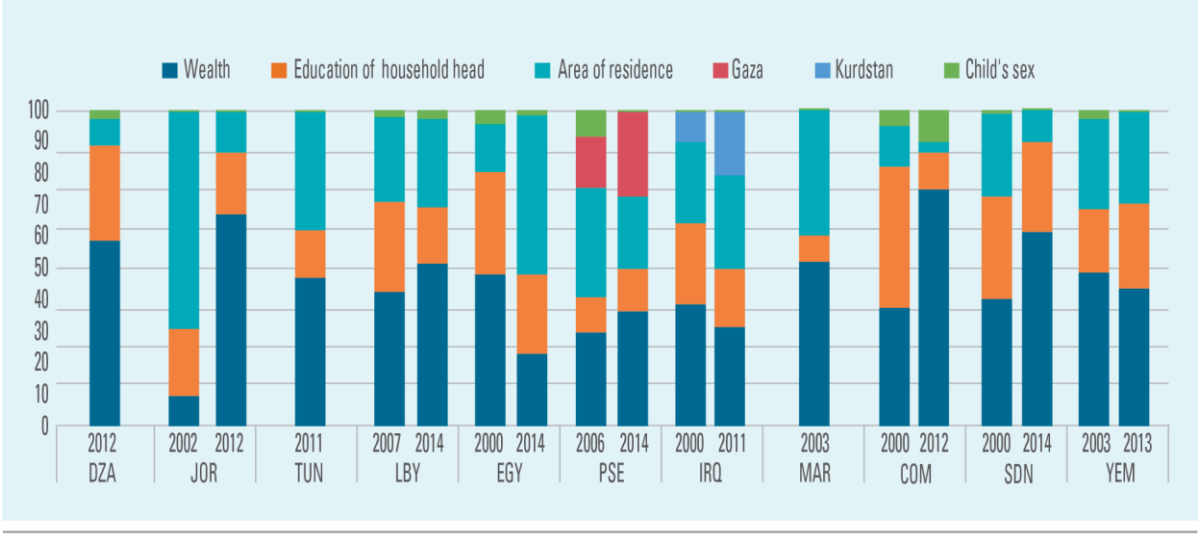
cases of Egypt and Iraq. In this regard, contribution of being in Gaza and Kurdistan also increased. Contribution of gender was minimal in nearly all countries.

Figure 2.35 Shapley decomposition for infant mortality (Percentage)



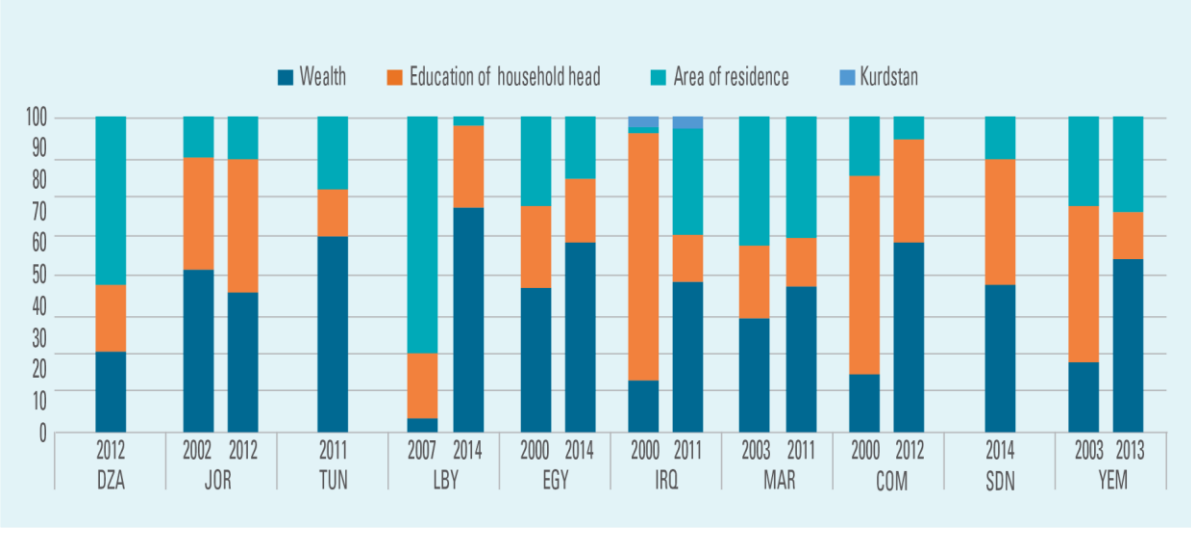
Source: Authors' calculations.

Figure 2.36 Shapley decomposition for child immunisation (Percentage)



Source: Authors' calculations.

Figure 2.37 Shapley decomposition for skilled birth attendance (Percentage)



Source: Authors' calculations.

4. Skilled birth attendance

For SBA, as shown in figure 2.33, almost all countries recorded a decrease in IOP. In general, among the selected indicators, SBA is most consistent, with both inequality of opportunity and inequality of outcome declining, apart from in few LDCs and conflict-afflicted countries. As shown in figure 2.37, the three main determinants of skilled delivery are household wealth, education of household head, and type of area of residence. Most countries experienced an increase in contribution of household wealth, especially in Libya, Iraq and Comoros.

Impact of education of household head decreased in most countries, with the decrease being substantial in Iraq and Yemen. Similarly, contribution of type of area of residence also decreased in most countries; most staggeringly in Libya. In Iraq, however, it increased considerably.

G. Summary

Generally, the Arab region achieved progress in health. Yet, inequalities in health outcomes and opportunity remained widespread.

Analysis of determinants of health outcomes reveals that access to improved water supply and sanitation varies across the countries studied; while some middle-income countries achieved near universal access, the LDCs still lag. Additionally, there were persistent gaps between rural and urban areas in several countries that grew larger over time and that need to be addressed. In access to maternal healthcare, great improvements in SBA were marked across the region, coupled with a decrease in inequality across all characteristics in all countries. However, although the LDCs achieved a big decrease in inequalities over time, there were still major gaps that need to be addressed, especially between rural and urban areas.

Consideration of inequalities in child health outcomes; namely, mortality and malnutrition, also provides key insights. The Arab region achieved a sizeable decline in infant mortality rates. Nonetheless, gaps between rural and urban areas and between the richest and the poorest persisted. For malnutrition, there was an overall decline in the rate of stunting over time for most countries, accompanied, however, by growing inequality over time with respect to several socioeconomic characteristics, especially in the LDCs. Indeed, the findings from the logistic model in section E reveal that probability of stunting decreased over time, but that, nonetheless, household wealth, household size, and type of area of residence, and sex and age of the household head remained critical factors. While stunting is more pressing in the LDCs, child overweight results are mixed, for it seems prevalent in both middle-income countries and the LDCs. Additionally, several Arab countries, including the non-LDCs, were affected by the double burden of malnutrition (i.e., high rates of both stunting and overweight).

Furthermore, analysis indicates that in several countries, inequality of opportunity in infant mortality, stunting and child immunisation increased over time, while IOP in SBA decreased in most countries, apart from the LDCs and the conflict-afflicted countries. Overall, when it comes to health opportunity and its main drivers, there were wide variations among countries and among indicators, but, clearly, IOP persisted, with socioeconomic background being the key determinant.

Such inequalities of health outcomes and opportunity may have adverse impacts on human capital formation and economic activity in the Arab region. Since it has a direct effect on cognitive development and ability to learn, especially in early childhood, poor health may negatively affect educational outcomes. Likewise, it may affect productivity and economic activity. Hence, to promote human capital and wellbeing, Arab countries need to address inequalities in health, as per SDG 3 and SDG 10.

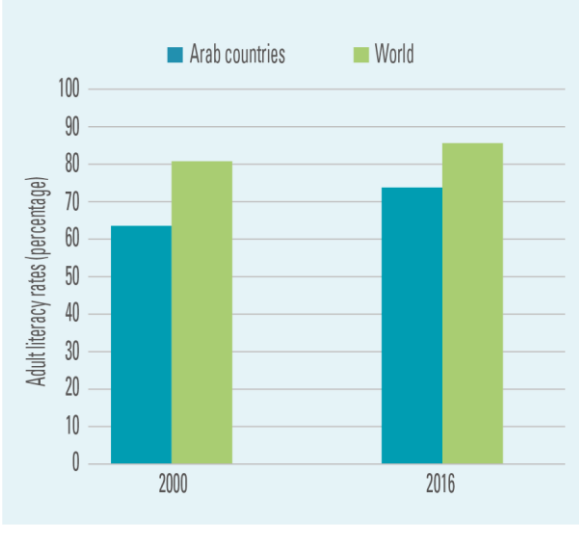
3. Inequality in Education

A. Introduction

Given its wide recognition as a stimulant of economic prosperity and development, education has been, over the past few decades, a prime concern on national and international agendas. Extensive literature, particularly that advocating the endogenous growth theory, emphasises the role of education as the main driver of human capital, which ultimately translates into higher productivity and national output, as well as of technological breakthroughs (Romer,1986, 1990; and Lucas, 1988;). Moreover, economic and social spillovers of education are numerous, such as lessening dependency on government financial assistance, strengthening social cohesion (Merisotis,1998) and reducing crime rates (Lochner and Moretti, 2004). Apart from economic growth and social welfare, education is fundamental to securing life chances of individuals and ensuring social equity.

As articulated in the UNESCO's "Sustainable Development Begins with Education" (2014) report, education received at early years and during adolescence shapes knowledge and cognitive skills, transition to work and employment opportunities, as well as lifetime wellbeing. More importantly, education is a foremost means through which the vicious cycle of intergenerational transmission of poverty is broken and social mobility is promoted. **Indeed, attainment of the seventeen SDGs is ultimately predicated upon adequate educational provision.**

Figure 3.1 Global disparities in adult literacy rates, age 15 and above



Source: World Bank, "Literacy rate, adult total (percentage of people ages 15 and above)", World Development Indicators database. Available at https://data.worldbank.org/indicator/se.adt.litr.zs (accessed on 14 September 2019).

Arab countries have long acknowledged the merits of education and have, since the Education for All (EFA) Dakar Framework in 2000, pledged to enhance their educational systems. Figure 3.1 assesses adult literacy rates in the region relative to the world over the period 2000-2016. **As shown, over that period, literacy rose to reach nearly 74.2 per cent, coming closer to world average.** Yet, the region was still far from reaching the goal of universal literacy, and, more importantly, ability to merely read and write is inadequate for coping with the rising intricate

technological and economic dynamics of the twenty-first century and may not nowadays even guarantee a subsistence wage. According to UNESCO (2013), at least a lower secondary education is needed to have the foundational skills necessary for finding work that pays a decent wage. **In this regard, the Arab region achieved a steady progress in mean years of schooling, which reached 7 by 2017. However, this still falls short of bridging the gap with the world average of 8.4 years.**[12]

Against this backdrop, this chapter assesses progress in educational outlook and inequalities of educational outcomes and opportunity. The first part addresses inequality of outcome, thoroughly discussing levels and trends of three main indicators: net attendance rates, completion rates for various educational levels, and average years of schooling. Primary and secondary completion rates are regarded as inputs to human capital accumulation in society, while average years of schooling can be regarded as a proxy outcome indicator. All indicators are analysed in terms of the predominant educational inequalities of type of area of residence and socioeconomic characteristics of the household; namely, household wealth and education of household head. Groups of extremes that hold several combined characteristics are also investigated. The analysis is conducted for two age groups. Section B focuses on the young cohort (6-25), which constitutes the bulk of the populations and the target for breaking poverty cycles, while section C addresses the adult cohort (25 and above) to highlight the higher education-employment nexus. Using a logistic model, section D then addresses the factors affecting probability of deprivation in school attendance, while section E presents inequality in educational attainment opportunity, focusing primarily on the young cohort (age 6-25). Using logistic regression models, the latter section aims to identify socioeconomic drivers of educational inequality and evaluates evolvement of IOP as measured by the D-index and its drivers over time using the Shapley decomposition. Finally, the last section provides an overview.

It is important to note that the data on education used here are extracted from household surveys, in which they were collected to provide a background characteristic for assessing health status of women and children. This is especially the case for the earlier surveys conducted between 2000 and 2007. In other words, the aim of the surveys was not to give a thorough assessment of the educational status of each person, but to offer a background characteristic for development and health status of a country. Thus, the data do not include information on quality of education, but may, nevertheless, still provide an insightful overview of it.[13] Quantitative measures of access to education are complemented with qualitative information whenever possible. The educational systems were harmonised to reflect the years of schooling of each person. The technical annex provides detailed information on the harmonisation process and on the construction of the education indicators.

B. Inequalities in educational attainment and completion for children and youth

1. Primary Net Attendance Rate (NAR) – Adjusted

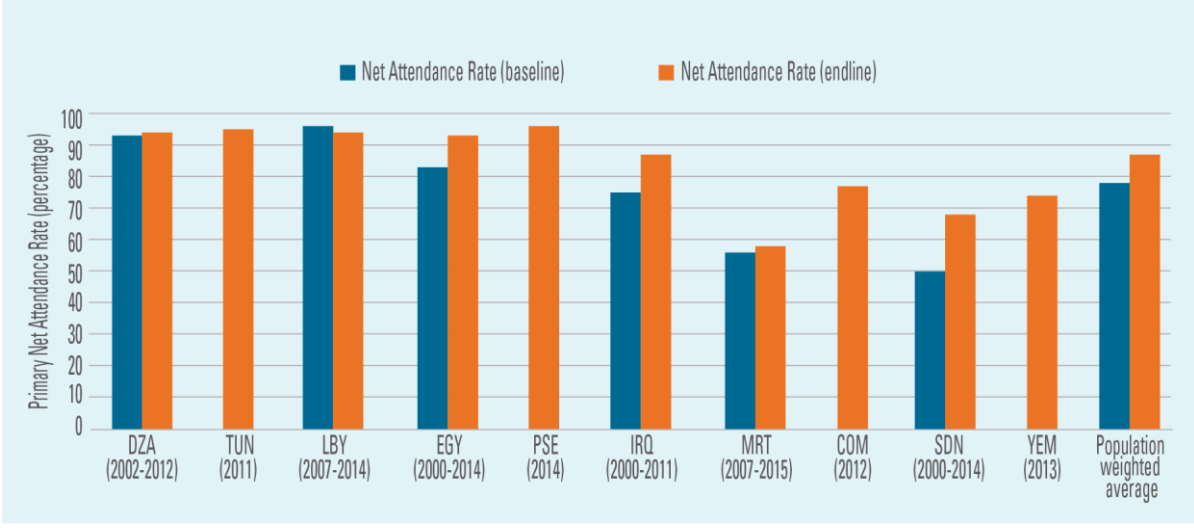
Primary Net Attendance Rate (Adjusted, also referred to as NAR) is defined as the total number of students of the official primary

school-age group (following the national definition of primary age group for each country and time point) who attended primary or secondary education (excluding pre-primary education) at any time during the reference academic year, expressed as a percentage of the corresponding population.

The rate is termed adjusted since it includes not only students who are enrolled at the primary level, but also those who participate in secondary-level education, as they may have accessed primary education earlier than the official entry age or may have skipped classes due to their performance. Thus, the adjusted rate is a measure of participation in primary and secondary levels of education. An increase in NAR could have several reasons: there may be an improvement in participation, or a decrease of the target population, or both. As the data collection period for the household surveys used is not always aligned with the academic year, the reference points for age at attendance have been adjusted, whenever necessary, according to the UNESCO UIS Guidelines on quality standards (UNESCO, n.d.).[14]

Figure 3.2 shows NAR for our sample of 10 Arab countries.[15] Algeria, Libya, Tunisia, and the State of Palestine had a very high NAR, with near universal enrolment. Egypt and Iraq had slightly lower levels in the baseline time point but show significant improvements in the succeeding 15 years. Akkair (2004) stresses that free education provided by the state has been a central part of the social contract in most countries of the region. However, he also acknowledges that the high population growth is a major challenge to the education system and that opportunities for vocational training or secondary/tertiary education are mainly provided for selected groups only.

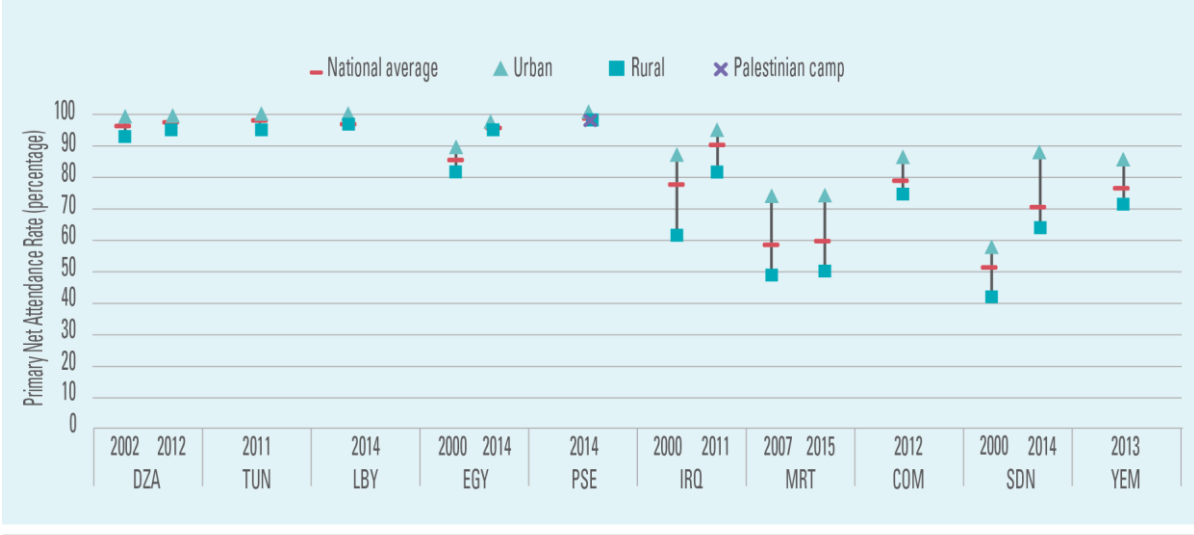
Figure 3.2 Primary Net Attendance Rate (Adjusted)



Source: Authors' calculations.
Note: The reported population weighted average includes only the countries with data across the 2 points in time.

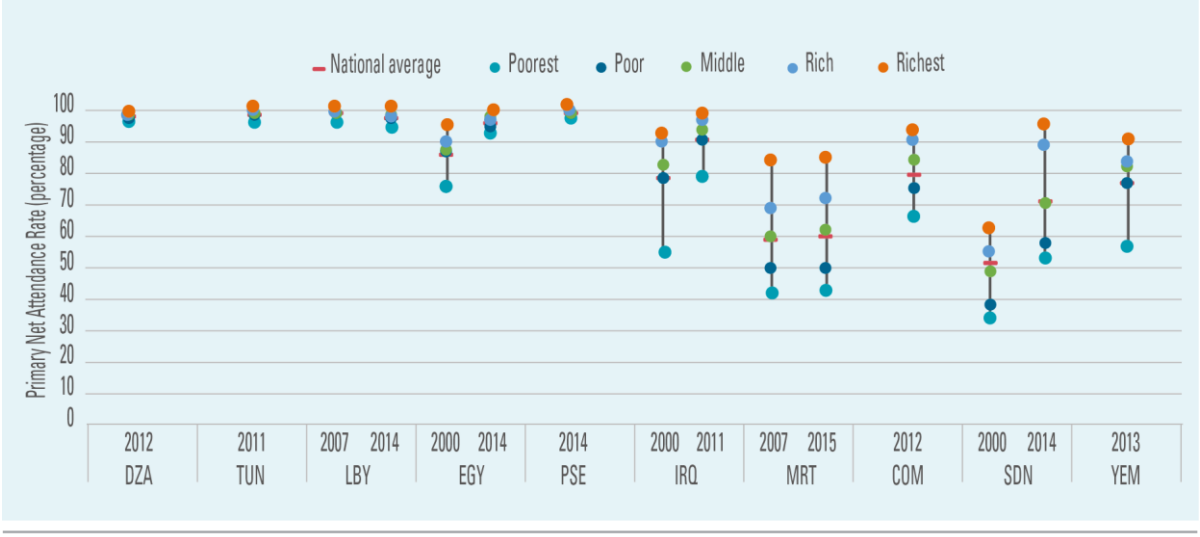
Several countries of the region grapple with the problem of out-of-school population. To get specific groups of marginalised children into the education system and make them stay in school requires specific well-targeted strategies (UNICEF and UNESCO, 2015). Improvements in NAR reflect the efforts that Arab countries had exerted to increase enrolment at the primary level. However, several countries, especially the LDCs, still lagged. Mauritania, for example, had the lowest NAR of all countries and had achieved very little improvement over time.[16]

Figure 3.3 Primary Net Attendance Rate (Adjusted) by type of area (Urban-rural-refugee camp)



Source: Authors' calculations.

Figure 3.4 Primary Net Attendance Rate (Adjusted) by wealth quintile



Source: Authors' calculations.

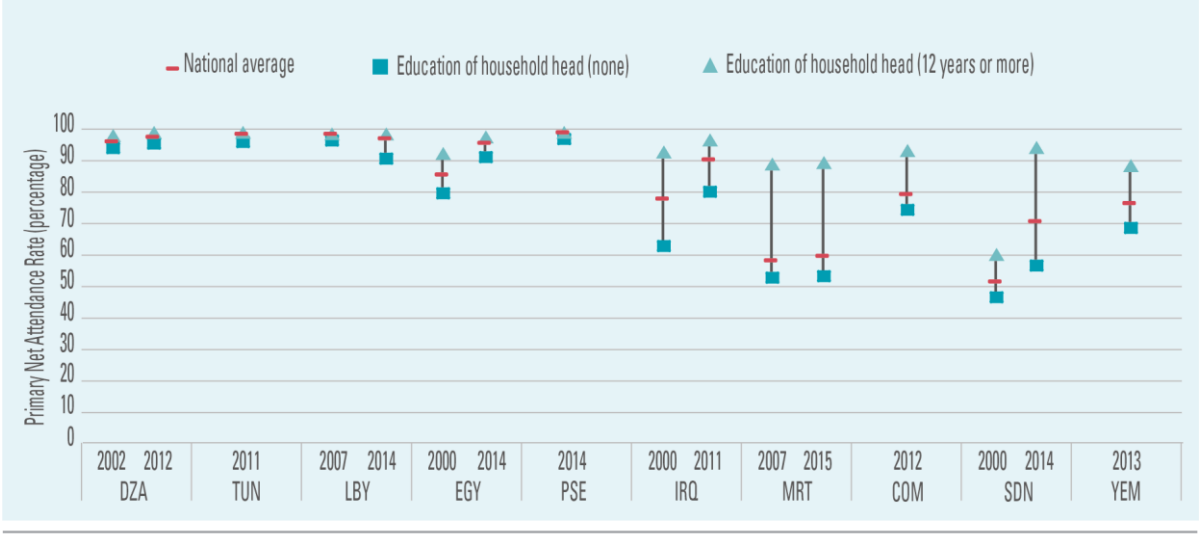
Disaggregation of NAR by type of area (rural-urban) shows that several countries had achieved near universal primary enrolment with no major differences between areas. The small gaps that existed in Algeria and Egypt in the baseline surveys appeared closed in the endline surveys, due to successful targeting of disadvantaged groups. The LDCs, however, show persistent gaps between rural and urban areas, notwithstanding a considerable increase in NAR for rural areas in the Sudan.

Disaggregation by wealth quintiles shows that gaps between the poorest and the richest persisted mainly in the LDCs, while in most of the non-LDCs, there were no major gaps. Among the latter, only Iraq still showed disparities. Figure 3.4 shows that the gaps were wide and persistent in Mauritania and the Sudan.

Several studies strongly associate higher educational outcomes and performance with higher levels of parents' education (Smits and Huisman, 2012; Peragine and others, 2015; and Hashemi and Intini, 2015). Generally, educated parents place a high value on education. Indeed, aiming to secure the educational fulfilment of their children, parents with a given level of socioeconomic background aspire that their young benefit from a similar or higher social status (Breen and Goldthrope, 1997). This fundamentally relates to intergenerational transmission of educational attainment and the need for securing educational mobility for children born to uneducated parents. Figure 3.5 presents the NAR by educational level of household head.

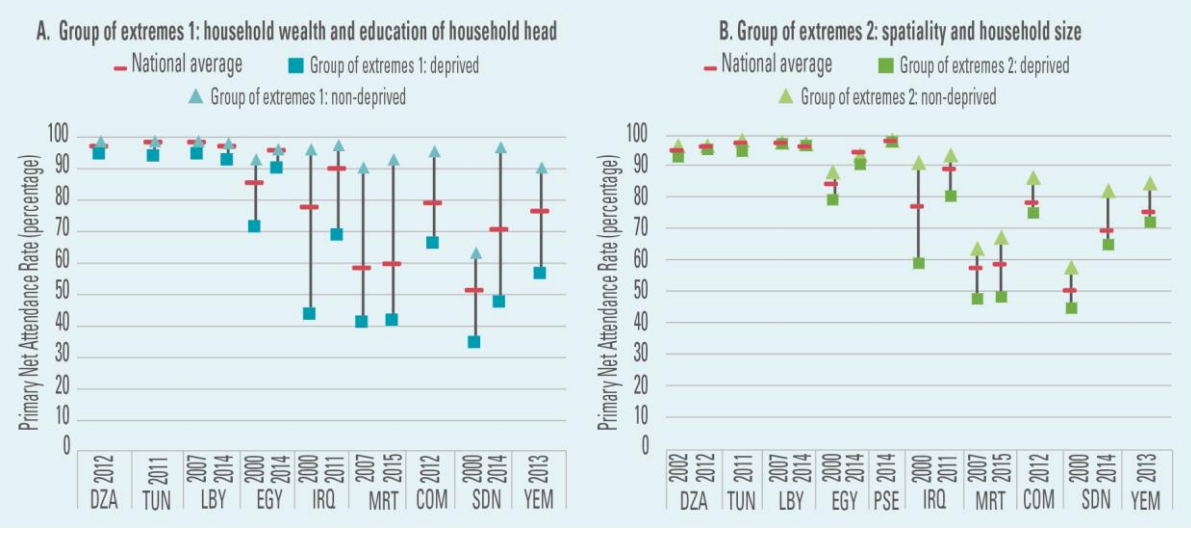
Tunisia, Egypt, the State of Palestine, and Algeria had only minor differences between households with educated heads and households with uneducated heads, while the LDCs and Iraq had larger disparities. In the Sudan, the gaps even widened over time.

Figure 3.5 Primary Net Attendance Rate (Adjusted) by education of household head



Source: Authors' calculations.

Figure 3.6 Primary Net Attendance Rate (Adjusted) by group of extremes



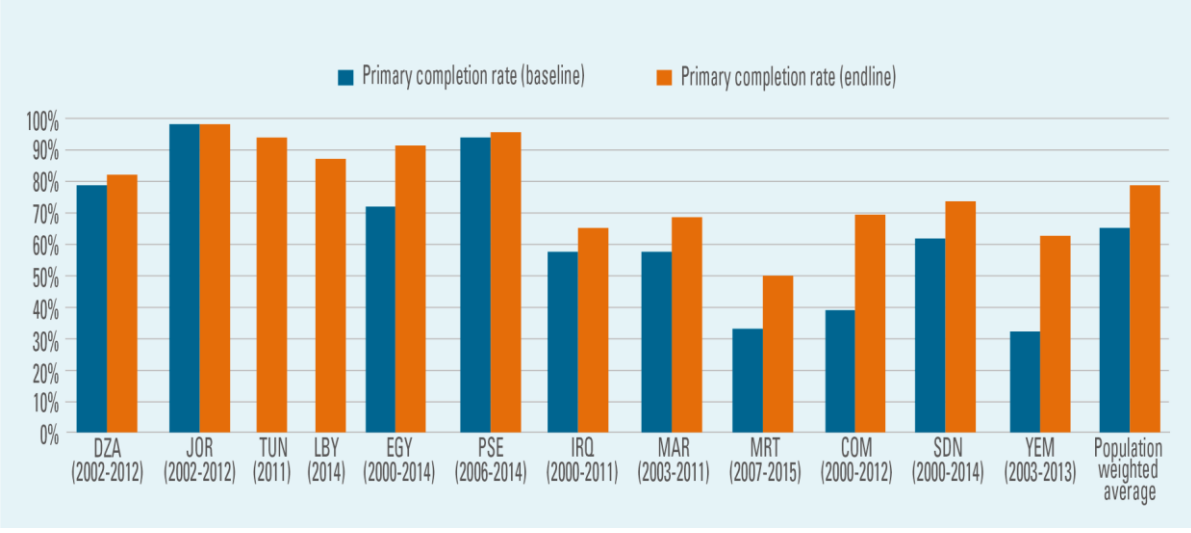
Source: Authors' calculations.
Note: Note that to ensure statistical representativeness, the results are only presented for countries in which the sample size of groups of extremes exceeds 50 unweighted cases.

Finally, two groups of extremes with a combination of socioeconomic characteristics, are considered. **Figure 3.6 shows that progress in NAR is reduced for children deprived in multiple socioeconomic dimensions simultaneously. Although more pronounced in group of extremes 1, this pattern is consistent across the two groups.** Figure 3.6A clearly shows that, apart from Egypt, Algeria, Libya, and Tunisia, the gap between children from the most deprived group and their peers from the most advantaged group largely persisted, with the gap not narrowing whatsoever over time in Mauritania. Nonetheless, in all other countries for which information for two time points is available, children from the most deprived group had a much higher attendance rate in the endline survey, compared with the baseline survey.

2. Primary completion rate

Primary completion rate is defined as the percentage of youth/children 3-5 years above the intended age for primary graduation who have completed 6 years of schooling.[17] Intended age of primary graduation is the age at which students would have graduated had they started school at the official entry age, studied all years and progressed without repeating or skipping a grade,[18] which indicates how many persons actually enter school on time and complete primary education without excessive delay. Low rates can, thus, indicate low or delayed entry into the primary level, high drop-out or repetition rates, late completion, or a combination of all.

Figure 3.7 Primary completion rate



Source: Authors' calculations.
Note: The reported population weighted average includes only the countries with data across the 2 points in time.

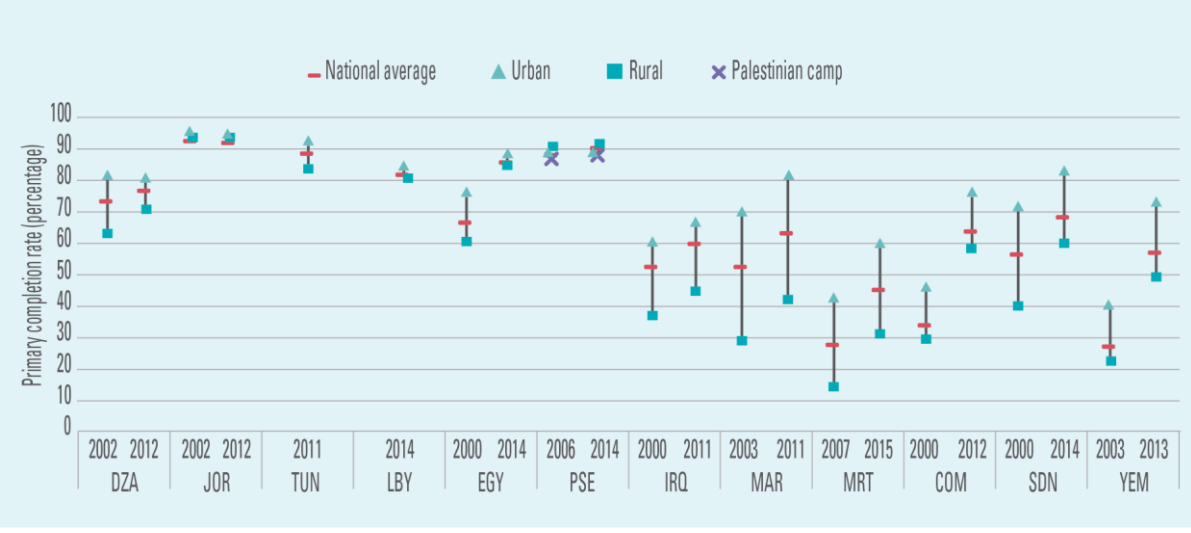
Disaggregation by socioeconomic characteristics helps identify groups of population excluded from primary education or who do not successfully complete it.

Figure 3.7 shows that the primary completion rate varied considerably among the countries considered. The State of Palestine and Jordan had the highest completion rates and all other countries achieved improvements over time. However, countries like Mauritania and Yemen had very low rates, even relative to the other LDCs. Remarkably, Iraq and Morocco had lower rates than the two other LDCs.

Disaggregation by type of area (rural-urban) indicates vast disparities in several countries (figure 3.8). The State of Palestine and Jordan had only marginal differences and Egypt managed to successfully close the gap, while Algeria and Tunisia had some minor gaps. All remaining countries had large disparities that were persistent over time. Thus, children in rural areas were still disadvantaged compared with their peers in urban areas. Furthermore, persistence of gaps indicates that efforts to include more children in rural areas need to be strengthened.

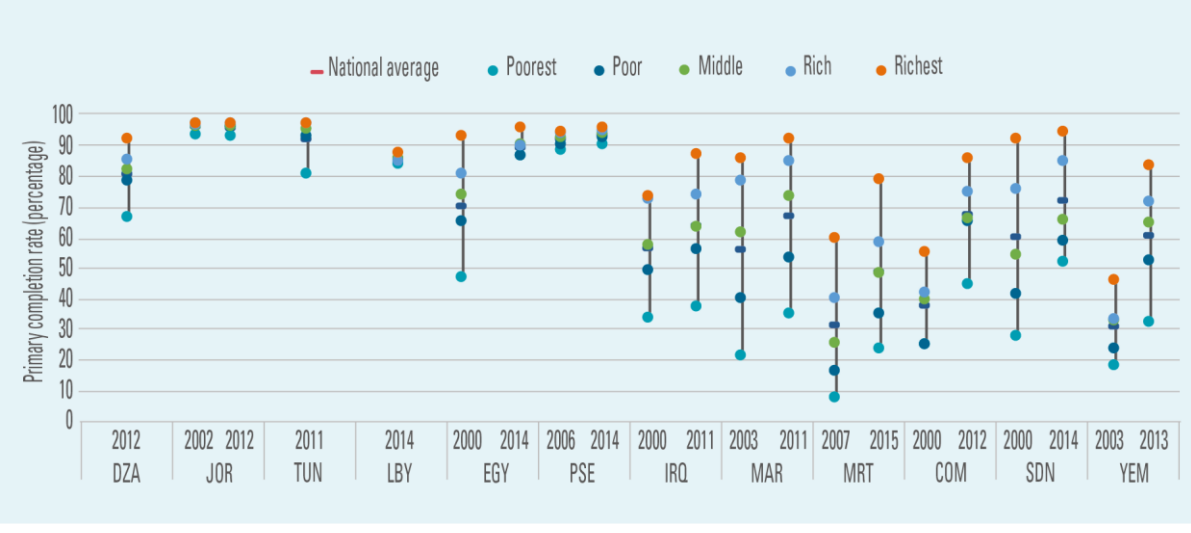
A similar picture is found for disparities by wealth quintile. Again, Jordan and the State of Palestine had the smallest gaps, while all other countries had very large disparities. Although the two quintiles are not directly comparable across time, figure 3.9 indicates that gaps were persistent and, in some cases, as in Iraq, even growing.

Figure 3.8 Primary completion rate by type of area (Urban-rural-refugee camp)



Source: Authors' calculations.

Figure 3.9 Primary completion rate by wealth quintile



Source: Authors' calculations.

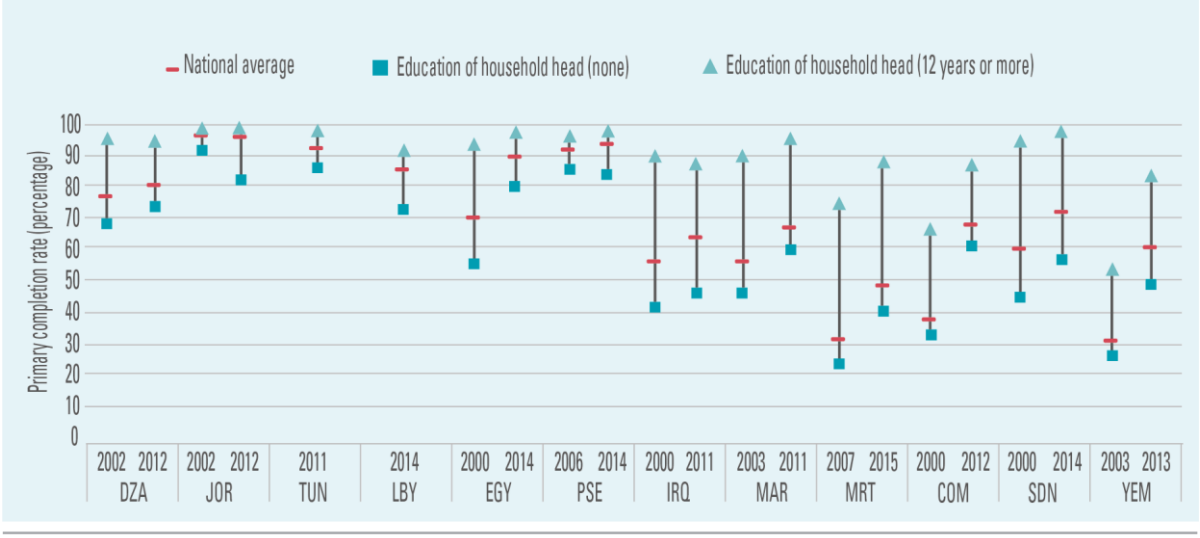
Disaggregation by education of household head shows large disparities. Notably, completion rate of children in households with uneducated heads decreased over time in Jordan and, to a lesser extent, in the State of Palestine, while it increased in the

remaining countries. However, even though gaps were decreasing, indicating more equity, figure 3.10 shows clearly that there were across all countries persistent gaps that need to be tackled.

Results across the two groups of extremes show that gaps were persistent for most of the countries considered (figure 3.11). Once again, gaps were wider at group of extremes 1, and in several cases, as in Yemen, Iraq and even Jordan, endline gaps were larger than baseline gaps. Although wealth and education of household head can be analysed separately, they are closely related; educated household heads tend to have better incomes to finance the education of their children, which may explain why gaps are wider for group of extremes 1. This suggests that more effort is needed to ensure inclusion of children born into households from the poorest quintile to uneducated parents.

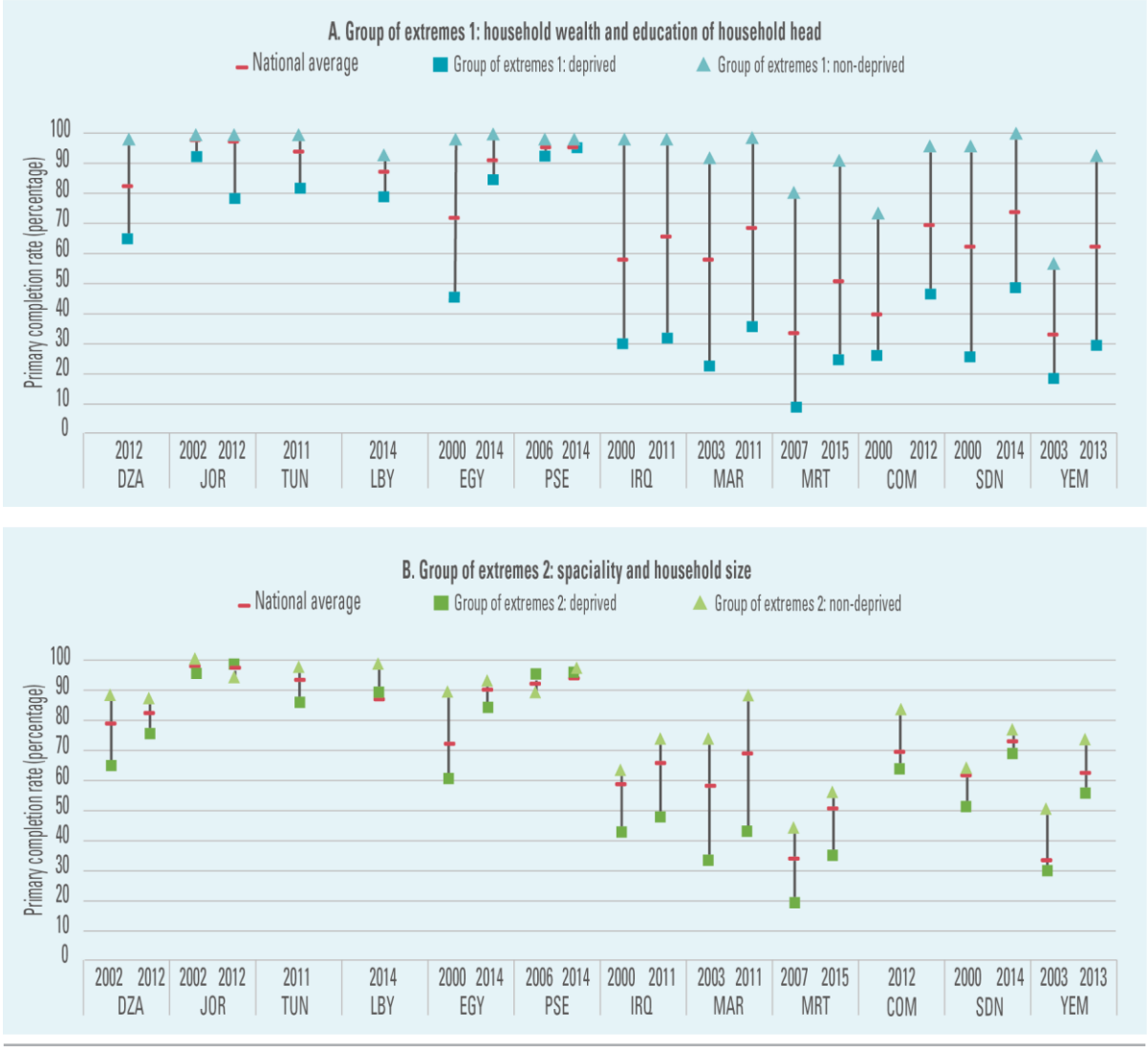
Figure 3.12 shows the average annual rate of change in the concentration index of the primary completion rate and the change in that primary completion rate itself. Most countries are clustered in the left corner of the figure, which translates into an increase in the rate and a decrease in inequality. Having had some increases in inequality, Jordan, the State of Palestine, and Morocco are exceptions.

Figure 3.10 Primary completion rate by education of household head



Source: Authors' calculations.

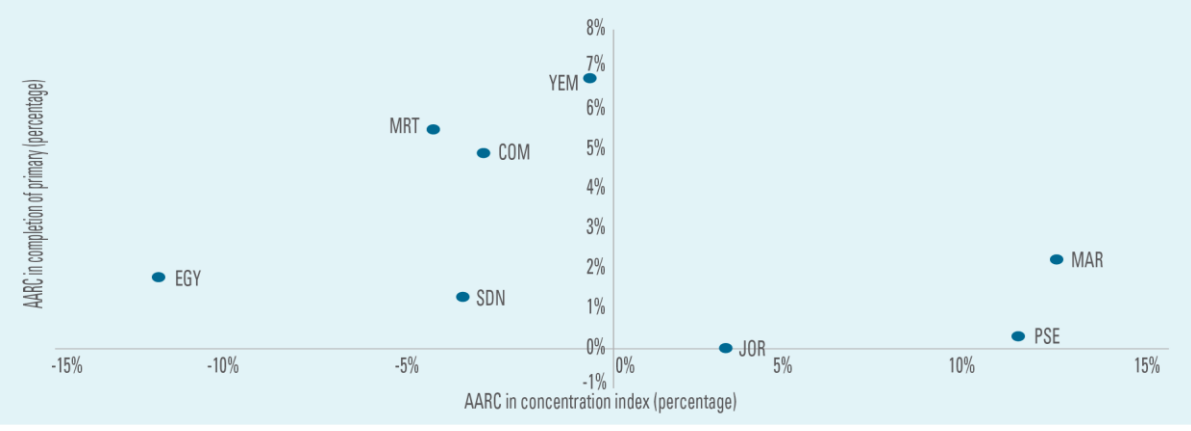
Figure 3.11 Primary completion rate by group of extremes



Source: Authors' calculations.

In conclusion, in primary attendance and completion rates for youth, there has generally been substantial progress and inequality reduction between socioeconomic groups. Nonetheless, progress in primary completion rates slackened considerably in comparison with attendance rates. Countries that have a high primary NAR do not necessarily have a high primary completion rate. Iraq is one such example. Furthermore, while progress in completion was generally accompanied with decreasing inequalities, present gaps between different socioeconomic groups are wider in comparison with attendance rates.

Figure 3.12 Average annual rate of change in concentration index of primary completion rate

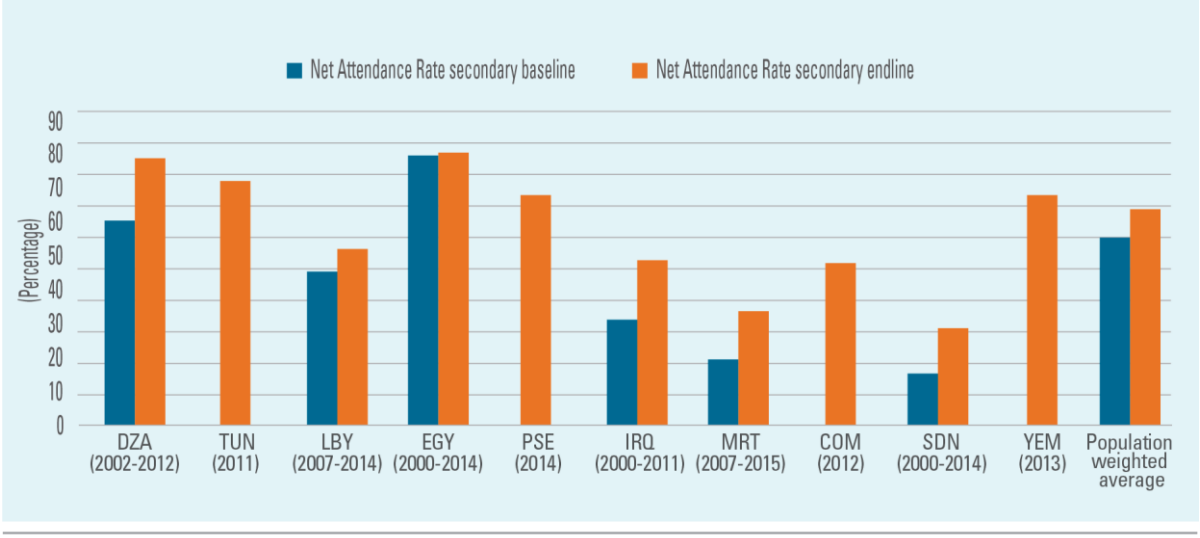


Source: Authors' calculations.

3. Secondary schooling – Secondary Net Attendance Rate (Adjusted)

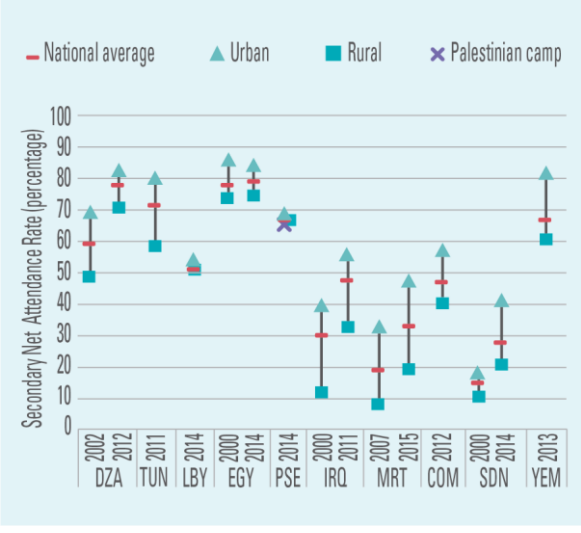
The secondary Net Attendance Rate (NAR) indicates, in per cent, how many students in secondary school age are enrolled in secondary or higher education. **Figure 3.13 shows large variations across the 10 countries considered.** Egypt had the highest rate; even at the baseline time point, its achievement was higher than that of most others. The Sudan and Mauritania achieved significant progress over time. However, their level was still very low in comparison. Across all countries, attendance rates were lower at secondary than at primary schooling.

Figure 3.13 Secondary Net Attendance Rate (Adjusted)



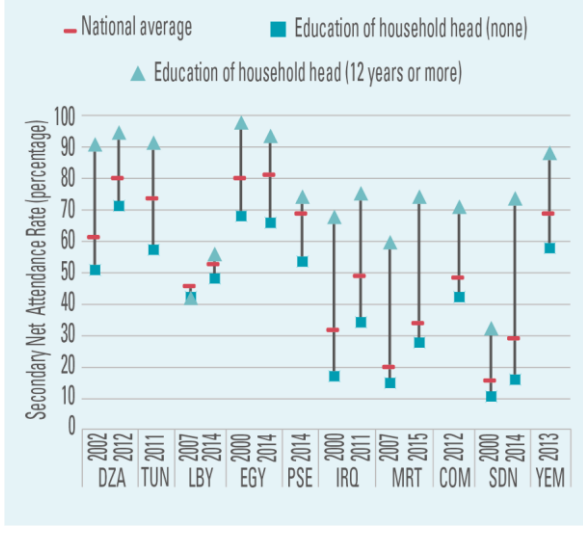
Source: Authors' calculations.
Note: The reported population weighted average includes only the countries with data across the 2 points in time.

Figure 3.14 Secondary Net Attendance Rate (Adjusted) by type of area (Urban-rural-refugee camp)



Source: Authors' calculations.

Figure 3.15 Secondary Net Attendance Rate (Adjusted) by education of household head

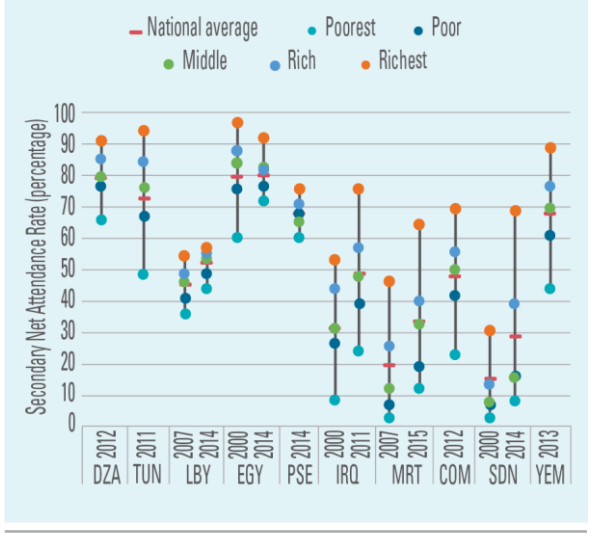


Source: Authors' calculations.

As in primary schooling, gaps between rural and urban areas were wide, and, in contrast with the case of primary schooling, this is the case for several of the non-LDCs, like Tunisia and Algeria. Thus, across the entire region, there was still a great need for improving access to secondary education, especially in rural areas. Also, remarkably, except for Egypt and the State of Palestine, large gaps persisted.

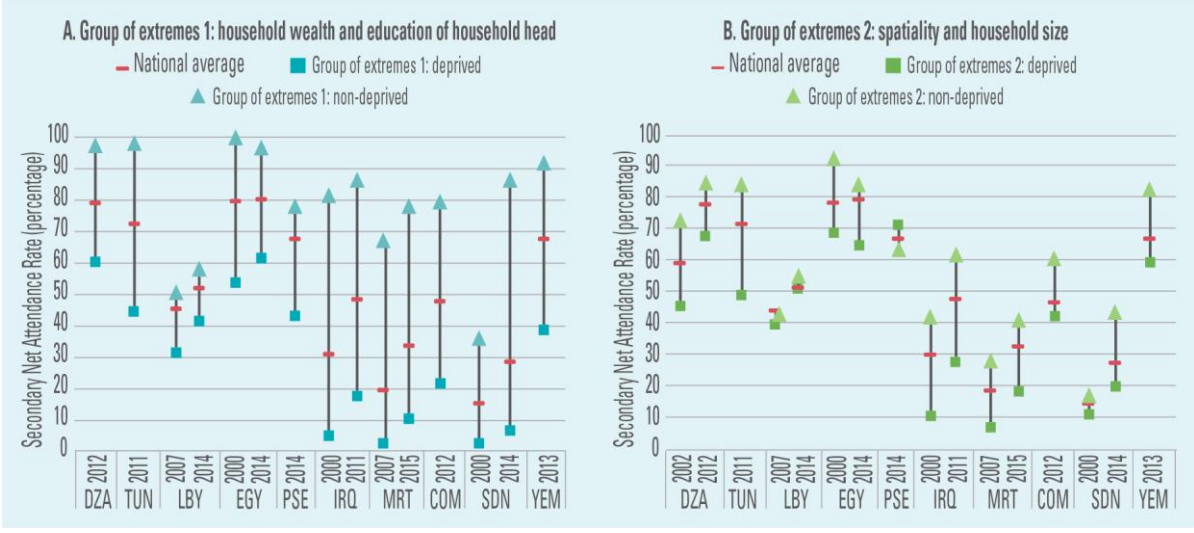
Large disparities are evident as well in relation to education of household head. Strikingly, these disparities worsened significantly in the Sudan. Although secondary NAR for children living in households with uneducated heads improved, figure 3.15 shows clearly that, at least in the LDCs, the more disadvantaged groups did not catch up as fast. This contrasts with the case of primary NAR and completion rates, where the decrease in inequality stemmed from improvements for the more disadvantaged groups.

Figure 3.16 Secondary Net Attendance Rate (Adjusted) by wealth quintile



Source: Authors' calculations.

Figure 3.17 Secondary Net Attendance Rate (Adjusted) by group of extremes



Source: Authors' calculations.

Disparities by wealth quintile have a similar pattern. In Egypt, inequality between the richest and the poorest quintiles decreased. In the Sudan, Iraq and Mauritania, the gaps between income brackets grew wider, with the secondary NAR improving significantly for the richest quintile. In Egypt, the case was quite the opposite: the poorest wealth quintile had significant improvement, while the rate slightly decreased for the richest, which is expected when a country approaches an attendance rate of 100 per cent.

Analysis by the two groups of extremes also reinforces the above findings. In most countries, particularly the LDCs, gaps persisted or widened, especially for group of extremes 1. In the Sudan, whatever progress was achieved, it disproportionately benefited the already better off.

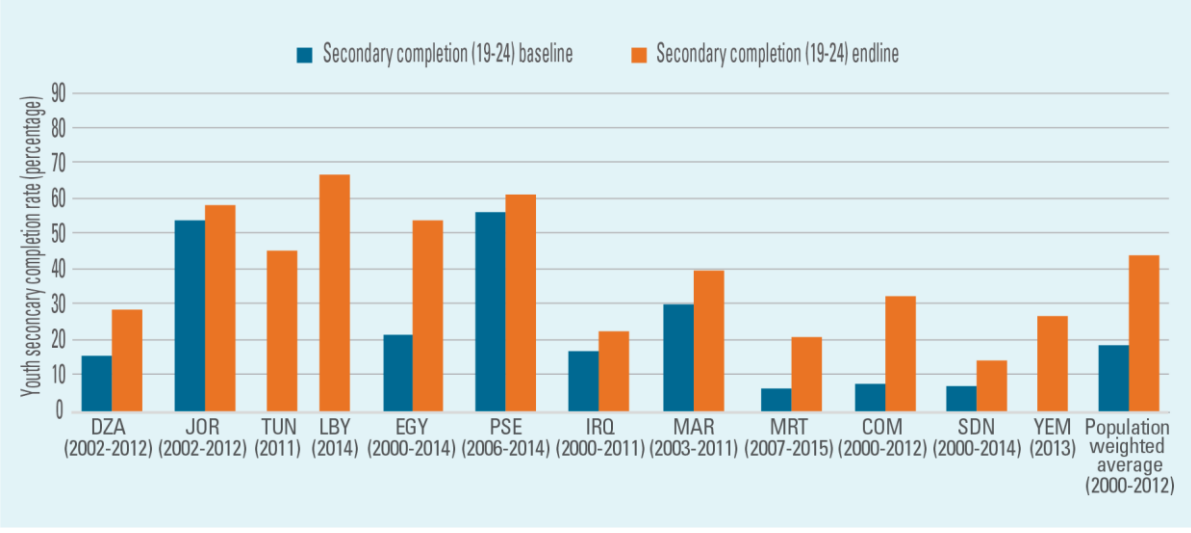
4. Secondary completion rate

Secondary completion rate is defined as the percentage of young people 3-5 years above the intended age for graduation from secondary school that have completed twelve years of schooling.[19]

As in the case of primary schooling, secondary completion rates are much lower than attendance rates.

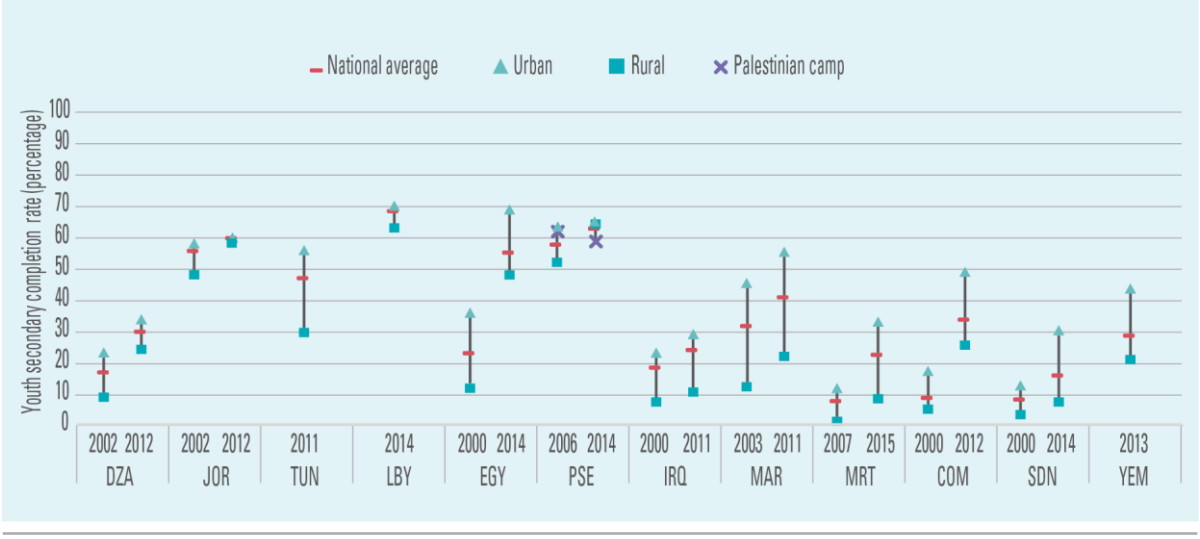
Figure 3.18 indicates very low achievement in secondary completion rates in most countries. Libya had a rather high rate. Egypt, Jordan, the State of Palestine, and Tunisia had a medium rate. However, the LDCs achieved significant progress.

Figure 3.18 Secondary completion rate



Source: Authors' calculations.
Note: The reported population weighted average includes only the countries with data across the 2 points in time.

Figure 3.19 Secondary completion rate by type of area (Urban-rural-refugee camp)



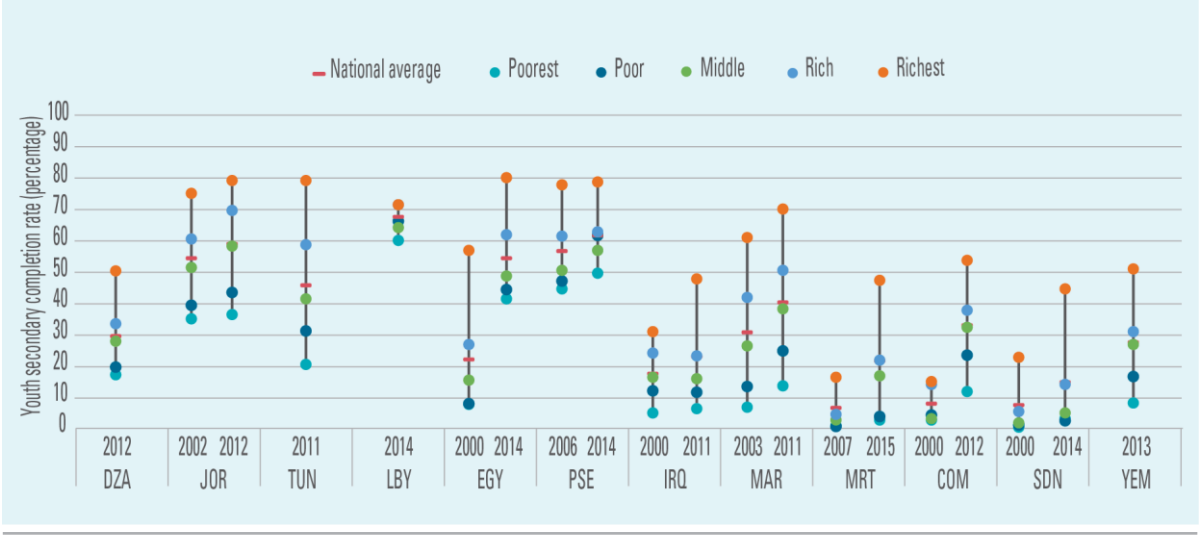
Source: Authors' calculations.

Disaggregation of completion rate by socioeconomic characteristics can help identify especially the disadvantaged. Figure 3.19 shows **that several countries achieved tremendous progress over time, but mainly in urban areas,** with rural areas still lagging.

Figure 3.20 shows large disparities across wealth quintiles in all countries, with the largest improvements being for the richest quintile. However, middle quintiles were also increasingly participating in secondary education in the LDCs. Most of the non-LDCs, however, had stark persistent disparities between quintiles.

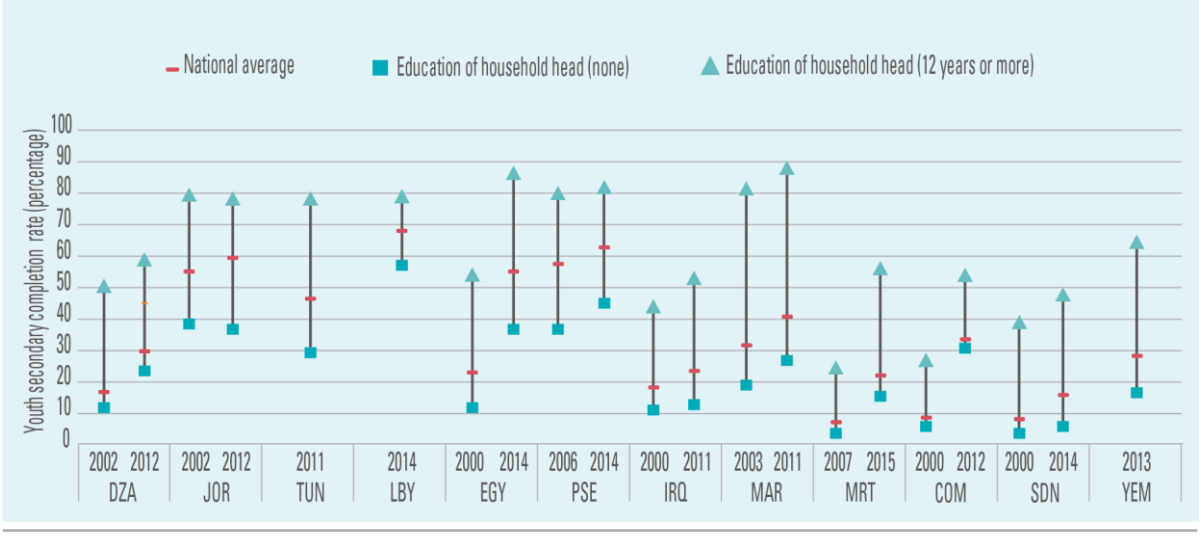
Figure 3.21 also shows large disparities by educational level of household head. **While several countries had some decline in inequality, gaps persisted, as households with educated heads achieved much more progress than their counterparts.**

Figure 3.20 Secondary completion rate by wealth quintile



Source: Authors' calculations.

Figure 3.21 Secondary completion rate by education of household head

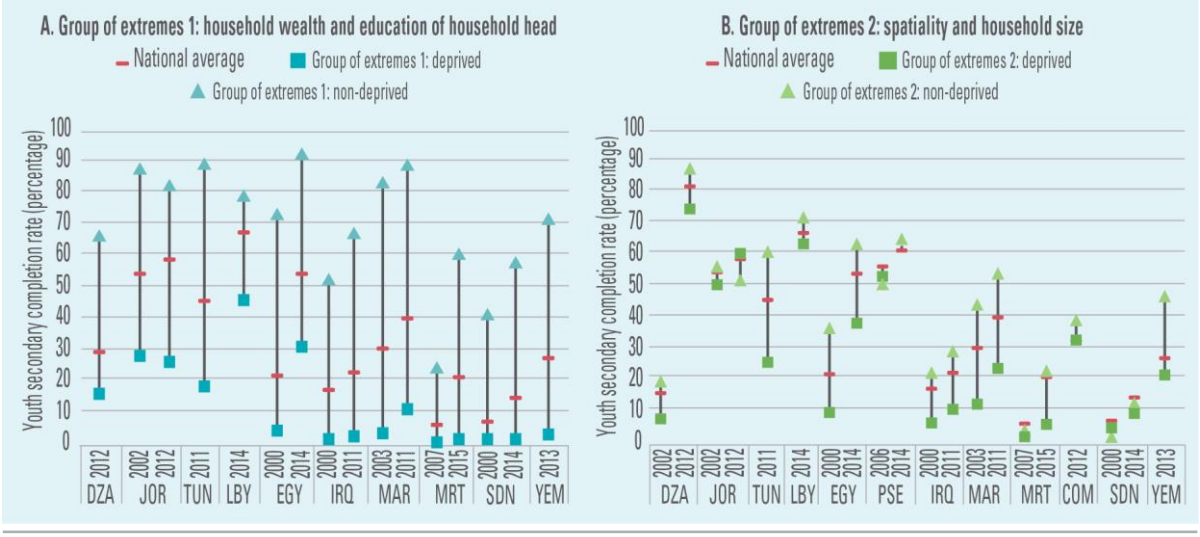


Source: Authors' calculations.

As is evident from figure 3.22, gaps between the two groups of extremes persisted and had widened, particularly in the LDCs. Jordan, the State of Palestine and Libya had very minor gaps between groups of extremes 2, but, nonetheless, had substantial gaps between groups of extremes 1.

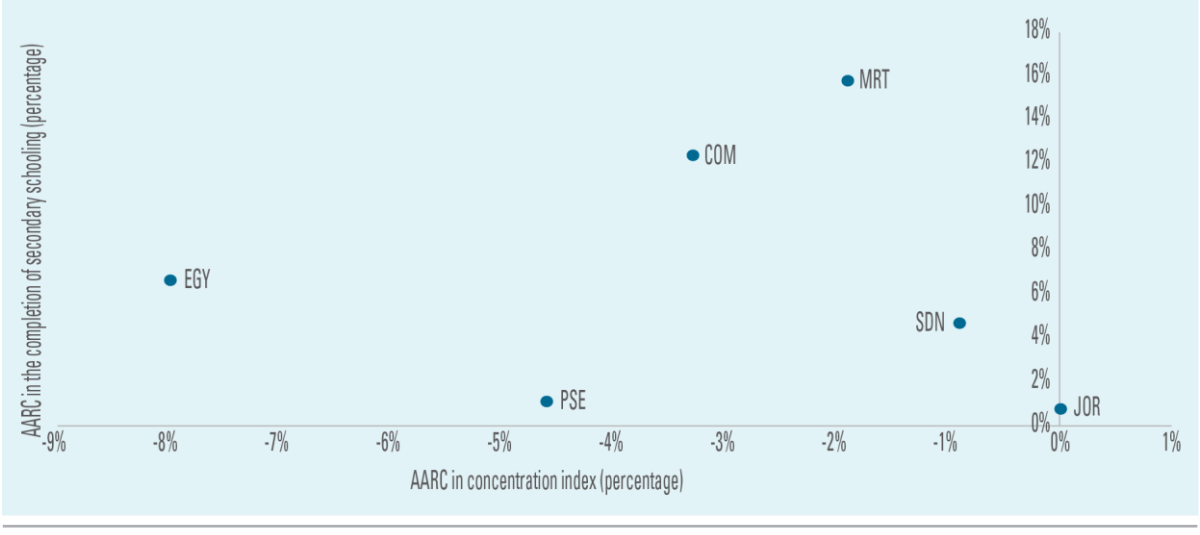
As regards average annual changes in the concentration index of the rate and the changes in the rate itself, figure 3.23 indicates that most of the countries examined had less inequality and a growing participation of youth at the secondary level.

Figure 3.22 Secondary completion rate by group of extremes



Source: Authors' calculations.

Figure 3.23 Average annual rate of change in concentration index of secondary completion rate



Source: Authors' calculations.

In conclusion, attendance and completion rates are lower at secondary schooling than at primary schooling. Several countries had a very low secondary NAR and a very low secondary completion rate. Notwithstanding significant progress in narrowing inequality gaps, these persisted and were still staggering. Hence, more effort is needed to include adequately the more disadvantaged and decrease inequalities.

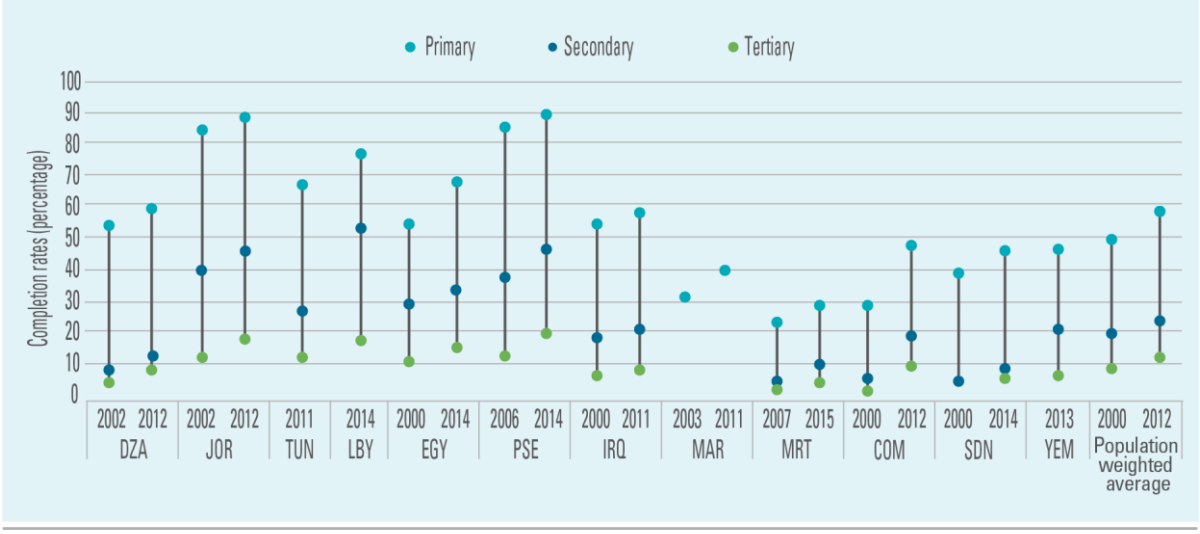
C. Inequality in educational attainment and completion rates for population aged 25 and above

1. Completion rates: primary, secondary and tertiary Levels

Countries differ in definitions of primary, secondary, and tertiary education, as well as in durations of the three cycles. Hence, completion of 6, 12, and 15 years of schooling are taken as proxies. Rates are defined as the percentage of population above the cycle-specific completion age who have completed the respective years of schooling. Figure 3.24 presents completion rates for the three levels at country level.

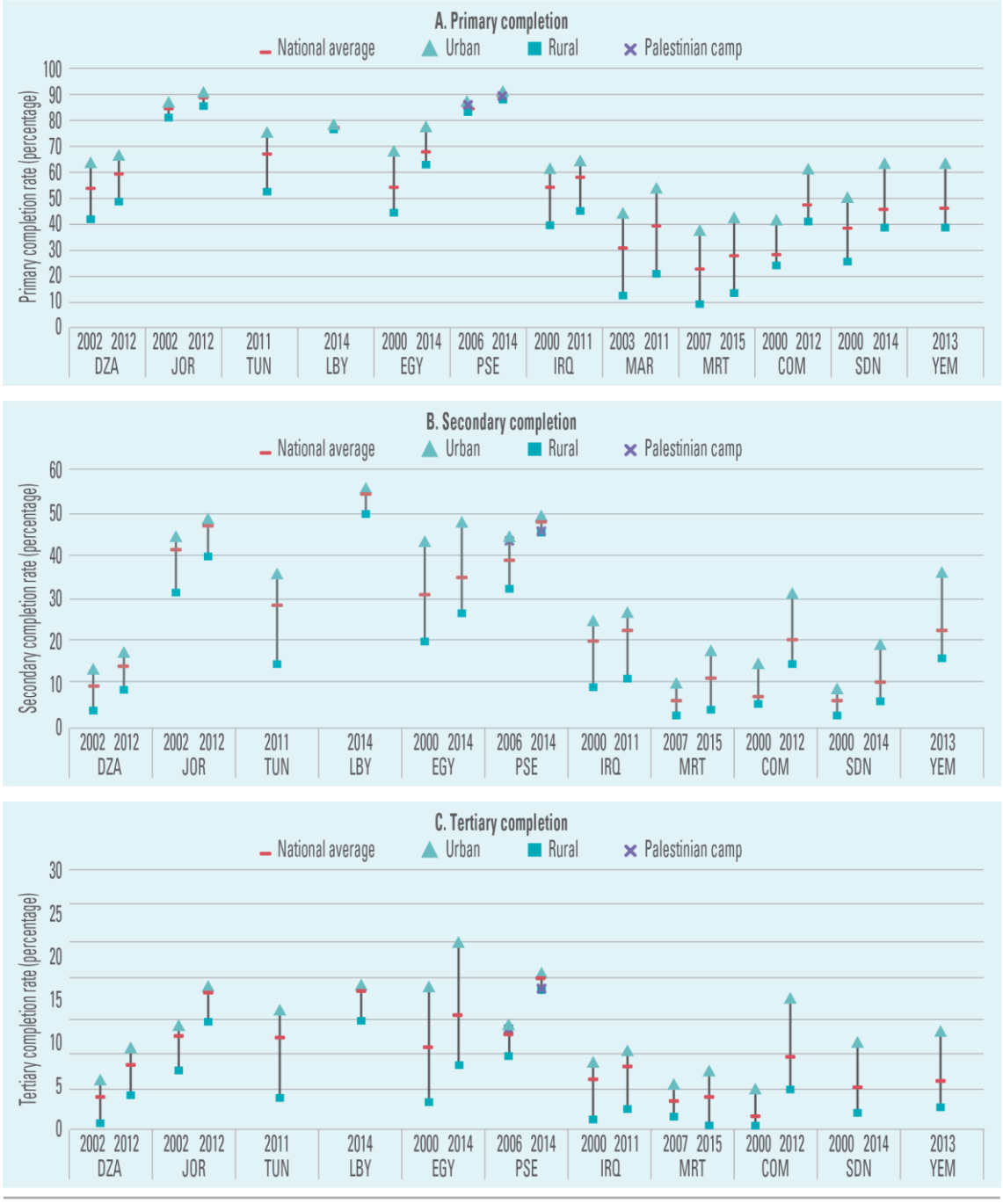
Nearly all countries had a substantial increase in primary completion rates, with the State of Palestine, Jordan and Libya closest to attaining universal primary education (UPE), which has been a prominent target in several international declarations, including the Millennium Development Goals (MDGs). However, progress was slow in Morocco, with the rate standing at only 40 per cent in 2011. Notwithstanding appreciable progress in the LDCs, rates continued to be modest, falling below 50 per cent and even below 30 per cent in Mauritania. This slow improvement for Mauritania may have been partially affected by administrative barriers associated with the biometric civil registration initiated in 2011 preventing many students from taking the national examination for lack of required official documents (Human Rights Watch, 2018).

Figure 3.24 Completion rates



Source: Authors' calculations.
Notes: For Libya, Tunisia and Yemen, the baseline surveys do not contain adequate information that allows the construction of education indicators. In the case of Morocco in 2011, the data did not allow the construction of secondary and tertiary completion rates. For these indicators, the figures in the earliest year (2003) are not reported; they are: 13.58 and 3.54, respectively. The reported population weighted average includes only the countries with data across the 2 points in time.

Figure 3.25 Completion rates by type of area (Urban-rural-refugee camp)



Source: Authors' calculations.

Completion rates were significantly lower at educational levels other than the primary, even for the State of Palestine and Jordan. Current secondary completion rates were quite heterogeneous across countries, ranging from as low as 9 per cent in the Sudan to 47 per cent in the State of Palestine and Jordan and 54 per cent in Libya. The tertiary level underwent minor developments; yet, the outlook remains the least favourable, with completion rates not even surpassing 20 per cent in any country. Among the LDCs, Comoros made exceptional progress, but the rates were still low. The low tertiary completion rates in the Arab region may also reflect inadequate educational quality that may have prompted a brain drain as students sought higher education abroad.

Trends in completion rates across countries were on par with the regional averages. Both most progress and highest current rates were at the primary level, with drastically reduced rates at the others.

As depicted in figure 3.25, trends in spatial inequality were quite diverse across countries at the primary level. The State of Palestine, Libya and Jordan attained near parity among areas. In all other countries, urban areas tended to have more favourable completion rates. However, in several countries, such as Egypt, Algeria and Iraq, inequality decreased. The LDCs, as well as Morocco, achieved considerable increases in completion rates in both urban and rural areas, but the gap was still substantial.

With the exception of the State of Palestine and Jordan, nearly all countries experienced a steady or even increasing urban-rural gap at the secondary level. The urban advantage was amplified, especially in the LDCs, where, currently, 17-35 per cent of urban residents complete secondary education, compared with only 3-15 per cent of rural counterparts. **At the tertiary level, the gaps widened slightly, to the advantage of urban settlers.**

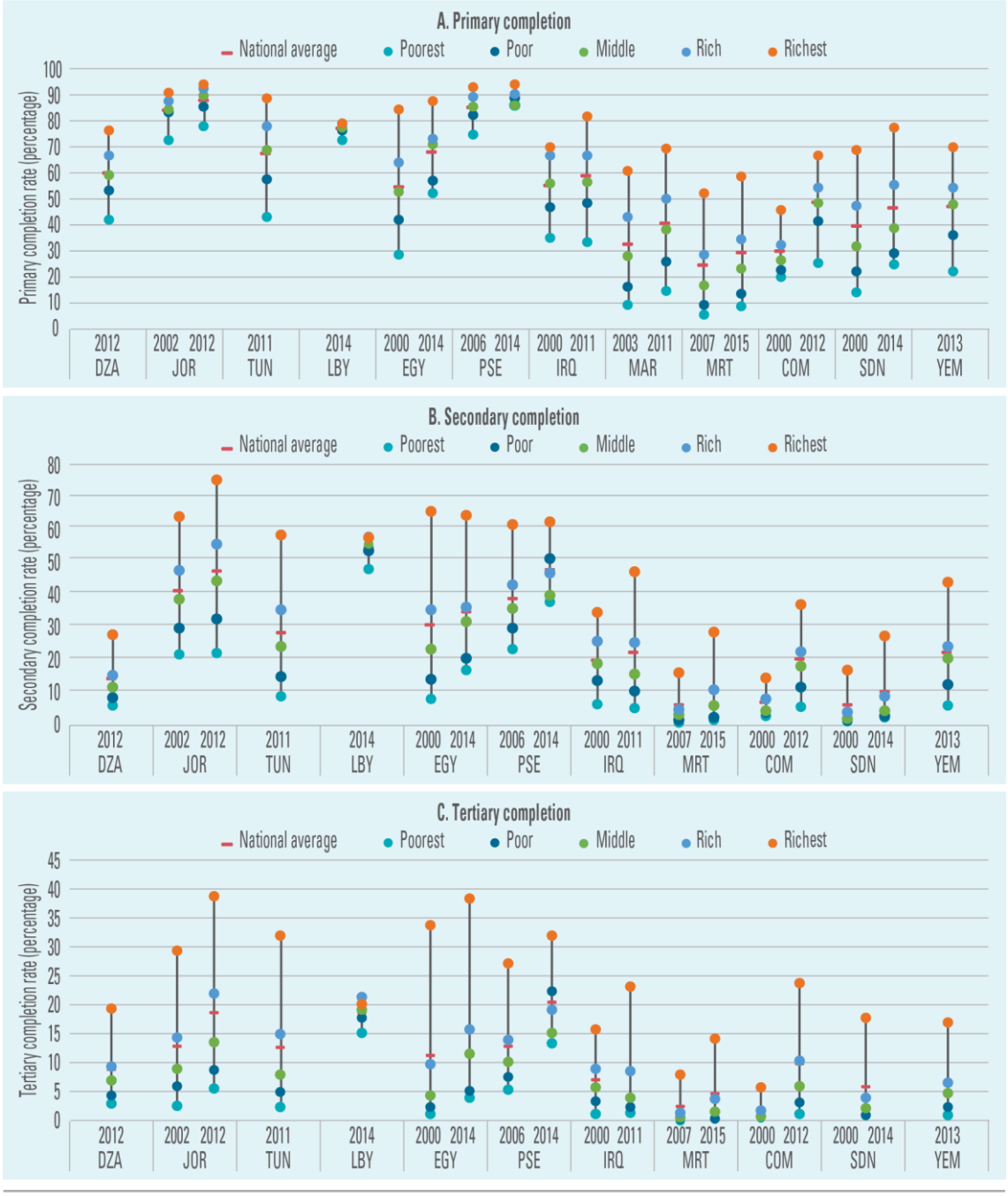
Figure 3.26 presents completion rates disaggregated by wealth quintiles. **Primary rates increased across all wealth quintiles in nearly all countries,** due to several programs, including compulsory primary education, that targeted the disadvantaged to ensure attainment of UPE. The richest-to-poorest gap narrowed in the State of Palestine, Jordan and Egypt, but in the remaining countries, inequality remained generally steady, such as in the Sudan, Morocco and Mauritania, or increased, such as in Comoros and Iraq.

At the secondary level, inequality by wealth grew in several countries, including Iraq, Comoros and the Sudan, where most gains went to the richest quintile. Inequality in tertiary completion rates was even more acute, where gaps widened considerably in all countries, other than the State of Palestine. Notably, at both secondary and tertiary levels, the middle quintile seems to have had rates below the national average. Overall, results indicate that wealth may impact educational achievement at both secondary and tertiary levels.

Figure 3.27 presents completion rates disaggregated by education of household head. **Improvements in inequality were quite absent at the three educational levels and across most countries. In several countries with data for two points in time,** inequality reductions could be seen in primary completion rates, most notably Comoros. Nevertheless, most countries experienced widened inequality, especially at the secondary and tertiary levels. For instance, only around 20 per cent of members of households with an uneducated head completed secondary education in the State of Palestine and Jordan, compared with 80 per cent for those in households with an educated head. For most other countries, the rates for the former are below 10 per cent.

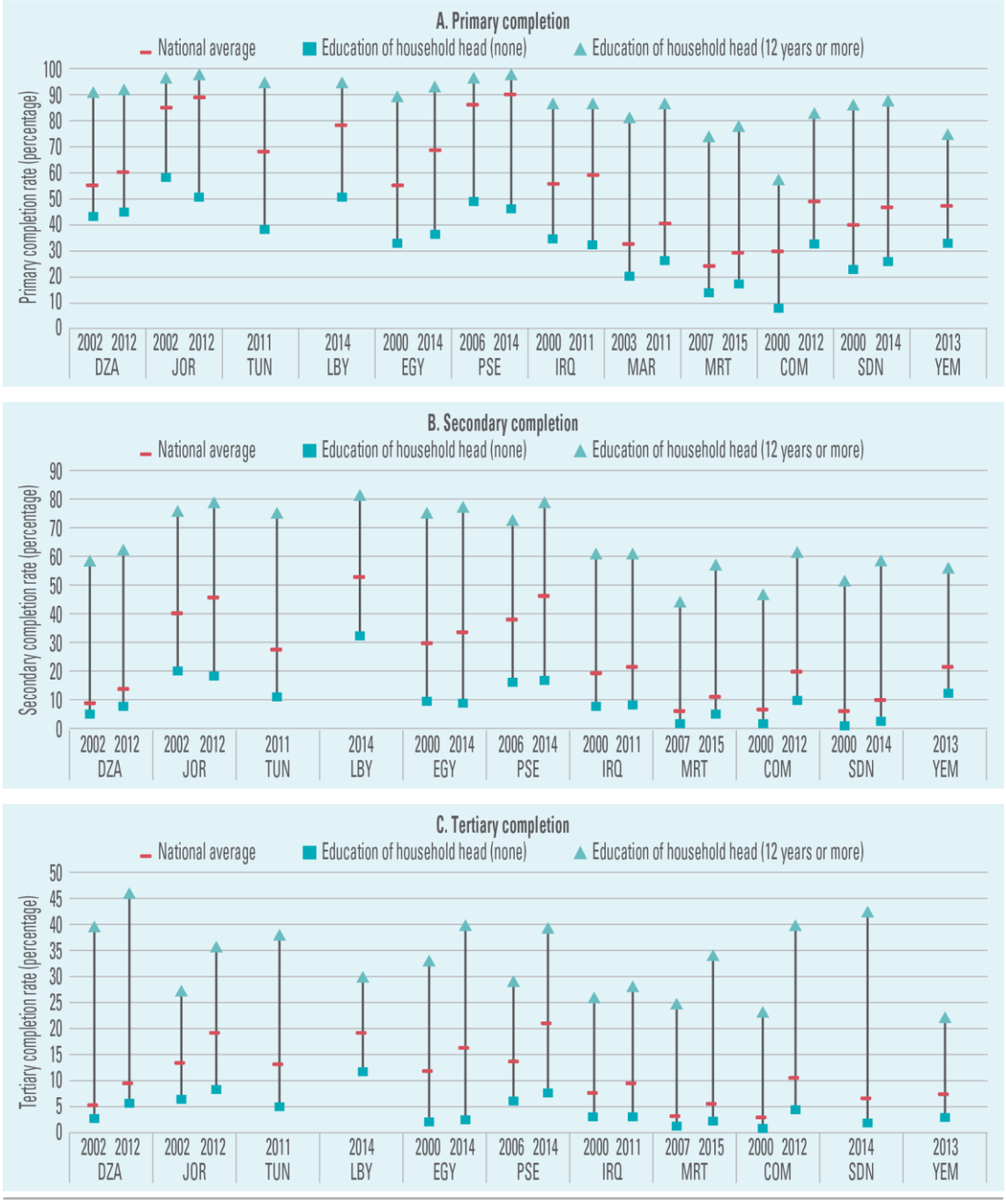
Completion rates were also low at the tertiary education level; less than 12 per cent of for members of households with uneducated heads in all countries.

Figure 3.26 Completion rates by wealth quintile



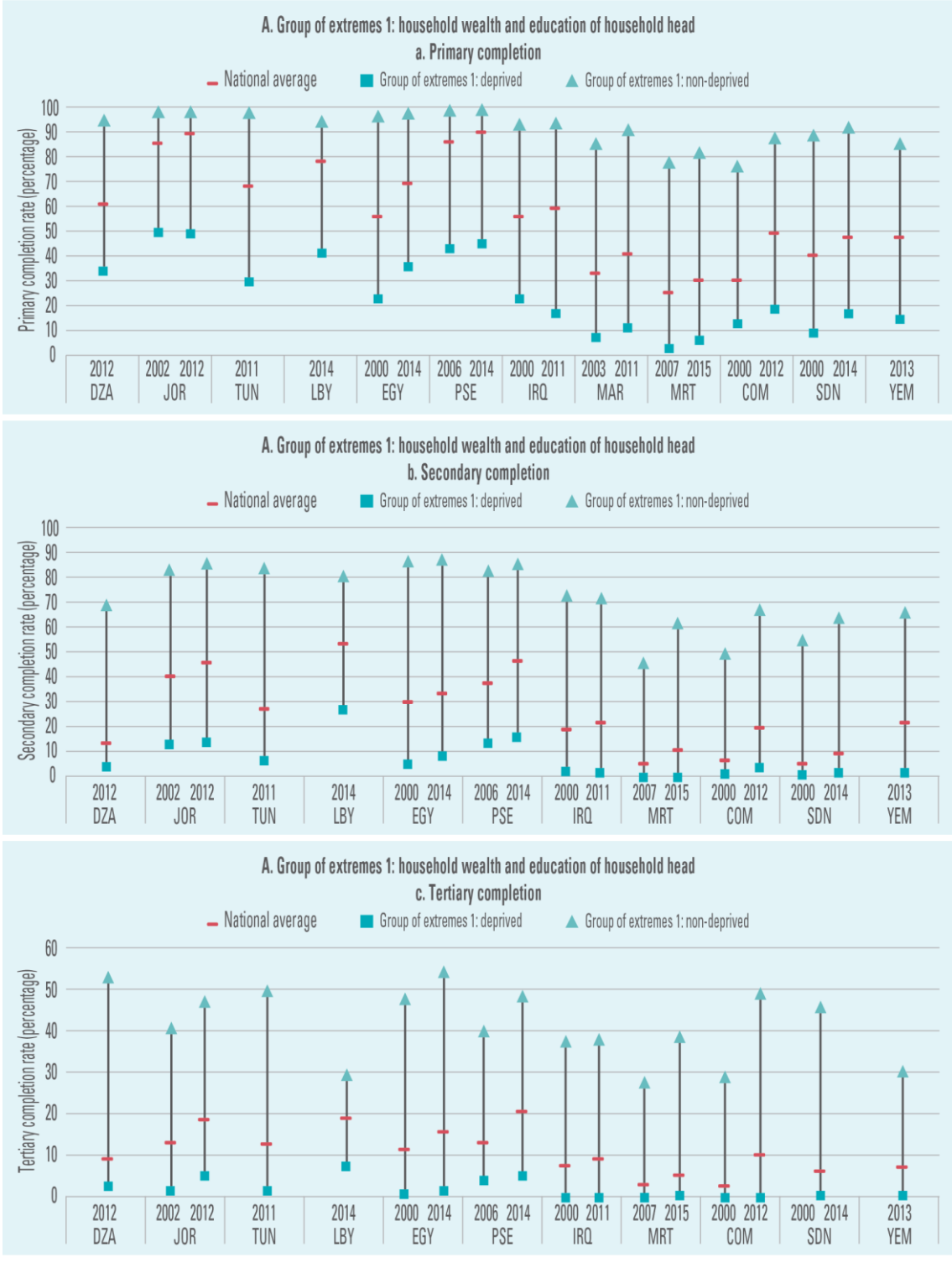
Source: Authors' calculations.

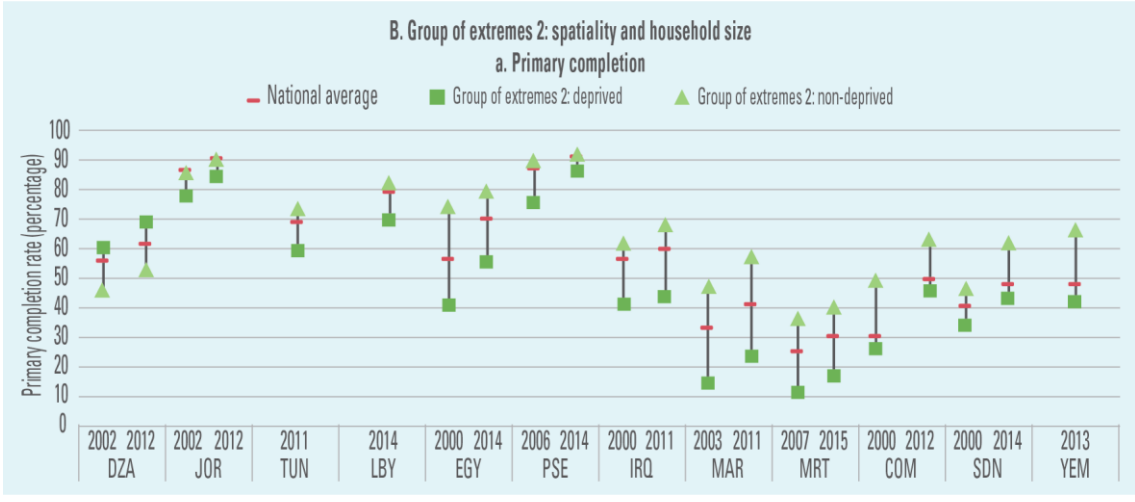
Figure 3.27 Completion rates by education of household head

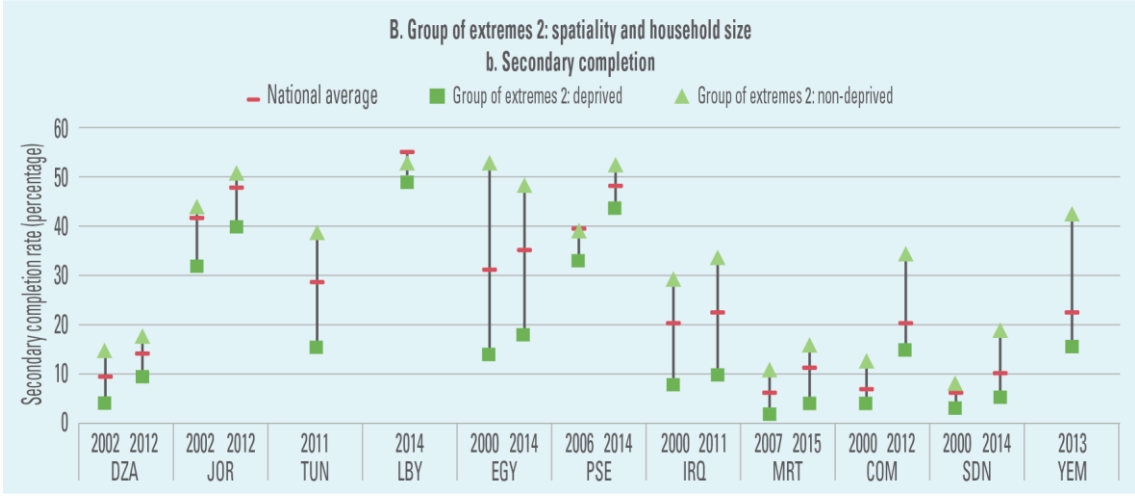


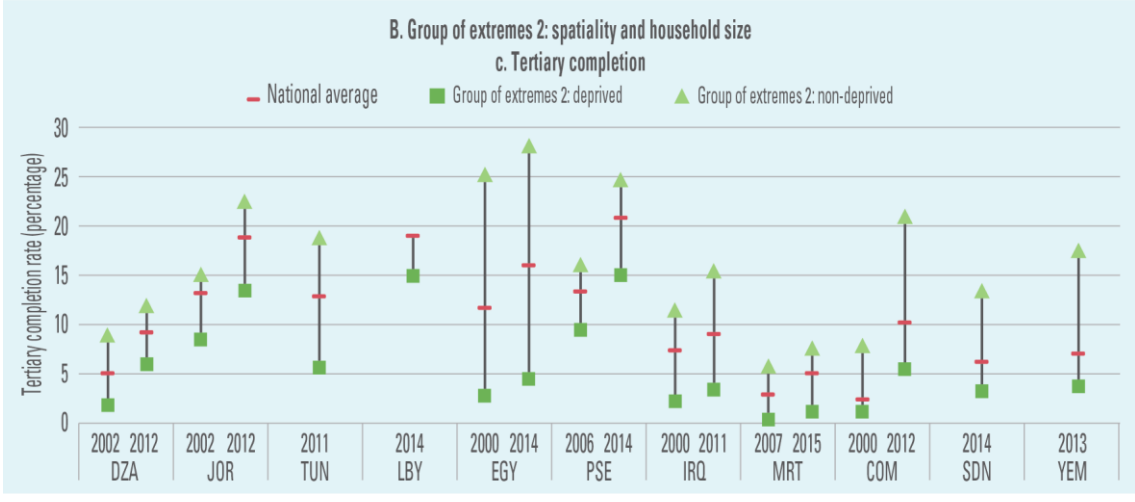
Source: Authors' calculations.

Figure 3.28 Completion rates by group of extremes









Source: Authors' calculations.

Figure 3.28 presents completion rates for the two groups of extremes. Inequality gaps for group of extremes 1 were generally steady at the primary level, notwithstanding some improvements in the rates for the most deprived groups. Improvements for deprived groups were reduced at the secondary and tertiary levels, with inequality gaps widening in several countries, especially the LDCs. The picture is similar for group of extremes 2. However, at all three levels, completion rates for the marginalised were lower and the inequality gaps were much wider for group of extremes 1 than for group of extremes 2.

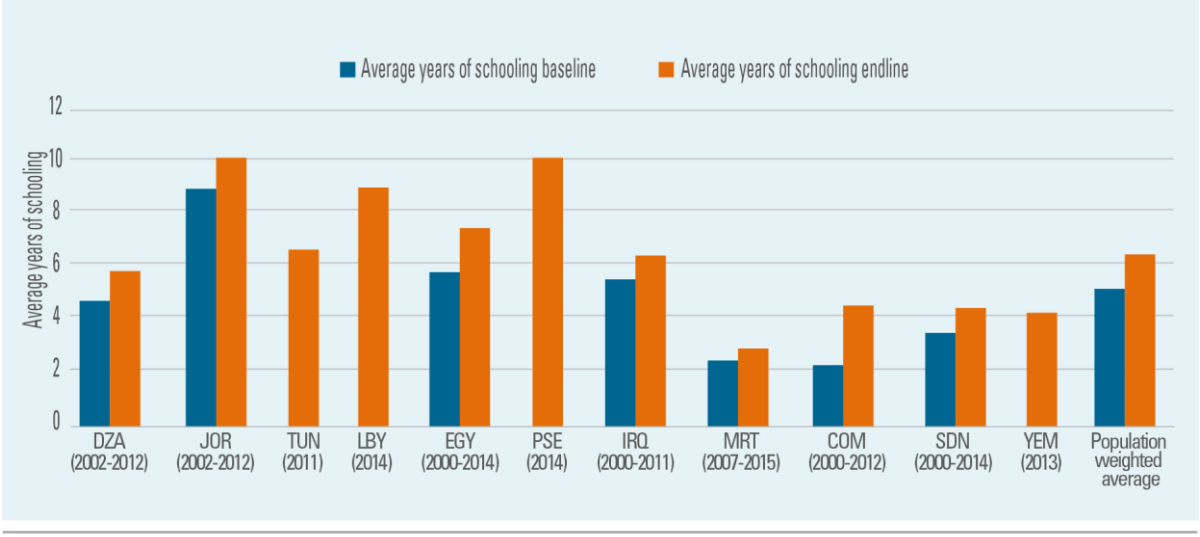
2. Average years of schooling

Endeavour by Arab countries to increase average years of schooling is a step in the right direction. Yet, the regional average of nearly 7 years is still inadequate to secure a prosperous equitable future for the young, especially relative to their peers in developed countries.

This section assesses levels and trends of average years of schooling for selected countries, using the two years nearest to 2000 and 2015 for which data[20] are available. Figure 3.29 presents average years of schooling for countries, based on the highest year achieved as reported by persons aged 25 and above in household surveys.

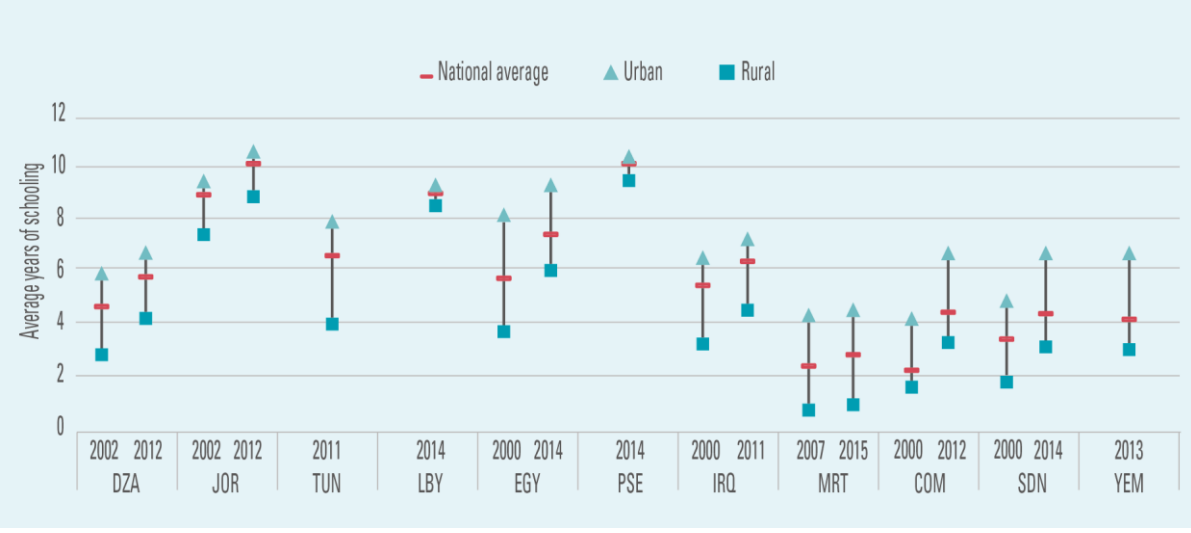
The upward trend in average years of schooling is uniform across all countries. Yet, disparities across countries reflect varied levels of educational attainment, since levels and trends of completion rates discussed previously are ultimately translated to national average years of schooling. The State of Palestine and Jordan fared best, with an average exceeding ten years. Libya and Egypt closely follow these latter. In contrast, progress in Iraq and Algeria seems sluggish. The LDCs achieved appreciable progress. Yet, they still fared worst, with, on average, just four years of schooling, and even less than 3 in Mauritania.

Figure 3.29 Average years of schooling (Age 25 and above)



Source: Authors' calculations.
Note that this average is the population weighted average for the countries with 2 time points in our sample.

Figure 3.30 Average years of schooling by type of area (Urban-rural-refugee camp)



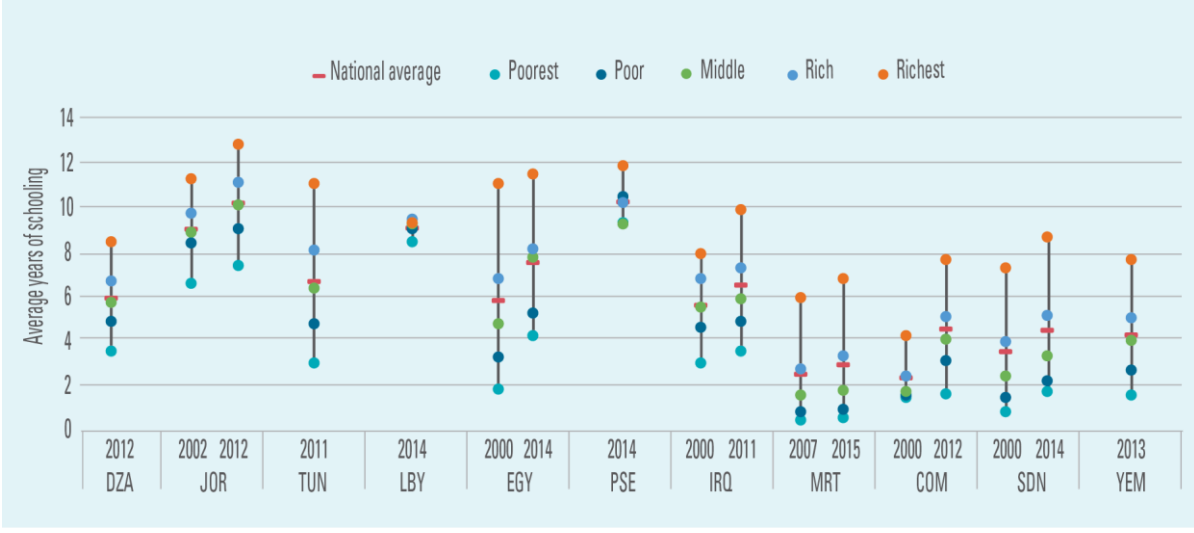
Source: Authors' calculations.

The trend in Arab countries follows the global upswing. ISSC, IDS and UNESCO's World Social Science Report (2016) stresses that, for a given level of average years of schooling, equitable access would have positive repercussions on economic growth. Hence, figures 3.30-3.33 assess the educational attainment of different subgroups in an endeavour to discern who benefited from the progress achieved.

Figure 3.30 examines spatial inequality in educational attainment, measured by average years of schooling. **Inequality remains substantial, especially for the LDCs.** Notably, in countries with a relatively high national average, such as the State of Palestine, Libya and Jordan, inequality was less pronounced. Over the period considered, Egypt achieved a marked improvement, especially for the rural population, having tailored several measures, such as in its National Strategic Plan for Pre-University Education Reform (2007/08 – 2011/12), to include decentralisation and establishment of community schools to alleviate inequality in remote areas. The LDCs had improvements for both areas, which led to a slight reduction in urban-to-rural ratio, which still stood at nearly 2 on average and exceeded 3 in Mauritania.

As seen in figure 3.31, inequality by wealth quintiles was more pronounced. In the State of Palestine, and to a lesser extent in Jordan, inequality was moderate, with the poorest and the poor accessing the equivalent of secondary schooling. In most remaining countries, people in the bottom quintiles barely access the equivalent of a primary education. This is evident especially in the LDCs, where poorest children had less than two years of schooling, and even less than one in Mauritania, where financial constraints on the vulnerable lead many to attend free-access non-formal religious institutions.

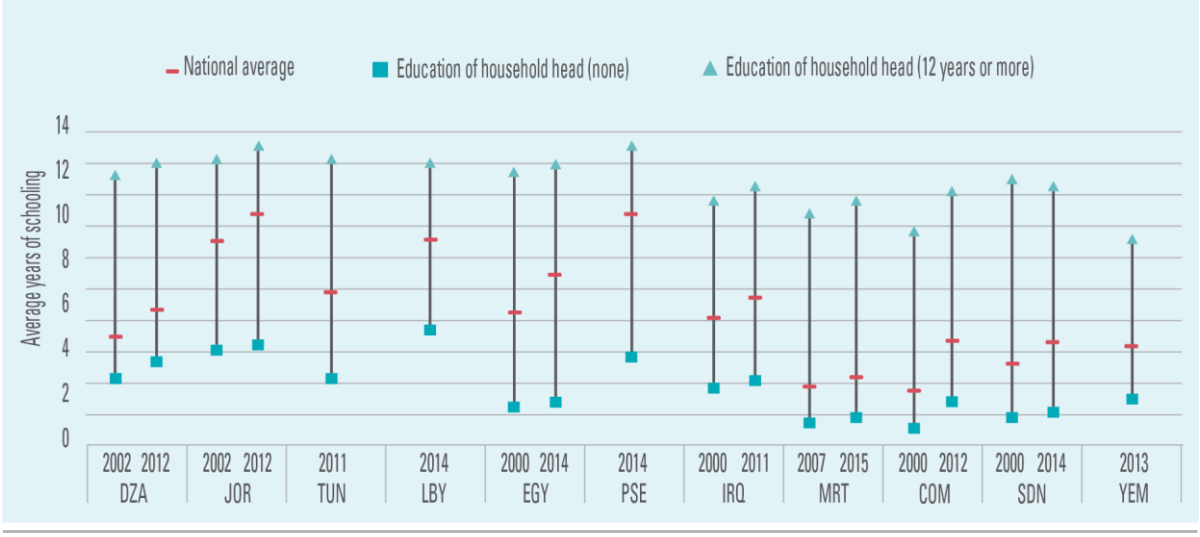
Figure 3.31 Average years of schooling by wealth quintile



Source: Authors' calculations.

Overall, across most countries, particularly the LDCs, wealth inequalities were still very wide. In terms of temporal trend, some countries, such as Egypt and the Sudan, had some significant reductions in the richest-to-poorest ratio, while in other countries, such as Iraq and Comoros, most progress was achieved by the top quintiles, which widened inequality by wealth. It is interesting to also note that in some middle-income countries and the LDCs, average years of education attained by the middle quintiles falls below the national average, which suggests that wealth may impact educational achievement.

Figure 3.32 Average years of schooling by education of household head



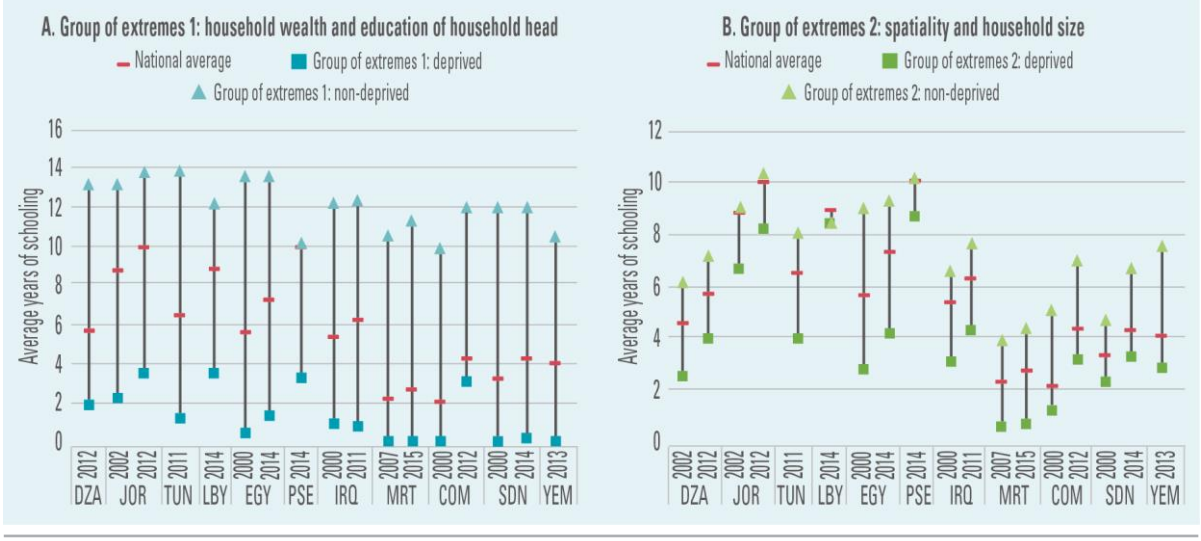
Source: Authors' calculations.

Inequality in average years of schooling by educational attainment of household head is also wide and persistent. Figure 3.32 shows only minor, if any, reductions in gaps in most of the non-LDCs. Even in countries that have high average years of schooling, such as the State of Palestine and Jordan, the ratio was approximately 3, with adults belonging to households with uneducated heads accessing around 4 years of schooling, compared with more than 12 for their counterparts in households with educated heads.

The LDCs, particularly Comoros, achieved some improvement for persons belonging to households with uneducated heads, but still had the highest ratios, which even exceeded 7 in the Sudan and Mauritania. All countries had comparable patterns with persons belonging to households with uneducated heads having average years of schooling equivalent to less than primary, compared with upper secondary for their counterparts in households with educated heads.

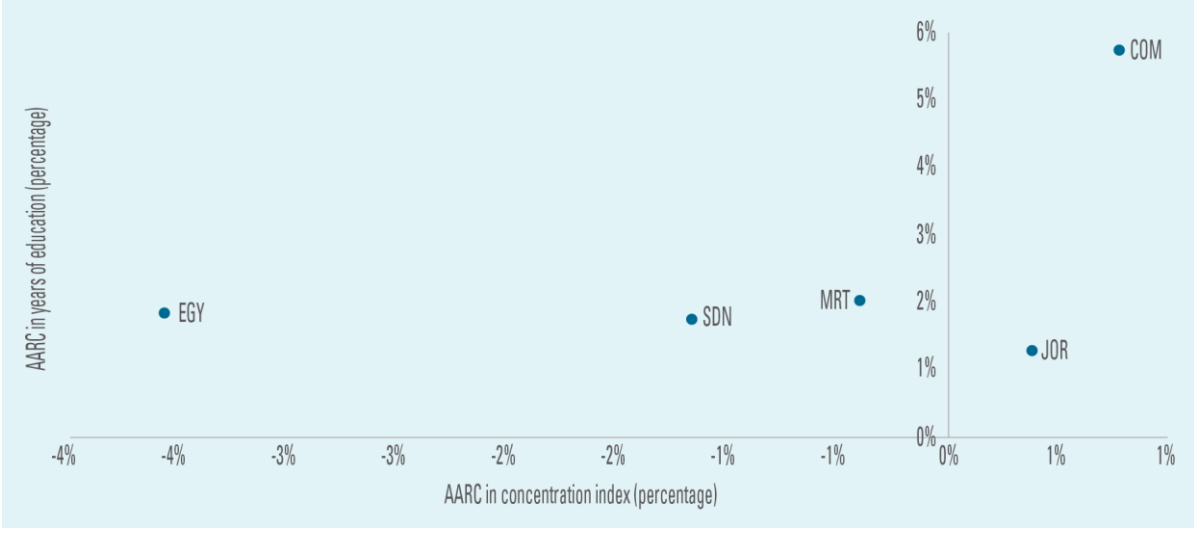
Patterns for the two groups of extremes are similar to those observed for completion rates. Despite increases in average years of schooling for deprived groups, gaps largely persisted in most countries, especially for group of extremes 1. Cross comparison of the two groups of extremes using Egypt in 2014 as an example of targeting rural areas well indicates that the deprived belonging to group of extremes 2 had around 4.5 years of schooling, while those belonging to group of extremes 1 only accessed 1.8 years. Generally, the wider gaps, as well as lower schooling levels, were for group of extremes 1, which suggests more needs to be done to ensure access for marginalised children, especially those born into households with uneducated heads in the poorest households.

Figure 3.33 Average years of schooling by group of extremes



Source: Authors' calculations.

Figure 3.34 Average annual change in concentration index and years of schooling



Source: Authors' calculations.

Figure 3.34, which depicts average annual change in the concentration index and the years of schooling, shows that the countries examined experienced a positive change in years of schooling, but the change in the concentration index indicates that inequality increased in Comoros and Jordan, while decreasing in Egypt and slightly decreasing in Mauritania and the Sudan.

D. Determinants of probability of deprivation in school attendance

This section assesses determinants of deprivation in education in relation to household socioeconomic characteristics. Using a logistic regression to analyse likelihood of deprivation, the aim is to discern the key determinants of probability of being deprived in education and how their magnitude/importance changed overtime. The education indicator used as a dependent variable is school attendance, as defined in the Arab Multidimensional Poverty Index (MPI) at household level, i.e., a household is considered deprived if it has any school-age child not attending school. Assessing the probability of being deprived for a specific socioeconomic group, compared with other groups, and the changes over time provides insight into the drivers of inequality in a multivariate model. The methodology is described in detail in the technical annex, along with the results of the logistic regression.[21]

Table 3.1 presents probability of being deprived in school attendance for eleven countries; for 8 of which the analysis is for two time points. The highest probability for each country and time point is highlighted in red. The findings are as follows:

1. Large households (at least 9 members) and those whose head is young (17-24 years of age) face the highest probability of deprivation in almost all countries, and this holds across the two time points.
2. Being in the poorest wealth quintile increases probability of deprivation significantly, especially in the LDCs. For household wealth, household size and education of household head, the results confirm the expected gradient: probability of deprivation in school attendance declines significantly when comparing the poorest with the richest households, larger with smaller households, and those whose head has no education or just primary education with those whose head has secondary or higher education.

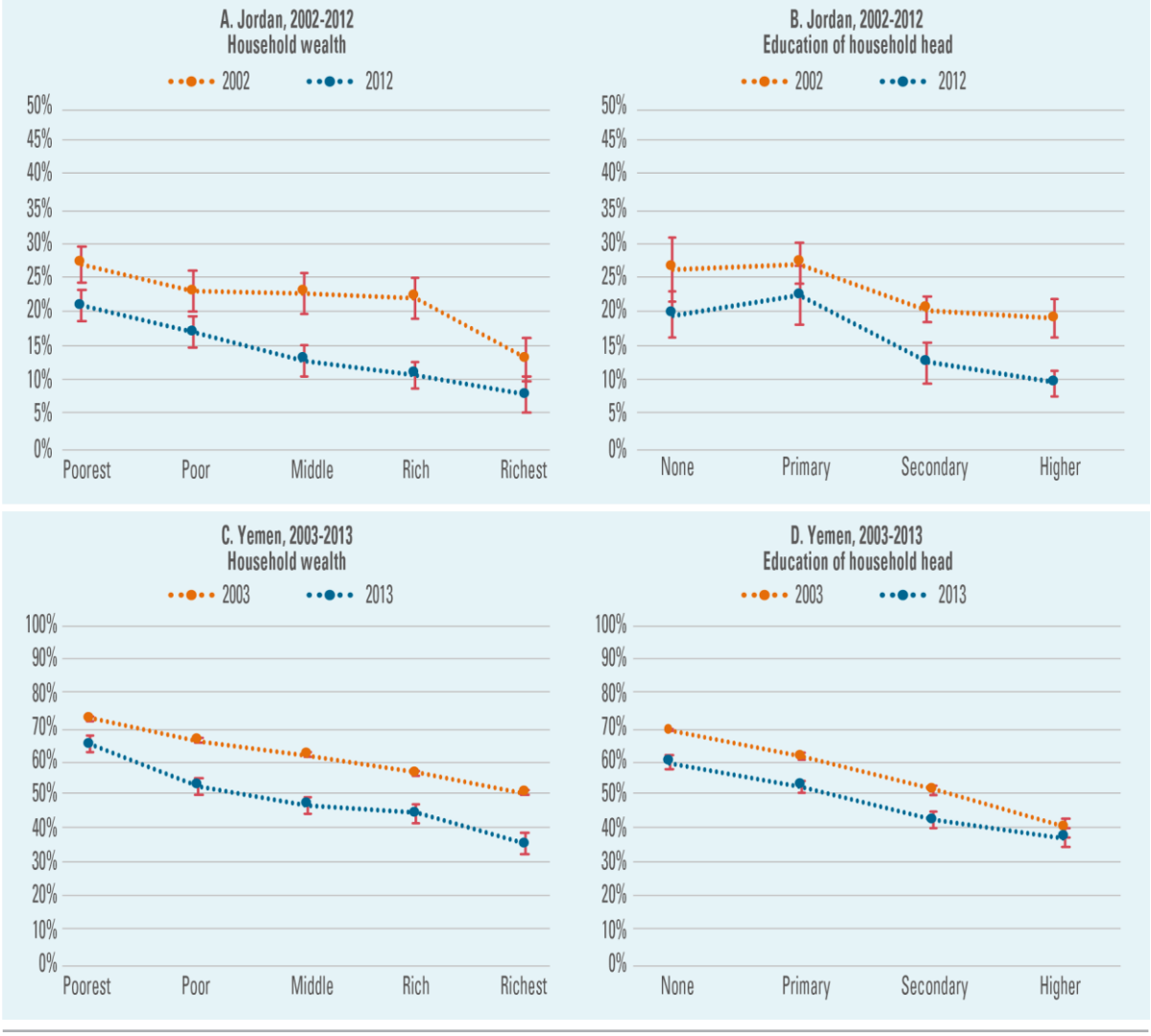
Figure 3.35 Probability of deprivation in school attendance

Source: Authors' calculations.

Monetary poverty (proxied by the wealth index), education and age of household head, and household size are important aspects to consider when designing social protection schemes and education programs geared towards improving school attendance and reducing inequality. However, the pattern across countries and time for gender of household head and type of area of residence is less clear.

Figure 3.35 presents the findings for the most recent year, comparing Jordan, a middle-income country, with Yemen a LDC.

Figure 3.36 Change in probability of deprivation by household wealth and education of household head



Source: Authors' calculations.

Comparing probability of deprivation across the two time points indicates that all countries experienced an improvement of school attendance. Moreover, as shown in table 3.1, probability of deprivation declined for almost all socioeconomic groups. Exploring whether all groups benefited equally requires assessing the difference in probability and magnitude of decline across groups. In terms of wealth, Egypt, Libya, Morocco, and the Sudan experienced a higher reduction in probability of deprivation among the poorest, which contributed to reducing inequality.
In contrast, in Iraq, Jordan, Comoros, and Yemen, the decline of probability of deprivation was slightly higher among well-off households. In terms of education of household head, reduction in probability of deprivation was higher among households with heads having no education or just primary education in Comoros, Egypt, Iraq, and Morocco, but higher among households with more education as in Jordan and the Sudan. For household size, most countries achieved a larger decline among highly deprived large households. These findings point to the key household characteristics to consider when addressing deprivation and inequality in education. However, specific policy prescription and evaluations of former policies would vary across countries. Figure 3.36 shows a plot of probability of deprivation by household wealth and education of household head for the two time points for Jordan and Yemen.

Table 3.1 Probability of deprivation in school attendance

Probability of deprivation in school attendance (Percentage)																				
		State of Palestine	Jordan		Egypt		Iraq		Tunisia	Morocco		Sudan		Mauritania	Libya		Comoros		Yemen	
		2014	2002	2012	2000	2014	2000	2011	2011	2003	2011	2000	2014	2011	2007	2014	2000	2012	2003	2013
Sex of household head	Female						56.2					54.3	35.5	47.4	9.5	5.6	60.0		60.6	
	Male						60.1					49.1	30.2	46.2	12.2	6.5	58.6		62.3	
Age of household head	17-24	30.8	31.1	27.6	47.9	32.4	66.4	45.4	18.0	42.0	35.7	62.8	43.2	51.1	19.4	31.2	67.3	46.2	68.4	62.7
	25-34	6.3	25.3	8.3	28.4	15.9	59.9	30.5	4.3	28.8	16.1	50.1	30.3	44.1	14.4	3.7	61.0	29.3	57.6	45.6
	35-44	14.5	25.7	12.8	32.5	18.2	64.8	41.7	11.7	39.3	26.2	50.7	30.9	48.3	16.0	5.1	58.3	28.3	63.4	52.0
	45-54	19.7	23.1	21.7	37.7	17.0	64.6	47.0	23.4	45.7	36.8	52.4	33.4	48.7	13.7	8.0	57.2	29.5	66.1	55.7
	55+	12.5	15.1	11.8	29.1	11.1	50.1	35.6	12.8	32.3	23.6	44.8	28.4	44.6	9.1	6.0	57.9	25.9	60.0	45.2
Education of household head	None	17.9	26.4	19.7	38.1	22.6	69.2	43.8	17.8	40.2	28.9	54.4	37.1	56.7	13.1	8.2	62.3	31.8	66.1	56.8
	Primary	26.1	27.2	22.5	31.5	17.6	63.0	43.9	17.7	36.1	23.6	45.6	27.8	43.7	13.2	7.1	54.2	26.1	58.4	49.7
	Preparatory	17.1	-	15.6	28.0	16.0	-	39.2	13.6	-	18.5	-	-	-	-	-	-	24.2	57.5	-
	Secondary	12.6	20.4	12.5	20.8	10.3	52.8	34.2	11.1	27.5	16.5	38.0	18.3	31.9	10.2	4.6	50.4	20.7	48.5	39.6
	Higher	6.8	19.1	9.5	14.3	7.6	40.0	26.8	5.2	21.7	10.9	35.1	12.3	-	9.3	-	42.6	15.8	37.3	34.2

Probability of deprivation in school attendance (Percentage)																				
		State of Palestine	Jordan		Egypt		Iraq		Tunisia	Morocco		Sudan		Mauritania	Libya		Comoros		Yemen	
		2014	2002	2012	2000	2014	2000	2011	2011	2003	2011	2000	2014	2011	2007	2014	2000	2012	2003	2013
Household size	1-4	4.3	5.5	5.1	12.1	7.9	19.0	11.0	5.9	16.0	11.6	19.4	10.8	24.1	2.3	1.4	18.7	14.3	21.0	16.4
	5-6	10.6	19.4	10.0	26.9	16.6	38.7	24.0	16.9	31.7	24.4	44.5	25.7	40.5	7.8	4.3	47.0	25.4	49.2	37.6
	7-8	15.3	22.1	19.8	39.8	25.5	57.7	40.8	26.8	45.6	35.7	57.2	35.6	49.8	11.8	7.4	59.7	32.2	63.5	52.3
	9+	26.7	35.6	27.2	50.4	40.6	77.4	59.0	43.2	57.0	46.7	65.6	43.6	64.1	20.0	13.1	69.3	42.3	74.4	64.1
Household wealth	Poorest	16.0	27.2	21.2	44.3	19.2	67.2	50.4	24.7	53.1	35.0	70.5	43.8	61.3	16.9	7.4	68.2	44.1	73.4	65.6
	Poor	14.1	23.3	17.4	35.9	17.5	60.4	43.4	17.5	45.3	30.3	63.6	38.8	59.6	12.9	7.1	66.8	35.9	66.6	53.4
	Middle	17.7	23.0	13.2	30.6	14.5	62.3	38.8	13.8	36.1	26.5	56.6	29.8	44.7	12.4	5.6	54.6	22.8	62.6	47.8
	Rich	14.1	22.4	11.2	26.8	14.6	55.5	35.0	11.1	25.9	22.6	40.9	21.4	39.2	10.1	6.9	56.8	20.7	57.3	45.3
	Richest	12.9	13.4	8.3	18.3	9.7	53.3	28.9	7.5	23.4	16.4	23.0	12.6	26.8	7.8	5.6	48.5	18.9	51.4	36.4
Household residence	Urban			15.8	35.4	18.3	57.2	37.7		34.8	20.7	47.1	23.7		-		57.6		52.1	47.5
	Rural			11.8	31.5	14.7	66.5	43.5		40.5	32.9	52.4	33.0		-		59.3		65.4	50.8
	Camp																			

Source: Authors' calculations.
Note: Only probabilities based on significant coefficients are shown. The highest probability for each country and time point is highlighted in red.

Box 3.1 TIMSS 8th graders test scores: education quality in the Arab region is falling behind

The substantial improvements in access to education over the past decades in Arab countries have not been matched with improvements in quality of education. This box examines the TIMSS 2015 scores for all Arab countries that participated in the test, including the GCC.

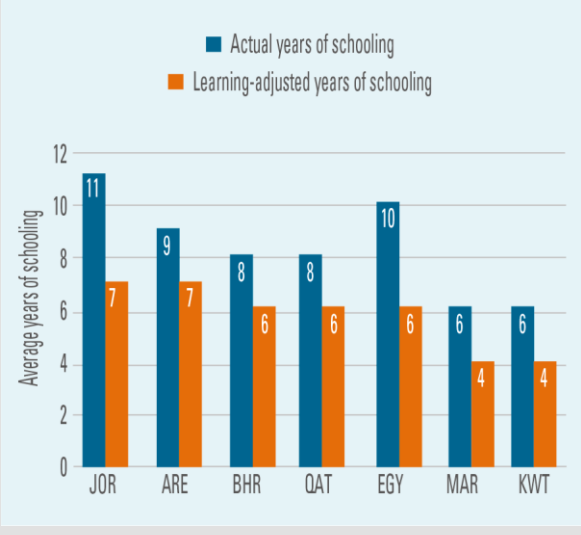
TIMSS 2015 data show that average math and science scores for 8th graders in the Arab region generally fell below the minimum proficiency standards, even in the oil-rich countries (figure 3.37). Nonetheless, there are intra-regional disparities in trends in educational quality. While some countries, such as the United Arab Emirates, Bahrain, and Qatar, experienced improvements in test scores, several countries, such as Saudi Arabia, Kuwait and Egypt, had declining test scores over the past years.

Figure 3.37 Trends in TIMSS test scores for 8th graders

Source: Mullis and others, 2016.
Note: For Egypt and Kuwait, the baseline year is 2007. For Kuwait, trends do not include private schools.

In its "A New Framework for Education in Middle East and North Africa" report (2018), the World Bank uses the TIMSS 2015 8th graders test scores to factor in educational quality and readjust average years for education for selected countries. Figure 3.38 presents the results with countries ordered in a descending order based on learning-adjusted years of schooling. On average, Arab countries lose between 2 to 4 years of schooling when quality and learning are factored in. For instance, in Jordan and Egypt, which have the highest actual years of schooling in the sample considered, the learning-adjusted years of schooling in 2015 fell to 7 and 6, respectively. Moreover, in several instances, the relatively resource-poor countries fare better than the resource-rich countries that have higher per capita incomes. This underlines that in the Arab region, higher incomes may provide access to education, but do not necessarily guarantee learning outcomes. These figures highlight the need for promoting inclusive quality education as articulated in SDG 4, rather than merely attempting to widen educational access.

Figure 3.38 Average years of schooling versus learning-adjusted years of schooling in 2015



Source: World Bank, 2018a.

E. Inequality in education opportunity

This section complements the preceding analysis of inequality in education outcome with an analysis of inequality in education opportunity. The latter reflects extent of intergenerational and social mobility. The few studies that examined inequality in education opportunity in Arab countries (Buckner, 2013; Salehi-Isfahani, Hassine and Assaad, 2014; Assad, Hendy and Salehi-Isfahani, 2019) commonly found it to be high. In this section, updated and richer household surveys data are used, allowing a more extensive assessment.

We examine how circumstances at birth shape educational attainment of children and youth aged 6-25. As in the chapter on health, we measure IOP using a dissimilarity index (D-index)[22] and examine the drivers of IOP using

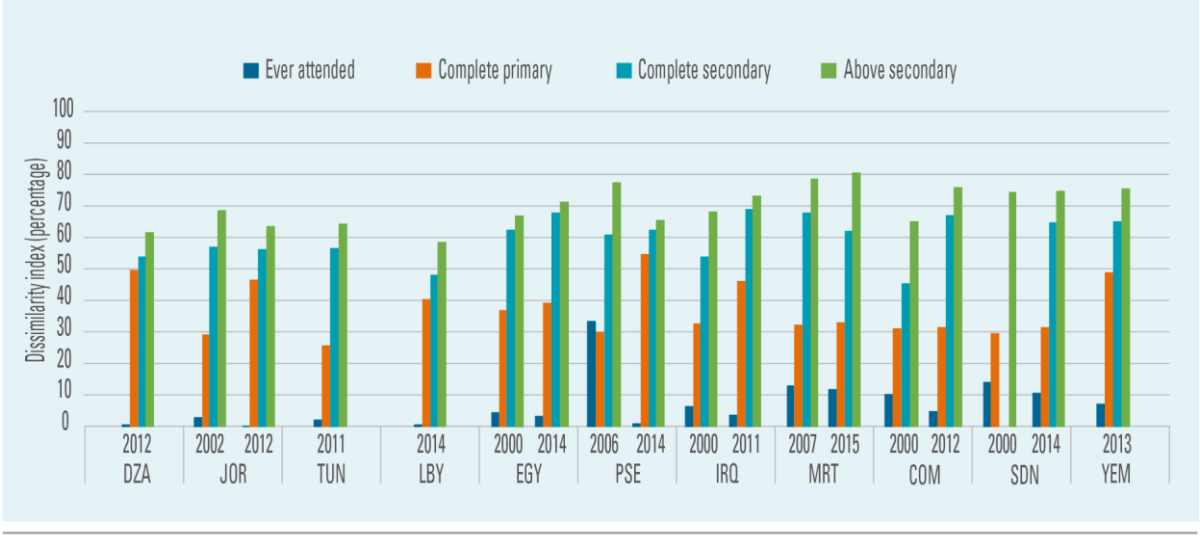
the Shapley decomposition. Technical annex provides a detailed explanation of the methodology.

Figure 3.39 presents the D-index for selected indicators: probability of having ever attended school, probability of attaining a certain educational level conditional on ever attending school and probability of completing the previous educational level.[23]

IOP in ever attending school was fairly low across all countries and had decreased over time even for the LDCs, which still had slightly higher degrees of inequalities. The downward trend in IOP in attending school across all countries reflects their commitment to increasing access and reducing the number of out-of-school children.

Although individuals from different backgrounds had equal opportunity of entering school, IOP soared for completion rates, especially at education levels higher than primary. This trend is homogenous across the countries examined. Even in middle-income countries that nearly achieved complete parity in ever attending school, such as Jordan, Algeria and Libya, the D-index at primary completion exceeds 40 per cent. Moreover, IOP grew for secondary completion, with the D-index surpassing 60 per cent in most countries. For instance, in Tunisia, the most opportunity-equal Arab country in primary completion in our sample, the D-index more than doubles for the secondary level.

Figure 3.39 Dissimilarity index (D-index) for selected educational indicators, age group 6-25 (Percentage)



Source: Authors' calculations.
Note: In the case of the Sudan, the data did not allow the construction of the D-index for the secondary completion indicator.

Remarkably, in countries with two time-points data, not only had IOP in completion rates persisted, but had also widened over time. All countries, including middle-income countries, such as Jordan and Egypt, had worsening dissimilarity indices for primary and secondary completion rates. Although in Egypt and Tunisia, the government provides free higher education, Assaad (2010) and Krafft and Alawode (2018) argue that public spending on higher education is regressive, having in effect subsidised education of the better off at the expense of the disadvantaged. In addition, IOP in accessing education beyond secondary schooling was the highest, with the D-index exceeding 60 per cent in all Arab countries and approaching 80 per cent in the LDCs.

This contrast between the low IOP in ever attending school and the increasingly high IOP in completing primary and secondary education may signal prevalent high drop-out rates in the Arab countries, particularly at the lower-secondary level (UNICEF and UNESCO, 2015). There are several reasons for these high dropout rates, including socioeconomic factors and conflicts. As shown in figure 3.39, Iraq and Yemen, two conflict-afflicted countries, have a relatively low D-index in school enrolment, but one of the highest D-indices for primary and secondary completion. Moreover, IOP in completion rates worsened in Iraq from 2000 to 2011. Conflicts may impair the safe-learning environment and exacerbate economic conditions, particularly for poor and lower-middle income households, leading to increased drop out risks. UNICEF (2017) highlights that one in five poor children in Iraq who dropped out before completing primary schooling did so for economic reasons.

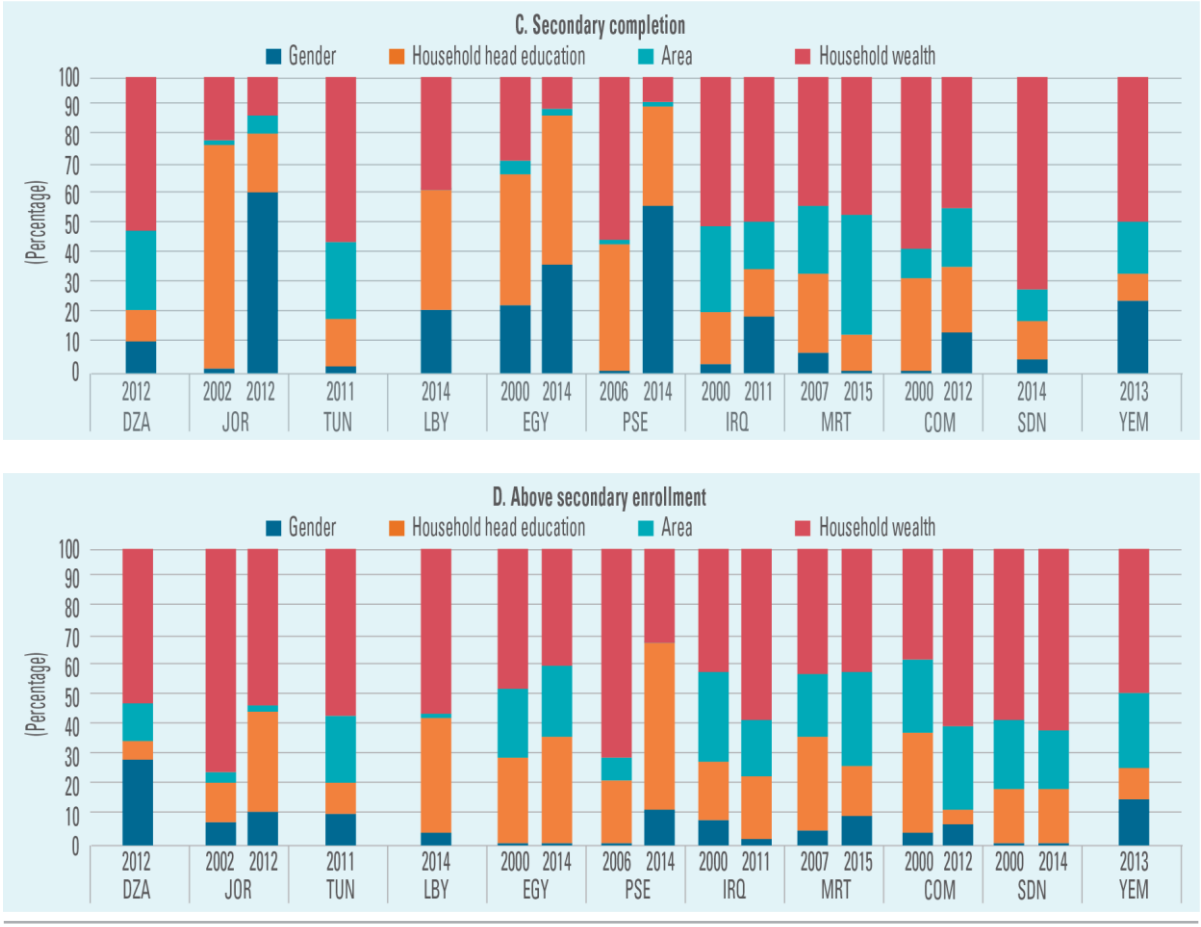
Indeed, as the Shapley decomposition results also show, economic background of the family can be a key exogenous factor in determining child educational opportunity. Contributions of each circumstantial factor to IOP are presented in figure 3.40. Despite huge cross-country heterogeneity, some general observations can still be drawn:

1. **Wealth is a leading driver of educational IOP across most countries,** even though its contribution declined in some countries, such as Egypt and Jordan. Generally, contribution of wealth to inequality rises the higher the educational level.
2. **Overall, educational level of household head plays a critical role in child educational opportunity and its contribution to IOP increased over time.** As discussed earlier, several scholars argue that educated parents hold education in high regard and aim to secure higher educational outcomes for their children. Moreover, family income may also be closely linked to educational attainment of household head, ensuring that households with educated heads are better able to support education of their children.
3. Contribution of type of area of residence to inequality varies significantly across countries. In Jordan, Libya and the State of Palestine, the contribution was minimal at all levels, indicating that these countries had reached near spatial parity. Egypt also had considerably reduced the spatiality gap, while in some of the LDCs, such as Comoros, contribution of type of area of residence had considerably increased. **Generally, spatial inequalities increase for higher educational levels,** which is most evident in the case of Mauritania.

4. **Similarly, there is no common pattern across countries for gender contributions to IOP, but they are fairly moderate, indicating that females are largely on a par with males in educational attainment.** Moreover, gender inequalities in attending school had reduced over time in all countries, especially the LDCs, even becoming non-existent in several.

A similar downward pattern is observed for primary completion, except for the State of Palestine. Gender contribution to IOP increased for secondary completion in some countries, such as the State of Palestine, Jordan, Egypt, and Comoros, Yet, overall the fairly low contribution of gender indicates that boys and girls alike were generally able to attain education.

Figure 3.40 Shapley decomposition for selected educational outcomes, age group 6-25 (Percentage)



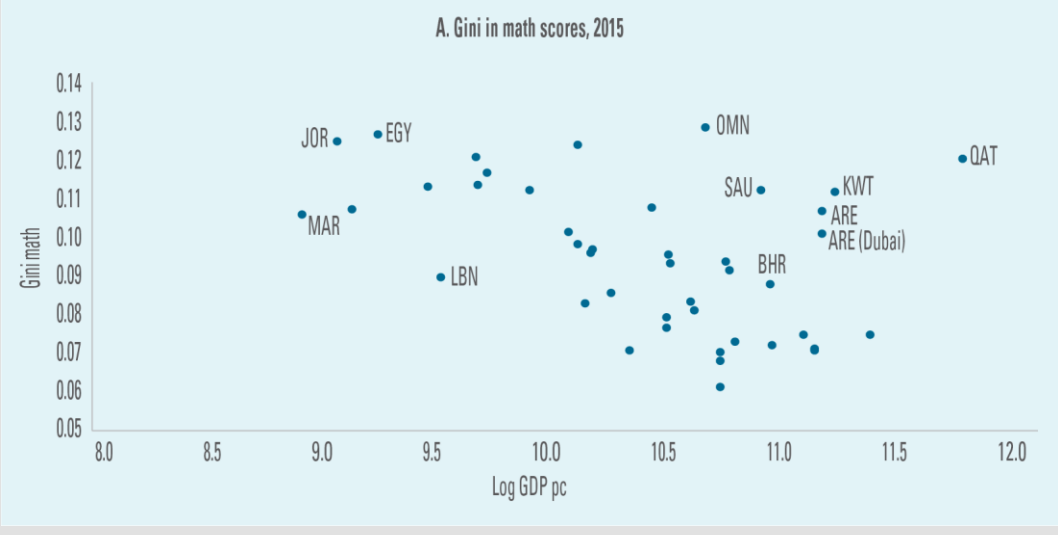
Source: Authors' calculations.

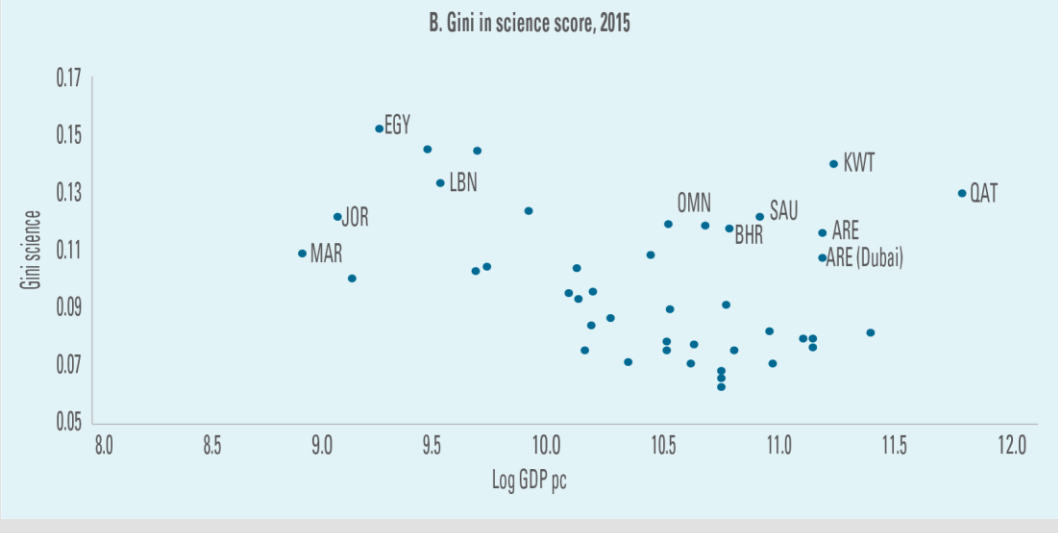
In sum, as in the case of health, analysis of inequality of opportunity in education indicates higher incidences of increasing inequality compared with inequality of outcome. Both the dissimilarity-index and the Shapley-decomposition analysis indicate that IOP in education in the Arab region remains high, especially at levels higher than the primary. Despite progress in inclusive access to education, household wealth and education of household head continue to be the primary determinants of opportunity of academic progression. These findings are in line with our analysis of inequality in education outcome, where inequalities due to educational attainment of household head and household wealth were found to be persistent over time. There are wide intraregional disparities in educational inequality profiles. Yet, overall the Arab region is still far from securing equal opportunities in accessing education and, as discussed in box 3.1 and box 3.2, even farther from ensuring high-quality education.

Box 3.2 Educational quality in Arab Countries: revisiting inequality of outcome and inequality of opportunity

Using TIMSS 2015 results for 8th graders, ESCWA (E/ESCWA/SDD/2017/6) assesses inequality in accessing quality education in the Arab region. Figure 3.41 shows that Arab countries, including oil-rich countries, have higher inequalities in accessing good quality education relative to their counterparts. In fact, Egypt has the highest inequality level in the world sample. In essence, this shows that the Arab region performs poorly in math and science, with uneven distribution of scores.

Figure 3.41 Inequality in math and science using Gini index and log GDP per capita, 2015

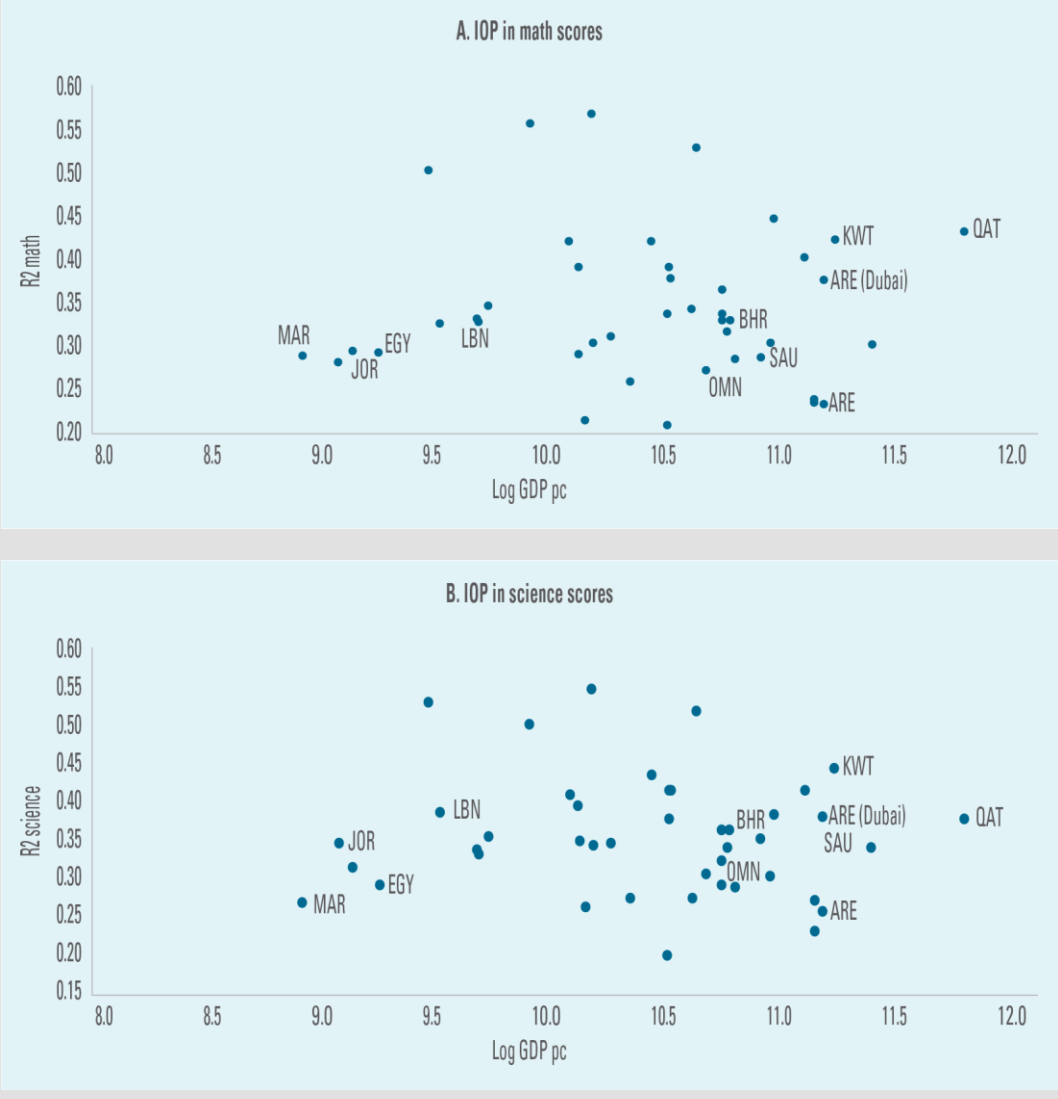




Source: E/ESCWA/SDD/2017/6.

The ESCWA report then employs a linear regression of scores on a set of circumstantial factors, with the R-squared representing the share of IOP in the total inequality observed in the test scores. The results presented in figure 3.42 show that IOP in accessing quality education is relatively moderate in the region.

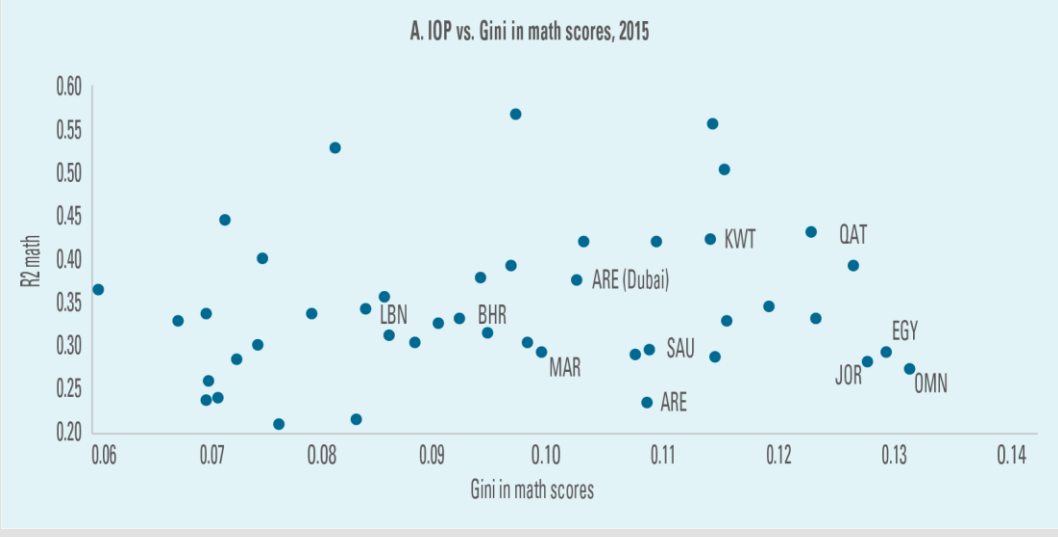
Figure 3.42 Inequality of opportunity in math and science score and log GDP per capita, 2015

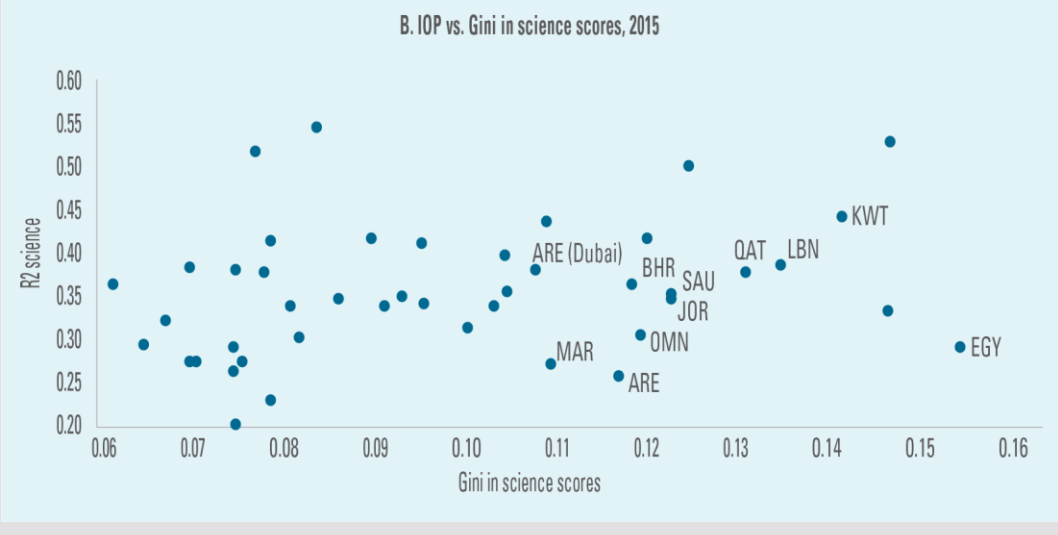


Source: E/ESCWA/SDD/2017/6.

In addition, figure 3.43 shows that higher inequality scores in the Arab region are not necessarily related to inequality of opportunity. Two plausible explanations are suggested by the study. First, given the fairly moderate circumstantial inequality in the region, luck and efforts play a larger role in the test score differentials. Secondly, and more compellingly, although better financial means allow children to enrol in private institutions, they do not necessarily guarantee an enabling-learning environment. This underlines deficiency in overall educational systems and poor prospects in labour markets. In times of increasing automation and ever-changing labour market demands, educational reforms in the Arab region should focus on promoting higher quality schools that provide youth with adequate skills to facilitate their school-to-work transition.

Figure 3.43 Inequality of opportunity and total inequality in math and science score, 2015





Source: E/ESCWA/SDD/2017/6.

F. Summary

In conclusion, the Arab region achieved some progress in educational attainment. Yet, inequalities of educational outcomes and opportunity remain widespread, especially at educational levels higher than the primary. In both opportunity and outcome analyses, inequalities due to educational attainment of household head and household wealth tend to be the most enduring. Spatial inequalities also persist.

In addition, across most Arab countries, the highest attendance rates and completion rates, as well as most progress, are at the primary-schooling level and are drastically reduced at secondary and higher education. With few exceptions, average years of schooling remain below 6. Moreover, the Arab LDCs tend to face a double burden of high deprivation and high inequality levels, which are reflected in persistent gaps, especially between wealth quintiles, households with educated heads and households with uneducated heads, and groups of extremes.

Inequality had been predominantly narrowed at the primary level, as nations devoted resources to attain universal primary education, guaranteeing the right of every person to basic education. However, with failure to benefit the vulnerable subgroups adequately, inequality persisted, and in several instances was reinforced, at educational levels higher than the primary. Moreover, sharper attention needs to be accorded to secondary and tertiary education, given their association with several public and private economic benefits, in terms of securing employability, higher salaries and better working conditions, as well as promoting labour-force flexibility (Merisotis, 1998). Indeed, the Arab region has much to do to ensure inclusive high-quality education, as articulated in SDG 4.

4. Gender Inequality

A. Introduction: The Global Gender Gap

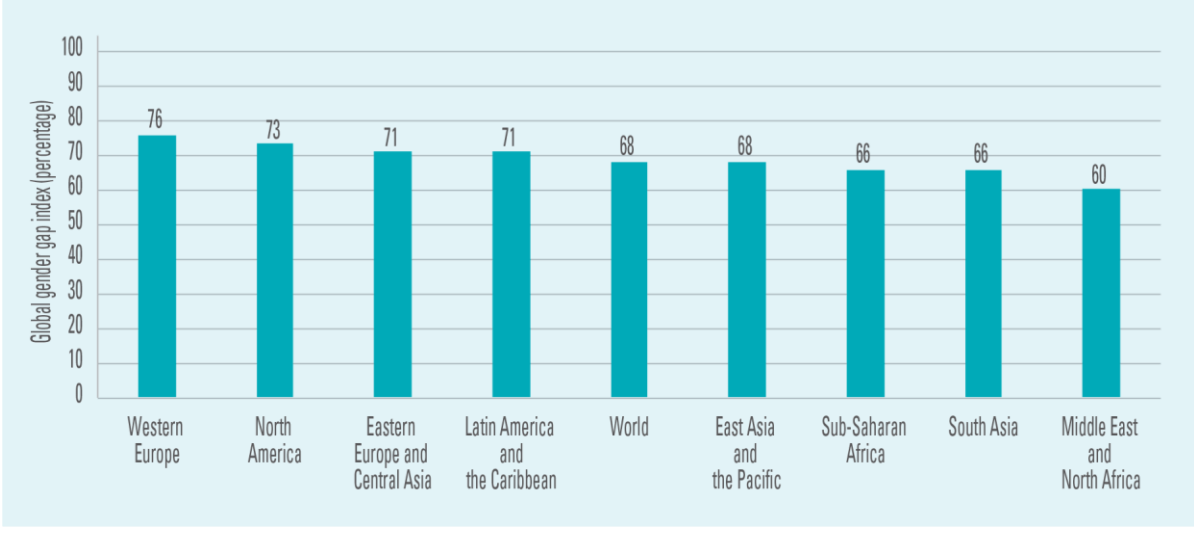
Gender inequality has long been a target on the global development agenda. Through adoption of the UN Millennium Development Goals (MDGs) in 2000 and later the Sustainable development goals (SDGs) in 2015, most countries, including Arab countries, have pledged to alleviate gender inequality and empower women. Across the world today, more women than ever before are both educated and participate in labour markets, which has certainly improved their socioeconomic status.

As is generally acknowledged, beyond enhancing the wellbeing of women, reducing gender inequalities has nationwide positive impacts on boosting economic growth, alleviating poverty, enhancing overall welfare and attaining the 2030 development agenda. Yet, notwithstanding progress over the past 20 years, especially in basic health and education, gender gaps along various socioeconomic dimensions persist widely. Gender-based discrimination is particularly flagrant in employment and career advancement opportunities, wages and political participation, all of which render women vulnerable and more exposed to violence and exploitation.

The global gender gap index is a measure of the average gap in four key areas: educational attainment, health and survival, economic participation and opportunity, and political participation. As depicted in figure 4.1, in 2018, compared with an average gender gap of 32 per cent worldwide, the Middle East and North Africa region had a gap of 40 per cent, which places it last globally, behind Sub-Saharan Africa and South Asia.

Progress of the Arab region in alleviating gender inequality is following the same trend as that of the world, with Arab women achieving significant progress in health and education over the last two decades. In fact, the gender gap in education has been reversed in several countries. Yet, this gain was not translated into gender parity in labour markets. Patriarchy and prevailing sociocultural norms and perceptions severely impact female economic opportunities and participation, leading to pronounced gender-based economic inequalities. Indeed, the Arab countries have largely failed to capitalise on the economic-growth opportunity that the increasingly educated female cohort presents them with. Standing only at 21 per cent in 2018 (World Bank, 2019), the region has the lowest female labour force participation rate. Moreover, women face multidimensional and intersecting forms of discrimination in all spheres, legal, social, economic and political, which, in turn, cause and perpetrate economic inequalities. Marginalisation of women in the economic sector is perpetuated by systematic and structural patriarchal practices prevalent in both the private and the public spheres, with inequalities in one sphere interlinked with and reinforced by inequalities in the other. Indeed, the structure of the household and the subordinate low status of women intersect with and perpetuate low economic participation of women in the public sphere.

Figure 4.1 Global gender parity index by region in 2018 (Percentage)



Source: World Economic Forum, 2018.

As they cause a failure to employ valuable human capital, gender gaps have considerable economic and developmental costs. Klasen and Lemana (2009) find that costs of gender gaps in education and employment in the Middle East and North Africa amount to 0.9-1.7 percentage points difference in growth relative to East Asia. Against this backdrop, this chapter first reviews gender inequality in both outcome and opportunity in health and education in the Arab countries, followed by an examination of inequalities in employment and an assessment of the impact of conflict on gender inequality. The final section then provides an overview. This chapter aims to contribute to existing research in two ways. First, using household surveys covering a large set of Arab countries, it endeavours to assess intraregional disparities in gender outlook. Secondly, it assesses evolvement of gender inequality in the selected indicators over time.

B. Gender inequalities in child health

As discussed earlier, the Arab region has generally achieved improvements in health outcomes, including an increase in skilled birth attendance and a decrease in maternal deaths. Numerous studies have shown that the health of children is highly correlated with that of women. Hence, it is unsurprising that child health outcomes, such as infant mortality rates and child stunting, have generally moved in the same direction as women's health.

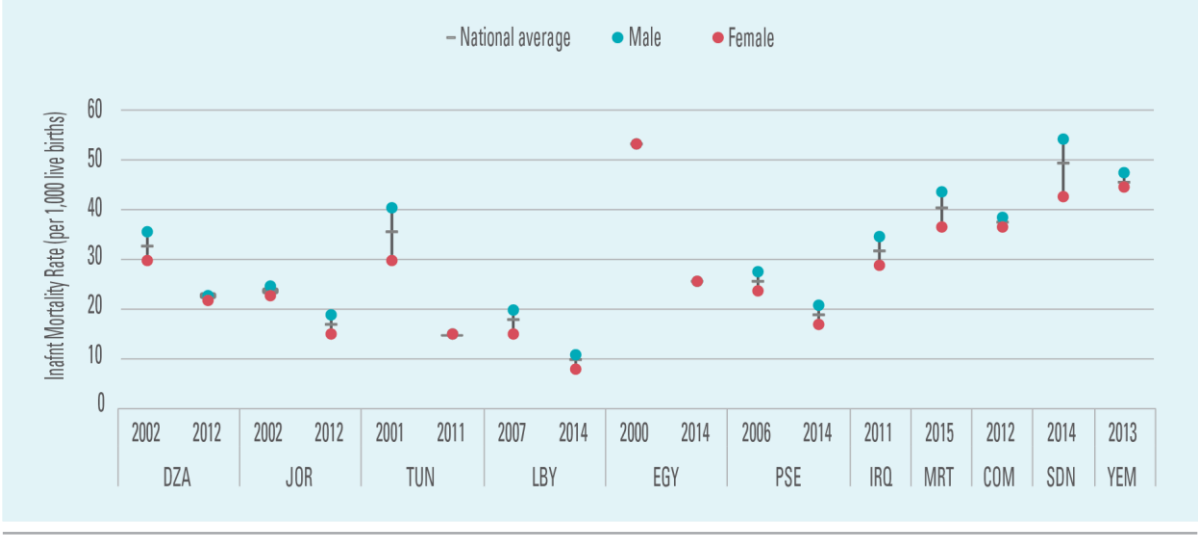
Early-age health and nutrition are crucial for health, productivity and wellbeing later in life. Gender inequality in child health is addressed here, as not only does it impact women's health, but also has spillovers on future generations and on society as whole. As argued by Osamani and Sen (2003), society as a whole will suffer for generations if girls and women are treated unequally.

Literature attributes disparities in health and malnutrition outcomes between boys and girls to two types of factors: biological and cultural. Biologically, boys are more vulnerable to malnutrition than girls (Gronau, 1985; Deaton, 1989; Wamani and others, 2007; and Engebretsen and others, 2008) and girls are found to be more resistant to food shortages and their consequences. Nonetheless, girls are the most affected when cultural factors exist (Evenson, Popkin and King-Quizon, 1979; Senauer, Garcia and Jacinto, 1988; and Chen, Chowdhury and Huffman, 1980). In patriarchal societies, a boy is culturally considered more "valuable" than a girl. Hence, there is more focus on his health and food resources are allocated in his favour (Dewan, 2008; Pillai and Ortiz-Rodriguez, 2015; and Raj, McDougal and Silverman, 2015), i.e., prevalent preference for sons may lead to relatively inadequate investment in the health of girls and women (Bhalotra and Rawlings, 2011). Thus, gender, an exogenous factor, can be a critical determinant of child health in both outcomes and opportunity.

Generally, for children under five-years old, the health gender gap favours girls. Data from household surveys show that infant mortality rates were lower for girls across all countries considered, especially the LDCs. As depicted in figure 4.2, in the Sudan, for example, infant mortality rate was 43 for females and 55 for males. Notably, countries reduced infant mortality rates for both females and males, while some, such as Egypt and Tunisia, also reached gender parity in these rates.

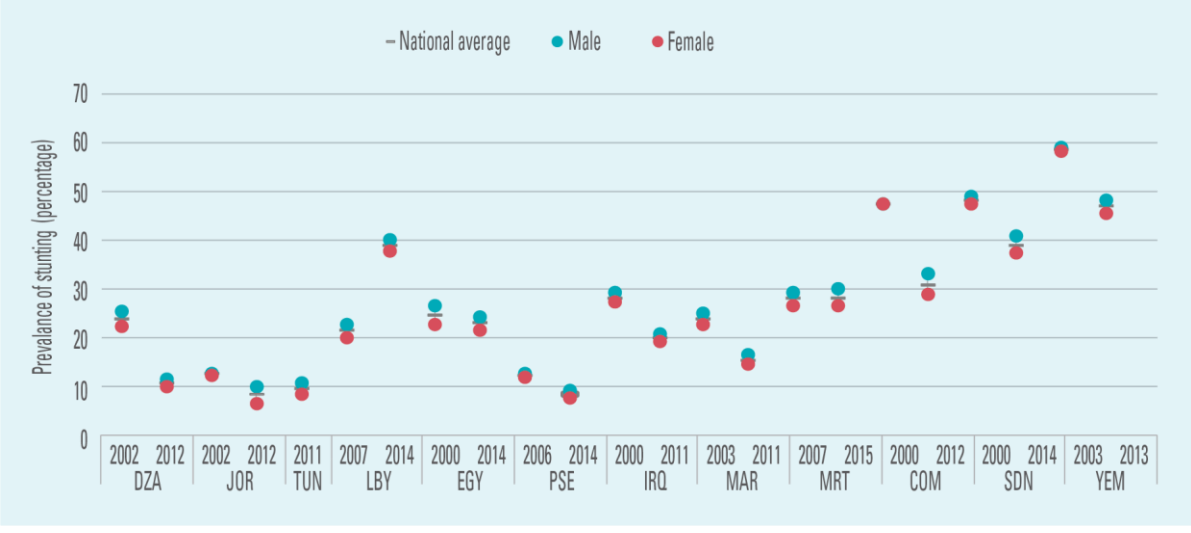
Similarly, prevalence of stunting and overweight were higher among boys under five years old, and there is a similar pattern of improvement in health outcomes and decreasing inequality for boys and girls under five. Nonetheless, in several instances, the gender gap, measured as male-to-female ratio, widened, as in the case of stunting in most of the LDCs. Overall, these disparities may be explained by the biological factor described above.

Figure 4.2 Infant Mortality Rate by gender



Source: Authors' calculations.

Figure 4.3 Prevalence of stunting by gender



Source: Authors' calculations.

Box 4.1 Using the concentration index and curve to assess gender inequalities in stunting

Gender inequalities in stunting are assessed here by comparing generalised concentration curves of boys and girls for a selection of Arab countries (Comoros, Egypt, Mauritania, Morocco, State of Palestine, Sudan and Yemen). As an example, these curves and their 95 per cent confidence bands are shown below for Egypt and Mauritania, while the corresponding graphs for the remaining countries are found in the technical annex. For all these countries, the curve for boys is higher than that for girls. A statistical test to check dominance at the 5 per cent significance level shows that the result holds; i.e., all possible rank-dependent shortfall indices displaying aversion to socioeconomic health inequality give higher values for boys, which leads to two conclusions: even though the points in the figure are very close, their difference is statistically significant; and the result will be the same for any other index of health shortfall.

Figure 4.4 Concentration curve for Egypt

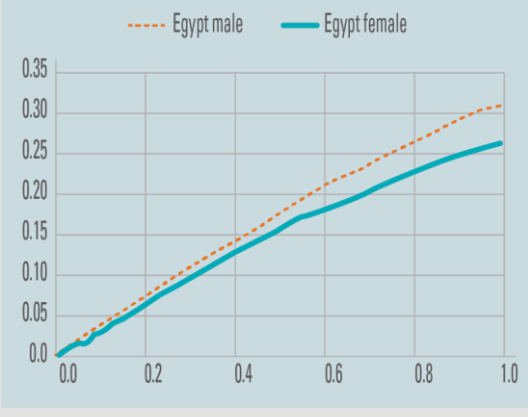
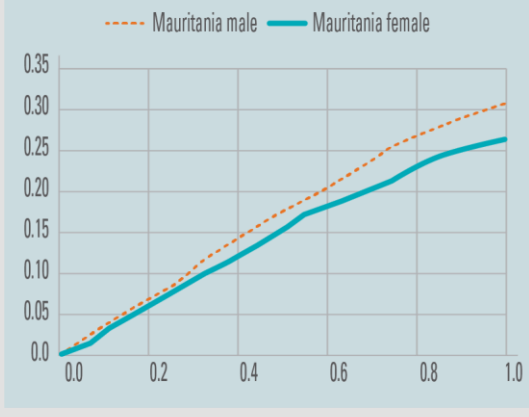
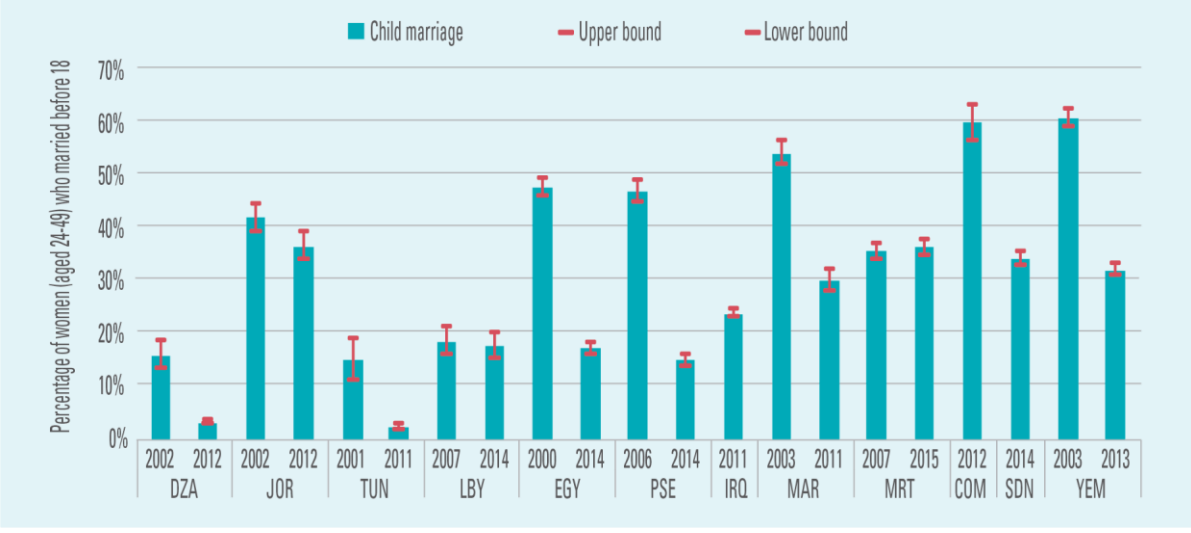


Figure 4.5 Concentration curve for Mauritania



Source: Authors' calculations.

Figure 4.6 Percentage of women (aged 20-24) who married before age 18



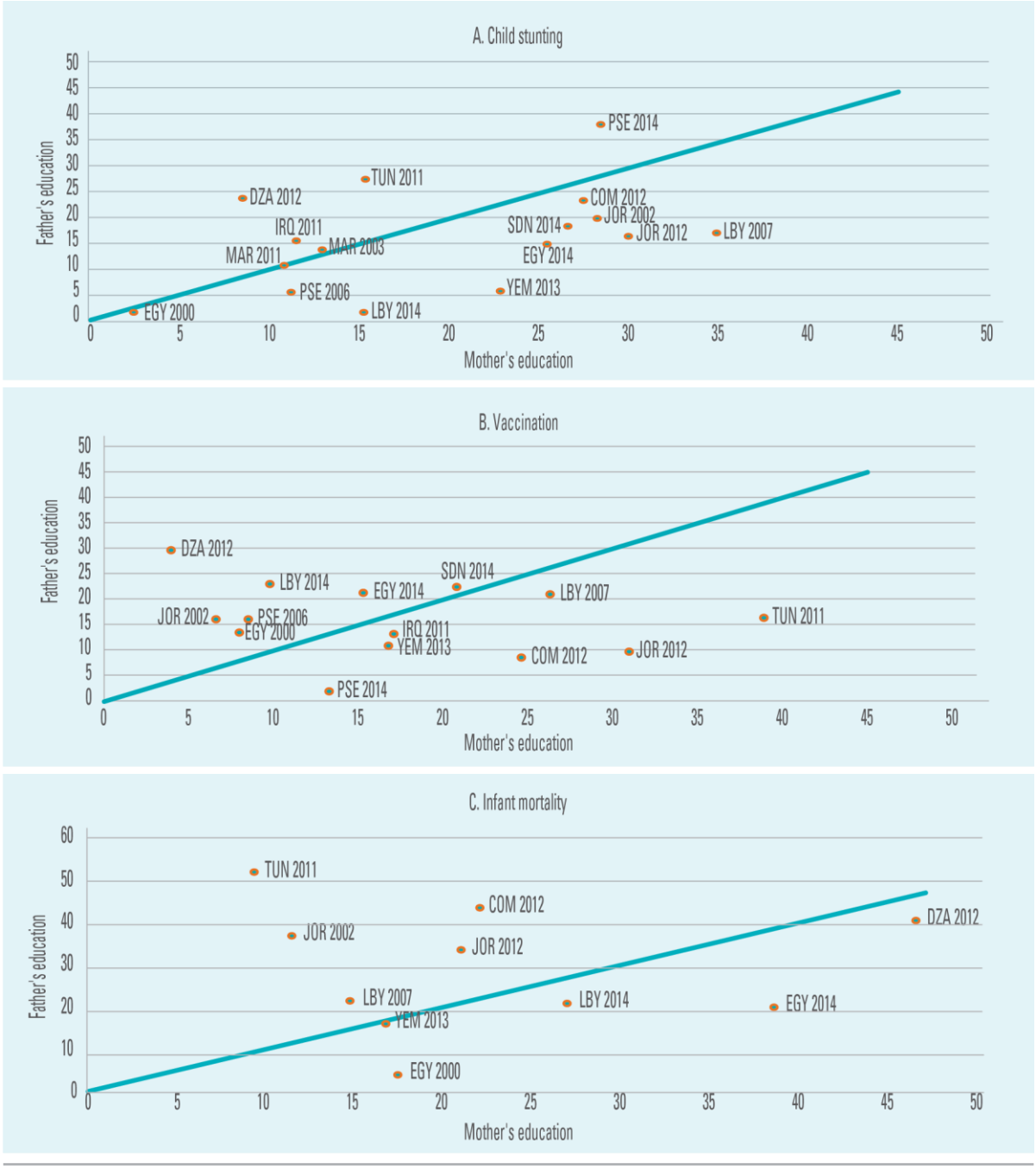
Source: Authors' calculations.
Note that the 95 per cent confidence intervals are reported in the graph.

Notwithstanding the minor gender gap observed above, which generally favours females, **girls are more vulnerable to cultural factors** as they grow up, with a possibly severe impact on their health. For instance, child marriage (before the age of 18) may devastate the mental and physical health of the girl, including pregnancy complications that may, in some cases, lead to death.

As shown in figure 4.6, child marriage decreased significantly over time[24] for most Arab countries (such as Algeria, Egypt, Jordan, State of Palestine, Morocco, Tunisia and Yemen). **Nonetheless, incidence remained very high, especially in conflict-afflicted areas, where one in three women aged 20-24 experienced child marriage (Sudan and Yemen), and in the LDCs, where incidence reached 3 in 4 (Comoros).** No significant change over time is observed for Libya, nor for Mauritania, which maintained a rate of child marriage of nearly 40 per cent.

Additionally, sociocultural norms and perceptions may affect women's lifestyle and result in long-term health issues, such as obesity, which is an aspect of malnutrition associated with chronic diseases, such as high blood pressure, high cholesterol, type II diabetes, cancer, heart disease and arthritis. **Female obesity incidence in the MENA region is the highest in the world,** with a regional average of 26 per cent, compared with 15.7 per cent for men. Referred to as the "Middle Eastern gender health inequality paradox" (Costa-i-Font and Gyori, 2018), this phenomenon may be linked to prevalent family roles: men are active in the labour market and generally outside the house, while the main role of women is within the house.

Figure 4.7 Contribution of parent education to health inequality, using the Shapley decomposition, above and below the 45-degree line (Percentage)



Source: Authors' calculations.
Note: For more details on the Shapley decomposition, please refer to the Technical Annex.

As shown earlier in this report, contribution of child sex to inequality in health opportunity is generally minimal in the Arab region, while wealth and education of household head are the main factors that impact child health. Here, we recompute IOP in child health, disaggregated by education of each of the parents. Figure 4.7 presents the results from the Shapley decomposition. Notably, in recent years, education of the mother was gaining more importance than that of the father in affecting positively the health and wellbeing of the children. More than half of the countries fall below the 45-degrees line. **For infant mortality, as per most recent data, education of the mother affects likelihood of occurrence more than that of the father in Algeria, Egypt, Libya and Yemen (figure 4.7C).**

Similarly, **having an educated mother decreases significantly likelihood of child stunting and likelihood of lack of child immunisation,** with education of mother affecting likelihood of both more than that of the father in more than half of the countries (figure 4.7A, figure 4.7B and figure 4.7D).

C. Gender inequalities in education

Education is a necessary condition for empowering women, reducing fertility rates, raising economic participation of women, and enhancing their bargaining power within the household, in addition to having a significant positive impact on the health and education of the future generation, contributing, thereby, to breaking intergenerational poverty transmission.

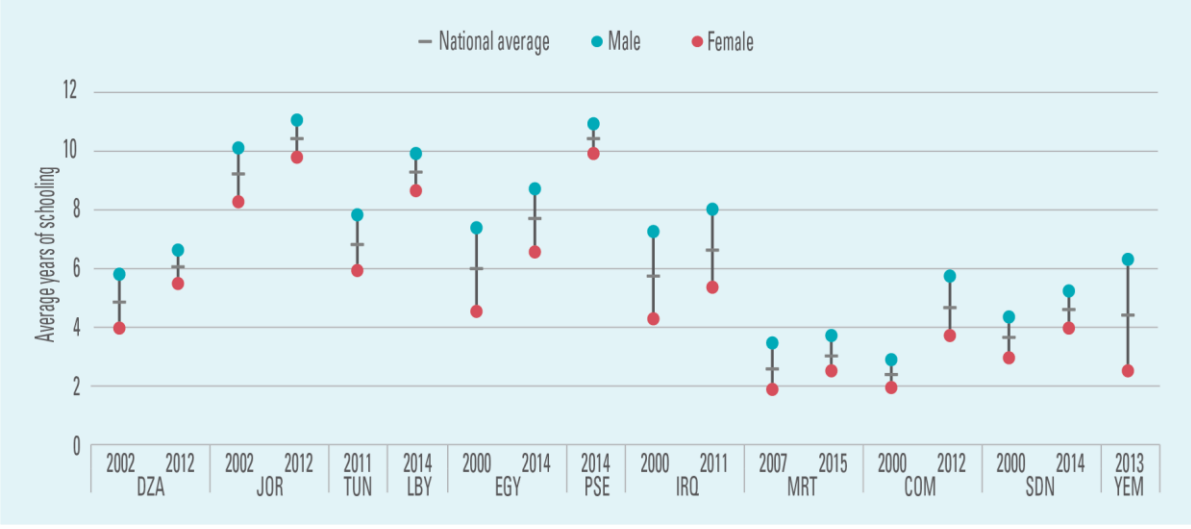
As a result of commitment to universal primary education and implementation of compulsory and free primary education for all, **the gap in both overall school attendance and primary attendance narrowed in the Arab region.** However, for ever attending school, the gender gap was still in favour of boys in all the countries considered, while the gap for primary school attendance was smaller, in favour of boys in Iraq, the Sudan and Yemen and in favour of girls in Mauritania. Interestingly, in the State of Palestine, Jordan and Tunisia, the gender gap for entering school was rather in favour of girls.

However, the picture is different for completion rates, with girls having lower rates in all countries. This may signal significant school dropout for girls, possibly due to social favouritism towards investing in boys' education, on one hand, and to the fact that girls may get married, in a region where child marriage rates remain very high in several instances (figure 4.6). Among several other factors, child marriage reduces the likelihood of girl completing secondary school (World Bank, 2017).

For most countries, girls seem to have higher chances of reaching secondary school, except for Iraq, Mauritania and Yemen. One explanation is that in unfavourable circumstances, boys are expected to drop out of school after completing primary education to work and start earning income. However, boys again have higher secondary-school completion rates.

Overall, despite reductions in disparities, the gender gap in education persisted across the region, especially in the LDCs, as reflected in average years of education. In middle-income countries, these were low for females, reflecting completion of primary or, at most, lower secondary schooling, while in the LDCs, the average was less than 4 years, with a significant gap between boys and girls.

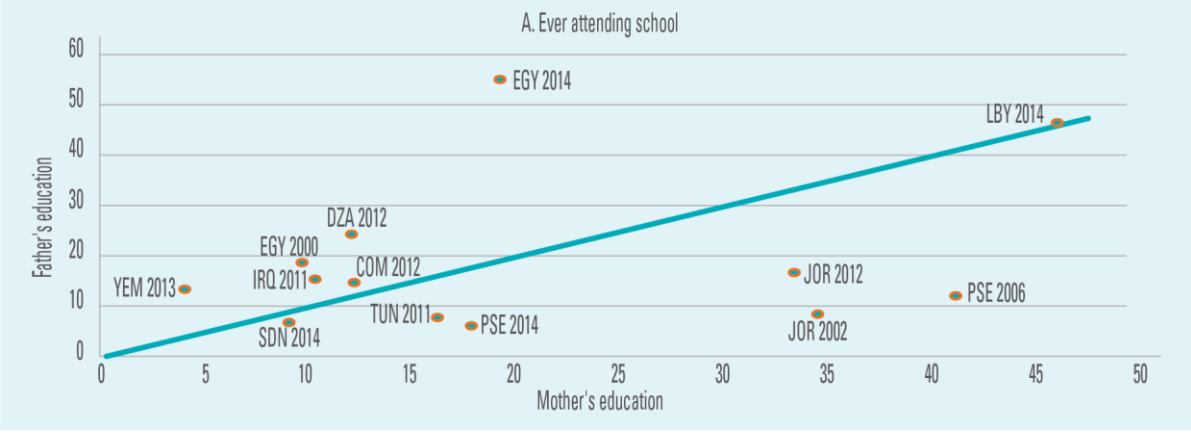
Figure 4.8 Average years of schooling by gender

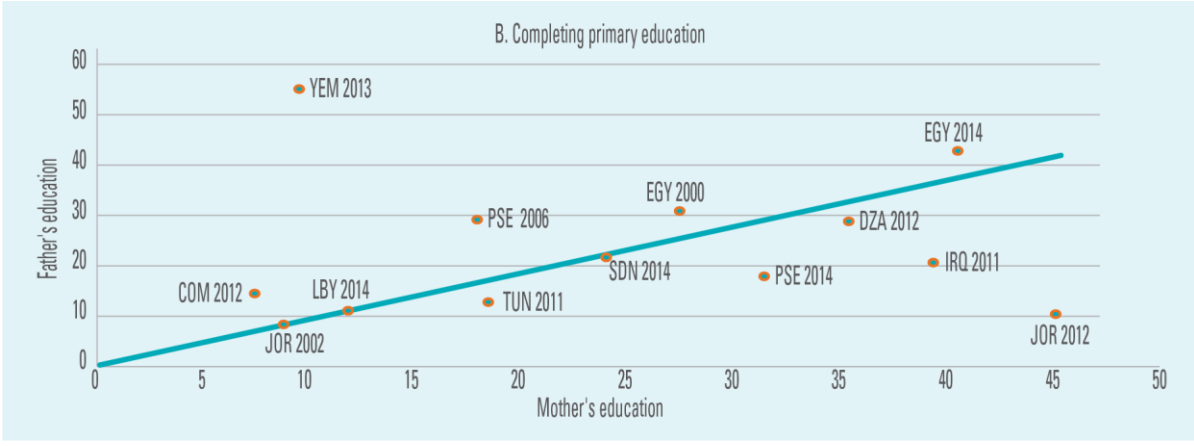


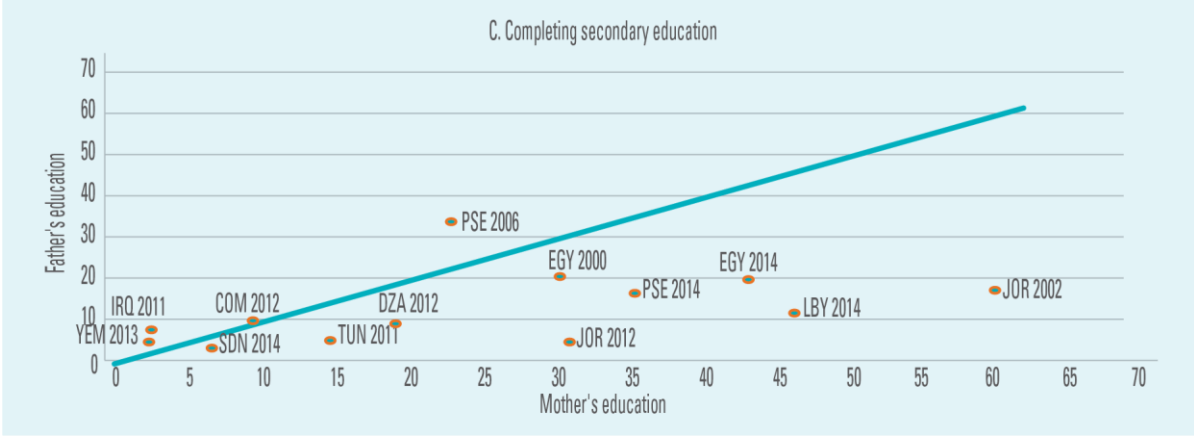
Source: Authors' calculations.

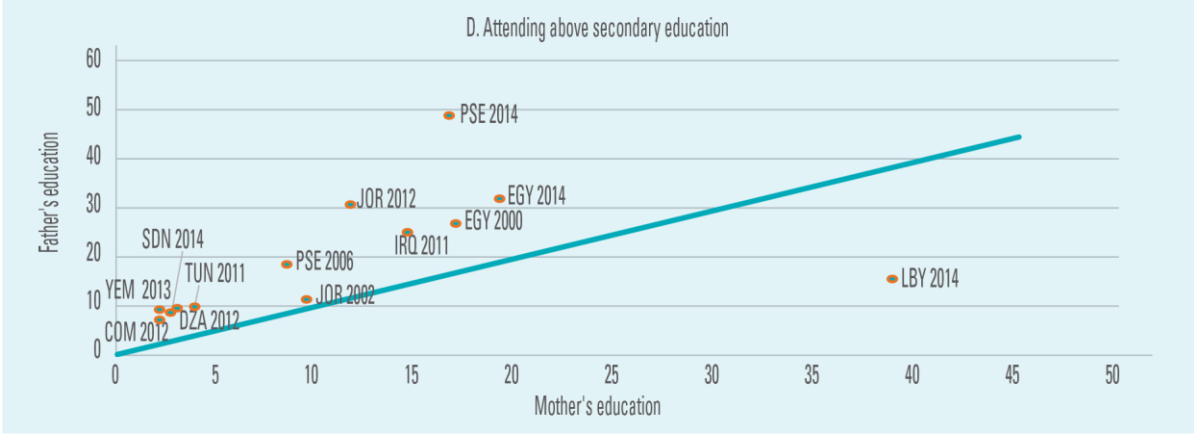
As shown earlier in this report, gender contributions to IOP in education are fairly moderate in the region, indicating that females are largely on a par with males in educational attainment. Additionally, across the different countries, girls seem to have had, in recent years, a higher probability of progressing in education, conditional upon entering school. Again, here we recompute IOP in child education, disaggregated by education of each of the parents. Figure 4.9 presents the results from the Shapley decomposition. The educational level of both the mother and the father positively and significantly affects educational attainment of children. However, an educated mother plays a more important role in school attendance and particularly in completion of primary and secondary education, while an educated father increases likelihood of attending above secondary education.

Figure 4.9 Contribution of education of parent to child education inequality, using the Shapley decomposition, above and below the 45-degree line (Percentage)









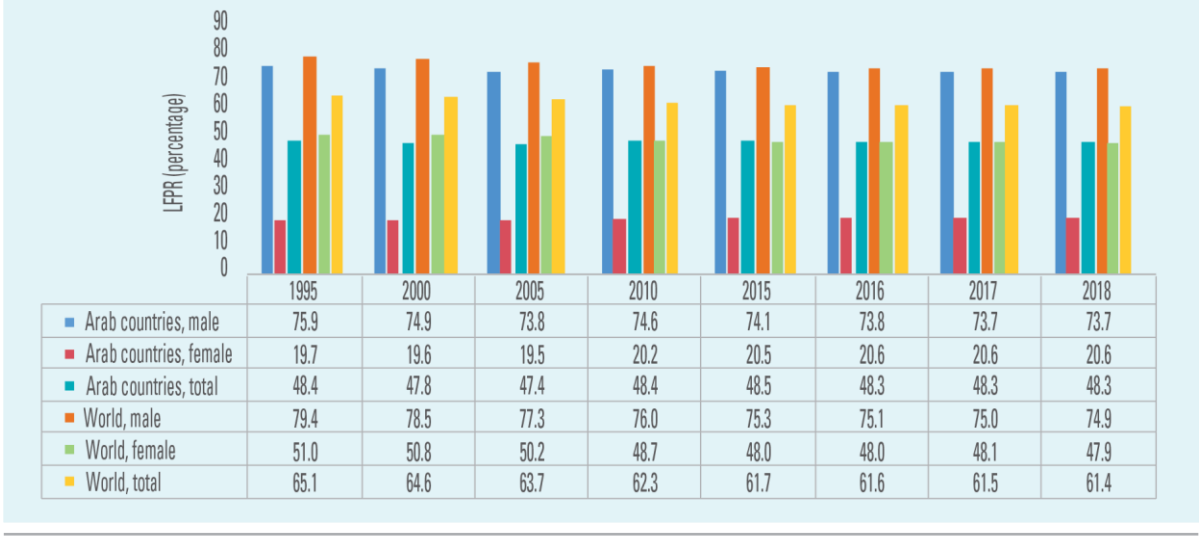
Source: Authors' calculations.
Note: For more details on the Shapley decomposition, please refer to the Technical Annex.

D. Female participation in private sector

Improving involvement of women in the economy is central for economic growth and sustainable development. Indeed, through improving the relative economic position of women, high participation of women in the labour force, as measured by the female Labour Force Participation Rate (LFPR), is important for national economic efficiency, while low participation has negative impacts on the bargaining power of women, their empowerment and their benefits from economic growth, all of which, in turn, negatively affect female and child health and wellbeing (Ackah, Ahiadeke and Fenny, 2009; and Klasen and Pieters, 2013). Moreover, women's earnings affect their status and decision-making power in family and society. Nevertheless, there are obstacles that hinder participation of women in the labour force and prevent women from obtaining better jobs, leading to gender disparities in labour-market outcomes (Robles, 2012).

Known in the literature as the "Education Paradox" (Chamelou, Muzi and Ahmed, 2011, Dandan and Marques, 2017; and Assaad and others, 2018), **narrowing the gender gap in education in the Arab region was not reflected in narrowing the gender gap in employment.** Female LFPR is still very low: the labour demand side of the economy does not adequately offer women the opportunity to work, and cultural factors and family responsibilities exacerbate various gender inequalities in labour-market outcomes (OECD, 2014). Thus, women are the region's unrecognised and unutilised human reserve. Moreover, due to their low engagement in the labour force, as well as their limited access to assets and property, exacerbated by discriminatory inheritance and labour laws, women tend to experience higher economic vulnerability and marginalisation (UNDP and others, 2018).

Figure 4.10 Labour Force Participation Rate (LFPR) in Arab countries and world by gender, 1995-2018



	1995	2000	2005	2010	2015	2016	2017	2018
Arab countries, male	75.9	74.9	73.8	74.6	74.1	73.8	73.7	73.7
Arab countries, female	19.7	19.6	19.5	20.2	20.5	20.6	20.6	20.6
Arab countries, total	48.4	47.8	47.4	48.4	48.5	48.3	48.3	48.3
World, male	79.4	78.5	77.3	76.0	75.3	75.1	75.0	74.9
World, female	51.0	50.8	50.2	48.7	48.0	48.0	48.1	47.9
World, total	65.1	64.6	63.7	62.3	61.7	61.6	61.5	61.4

Source: World Bank, 2019.

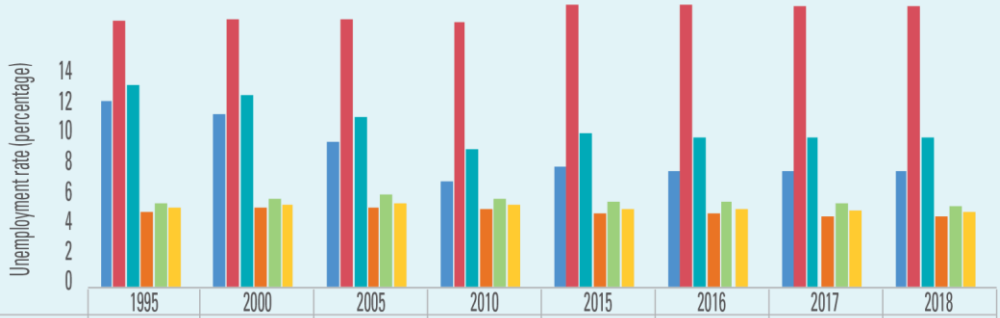
Statistics show that female labour-market outcomes in Arab countries are among the lowest globally, while those for males are around the world average. Moreover, this gender gap is large and persistent. For the three-labour market key measures (LFPR, unemployment rate and employment rate), performance of women lags extremely behind that of women in the rest of the world, as well as behind males in the region. In 2018, labour force participation rate (LFPR) of women in the Arab countries stood at approximately 21 per cent, compared with near 74 per cent for males and near 48 per cent for women globally (figure 4.10).

In 2018, 18.7 per cent of females in the labour force were unemployed in the Arab counties, compared with 7.7 per cent for males and around 6 per cent for females globally (figure 4.11).

Moreover, percentage of employed women in the Arab countries lags even further globally. In 2018, around 16 per cent of females aged 15 years or more in the Arab countries were employed, compared with 73 per cent for males and with nearly 46 per cent for females globally (figure 4.12).

With many women engaged in unpaid domestic or agricultural work, female employment in the Arab region is associated with high levels of informality and vulnerability (E/ESCWA/ECW/2012/1; OECD, 2012). Around 80 to 90 per cent of unpaid care work is undertaken by women, but this essential contribution to the economy remains largely overlooked in standard measures, such as LFPR (Woetzel and others, 2015). Moreover, the uneven distribution of domestic and care work between men and women may create a barrier to entry of women into labour force, since they may then face the "double-burden" of household and work responsibilities. In addition, even though the share of women working in agriculture has been declining, with 32.3 per cent of all working women being in the sector, it remains a primary source of female employment (ILO, 2018b). The World Bank (2012) reports that these informalities leave women vulnerable with low wages and inadequate social protection.

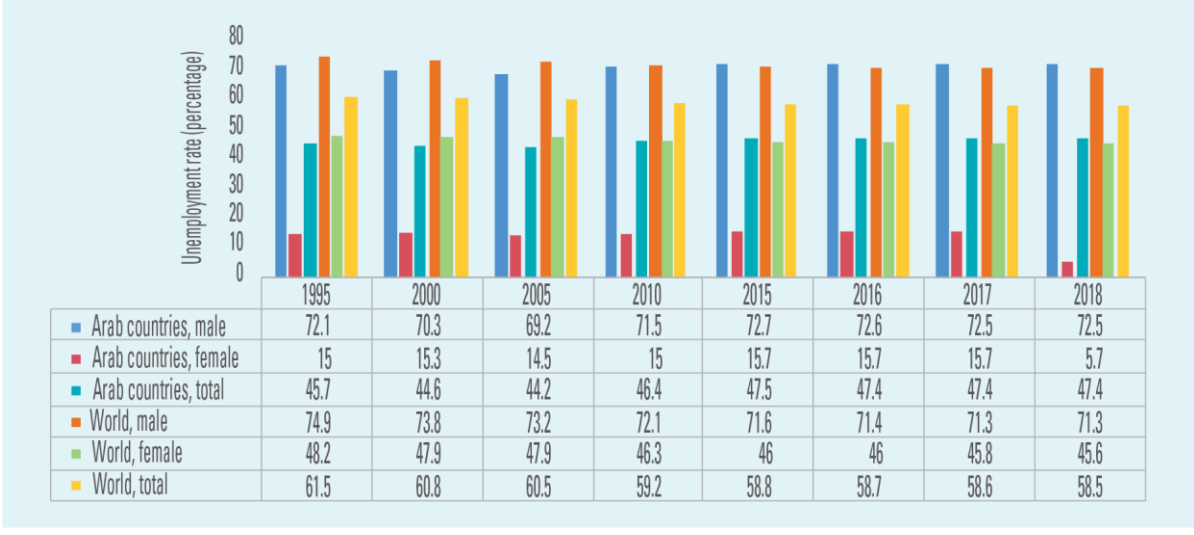
Figure 4.11 Unemployment rate in Arab countries and world by gender, 1995-2018



	1995	2000	2005	2010	2015	2016	2017	2018
Arab countries, male	12.3	11.5	9.6	7.1	8.0	7.7	7.7	7.7
Arab countries, female	17.7	17.8	17.8	17.6	18.8	18.7	18.7	18.7
Arab countries, total	13.4	12.8	11.3	9.2	10.2	10.0	10.0	9.9
World, male	5.0	5.2	5.2	5.2	4.9	4.9	4.7	4.7
World, female	5.6	5.8	6.1	5.9	5.7	5.7	5.5	5.4
World, total	5.2	5.5	5.6	5.5	5.2	5.2	5.1	5.0

Source: World Bank, 2019.

Figure 4.12 Employment rate in Arab countries and the world by gender, 1995-2018



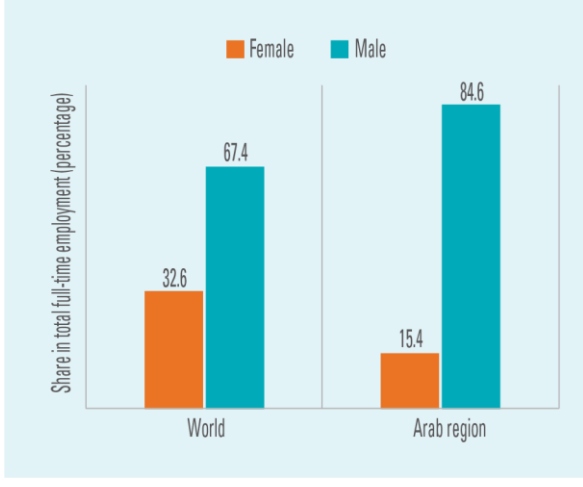
	1995	2000	2005	2010	2015	2016	2017	2018
Arab countries, male	72.1	70.3	69.2	71.5	72.7	72.6	72.5	72.5
Arab countries, female	15	15.3	14.5	15	15.7	15.7	15.7	5.7
Arab countries, total	45.7	44.6	44.2	46.4	47.5	47.4	47.4	47.4
World, male	74.9	73.8	73.2	72.1	71.6	71.4	71.3	71.3
World, female	48.2	47.9	47.9	46.3	46	46	45.8	45.6
World, total	61.5	60.8	60.5	59.2	58.8	58.7	58.6	58.5

Source: ILO, ILOSTAT database. Available at https://ilostat.ilo.org/ (accessed on 1 February 2019).
Note: ILO definition of Arab countries excludes North Africa.

In the region, the public sector remains the primary source of formal employment, particularly of women, for whom the formal private sector offers less chances of decent employment. However, fiscal capacity constraints limit employment growth prospects in the public sector, which, coupled with high labour market informality, enhances job-informality incentives for women and widens the gender wage gap.

As shown in figure 4.13, though female disadvantage in labour markets is a global phenomenon, **the gender gap in total full-time employment is aggravated sharply in the Arab region, with the share of men approximately 5.5 times higher than that of women (ESCWA and ILO, 2019).** Moreover, in the formal private sector, the average female share in full-time employment is only around 15.4 per cent, almost half of that of the global, rendering Arab countries far from attaining gender parity in that type of employment.

Figure 4.13 Share in total full-time employment by gender



Source: ESCWA and ILO, 2019.

Coupled with low participation in the labour market, females in the region suffer low political participation. Average regional proportion of female members of parliament is around 19 per cent, which is significantly below the global average of 24 per cent (Inter-Parliamentary Union, 2019). Women are also underrepresented in local government, with participation of women in local councils ranging from 0.7 per cent of seats in Saudi Arabia to 36 per cent in Jordan (E/ESCWA/ECW/2017/3).

Progress of women in the Arab region faces numerous hinderances, chief among which are the sociocultural beliefs and norms of patriarchy and institutional barriers favouring males, including gender-blind processes.

E. Gender and conflict

Recent conflicts in the Arab region have impacted a large segment of population, generating and perpetuating inequalities, with women and marginalised communities carrying the costs disproportionally. Income and wealth inequality have been at the forefront of sustainable development efforts. With conflicts affecting numerous aspects of human development, they appear to have exacerbated not only income inequality but also multidimensional inequality in the Arab region.

Seven Arab countries suffered at least one episode of major conflict in the last five years, while four others experienced low-intensity conflict (ESCWA, 2019a).[25] Both have had devastating consequences for countries directly afflicted, as well as for neighbouring countries hosting refugees, subverting several decades of concerted efforts to promote inclusive development and reduce multidimensional inequality. Literature on violent conflict distinguishes direct effects, such as killing, wounding, and physical destruction, from indirect effects on economic performance and human development and, hence, on gender inequality.

Analysis here is based on the framework presented by Buvinic and others (2013), which distinguishes first- round effects from second-round effects. The former effects include higher mortality and morbidity (especially of men and children) wrought by direct and indirect consequences of violence and destruction; higher incidence of widowhood; forced displacement and migration; asset and income loss; and increased sexual and gender-based violence. The latter include changes in marriage and fertility behaviour; changes in coping strategies that involve changes in traditional household roles of women (labour reallocation); and changes in household investments in child health and education.

Both first-round and second-round impacts often result in reductions in household income and consumption, triggering coping strategies that have gender implications (Buvinic and others, 2013). Often engaged in active fighting, young men, mainly aged between 15 and 44 years, have the highest mortality, generating a gender imbalance, as the size of the cohorts of young women will be likely larger than those of their male counterparts. Demographic imbalances also suggest that women and children would constitute the majority of displaced populations (World Bank, 2011).

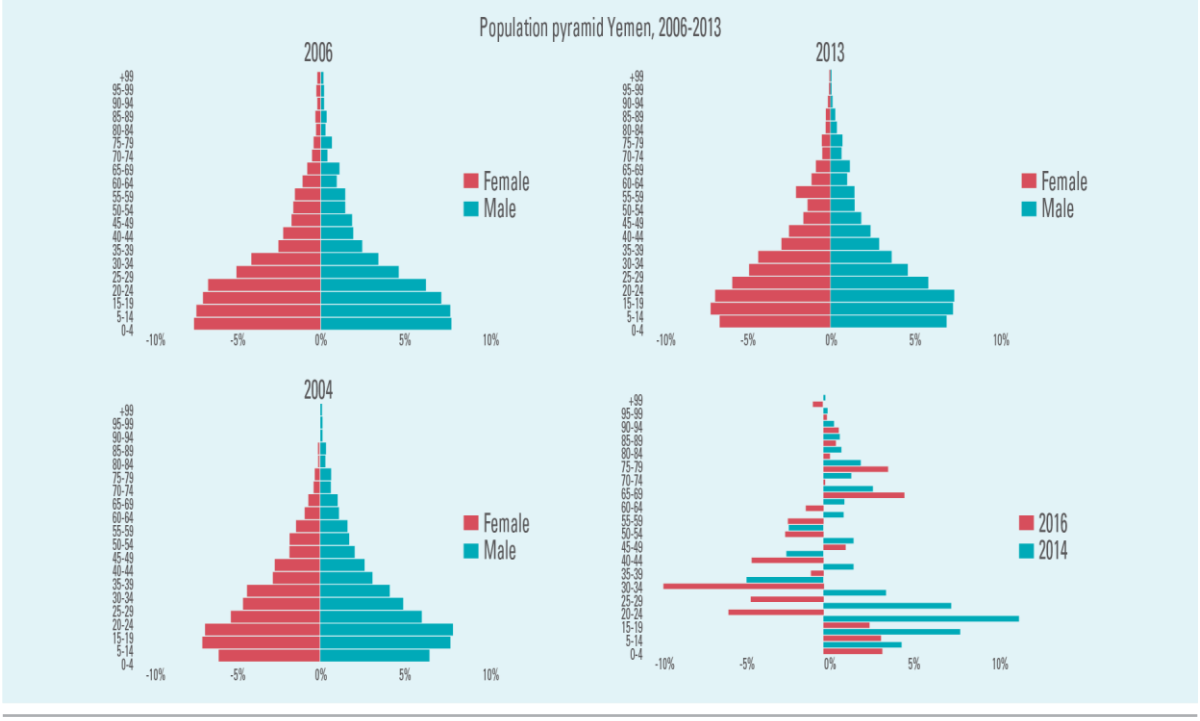
Using household survey data from Household Budget Survey (HBS) and Demographic and Health Survey (DHS) for Yemen in 2006 and 2013, figure 4.14 shows impacts of the conflict that started in 2011 on both young male adults

and young children, particularly those 0-4 years of age. These impacts seem distributed equally between males and females.

Through a combination of increased exposure to infectious disease, acute malnutrition, poor sanitation, and lack of health services, conflicts affect population health beyond direct effects of violence. Yemen has suffered emergency levels of food insecurity, as well as several waves of a cholera epidemic. The proximate determinants of infant mortality are maternal and infant health, with the latter influenced by maternal behaviour. During conflict, both are impacted by reduced access to healthcare.

As violence pushed people to seek more secure conditions for themselves and their families in various regions or countries, **conflicts across the region have generated massive forced migrations.** Of the 60 million displaced people worldwide, close to 40 per cent originate from the Arab region, mainly from the Syrian Arab Republic and the State of Palestine (Nassar, Chatty and Awad, 2018). For displaced populations and refugees, the crisis has resulted in systematic erosion of human development and deterioration of quality of life, with implications for generations to come. Typically, the number of women and children among refugees is disproportionate, with women, almost entirely on their own, required to care for their families, leading to impacts on traditional gender norms. Aside from significant asset loss, displaced populations also experience a dramatic erosion of their human capital and health (ESCWA, 2019a).

Figure 4.14 First round impacts: morbidity and mortality



Source: ESCWA, 2019a, based on DHS (2006) and (2013), and the HBS survey of 2014.

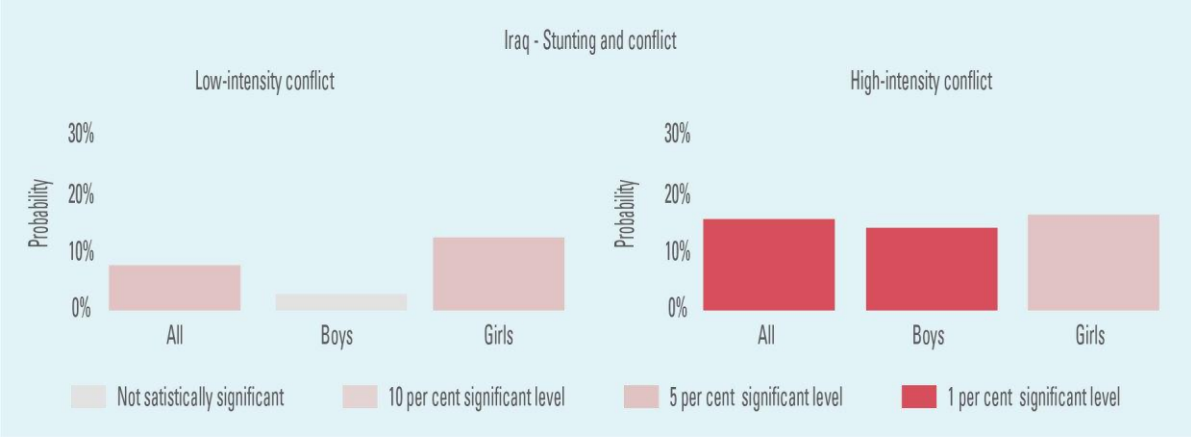
Refugee policies in host countries often translate into gender disparities. Calderón-Mejía and Sieverding (2019) find that various public policies in Jordan and Lebanon have produced differentials across countries in terms of school enrolment. Formal and informal policies in Lebanon appear to have discouraged school enrolment of adolescent girls, whereas public polices in Jordan have kept them in school for longer. Generally, violent conflict has highly gender-specific consequences for refugees and the internally displaced (Buvinic and others, 2013). Langhi (2018) noted also a lack of gender-sensitive approaches in humanitarian appeals in countries like Yemen and Libya.

Conflict environments present women and girls, who are predominantly the most marginalised, with unique challenges, as exposure to violence weakens their situation both within and without the household. Risks faced by young women living in conflict afflicted countries are likely to have negative effects on their sexual health and wellbeing (Neal, Stone and Ingham, 2016). Conflict often has ambiguous effects on nuptiality and fertility; in some contexts, exposure to violent conflict increases likelihood of child marriage, and fertility often follows these marriage trends. In some conflict situations, the mere heightened perception of insecurity or threat of sexual violence for women translates into a higher prevalence of child marriage (CARE, 2015). Indeed, **a recent study by ESCWA (2019a) on child marriage suggests that exposure to conflict is positively correlated with likelihood of child marriage,** which is a human rights violation that prevents girls from obtaining an education, enjoying optimal health, bonding with others their own age, maturing, and ultimately choosing their own life partners (Nour, 2006), and has been found to be associated with intergenerational transmission of poverty (Save the Children, 2015). Moreover, offspring of child marriage are at increased risk of premature birth and death, as well as being more prone to low birth weight and malnutrition.

Exposure to violence in early life has been directly associated with poor educational and health outcomes (Camacho, 2008; Akresh, Lucchetti and Thirumurthy, 2012; Brown, 2018, Valente, 2011, Leon, 2012). Moreover, exposure to violence in "critical and sensitive periods"[26] in the life of the child can lead to health and cognitive declines (Duque, 2017). Childhood stunting is the best overall indicator of child wellbeing and an accurate reflection of social inequalities (de Onis and Branca, 2016). In conflict settings, prevalence of stunting is likely to surge, as food insecurity and deterioration of access to improved water and sanitation make malnutrition probable. Even in places like Iraq, where national rates of stunting for children aged 0-5 declined from 2006-2011-2018, exposure to conflict has subverted these positive trends.

Generally, the impact of conflict on nutritional status of population depends on the nature of the conflict, its duration, how it affects livelihoods and the coping strategies adopted by the community. Figure 4.15 indicates **that inequalities were reinforced by exposure to conflict, which appears to be associated with a higher likelihood of stunting and severe stunting.** Moreover, there are gender differentials in these outcomes; although boys appear more prone to stunting in the baseline data, exposure to both low- and high-intensity conflict increases vulnerability of girls significantly, while vulnerability of boys increases only in times of exposure to high-intensity conflict.

Figure 4.15 Second-round impacts: investments in child health

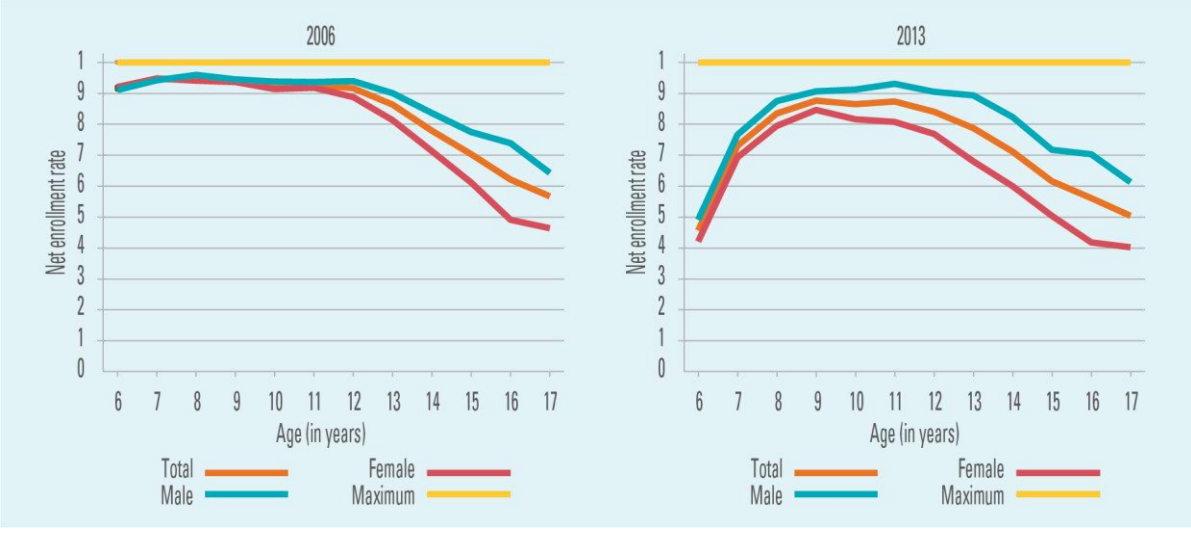


Source: ESCWA, 2018a, based on DHS (2006) and (2013), and the HBS survey of 2014 and UCDP conflict data.

The impact of war on accumulation of human capital amongst civilian populations affected by violence can be substantial and persistent (Justino, 2011). Given the severe long-run effects it can have on individual and household welfare, destruction of human capital during childhood is a well-documented mechanism leading to poverty traps via future labour-market outcomes and economic performance of affected children (Justino, 2011; Mincer, 1974; Schultz, 1961; Becker 1962). In several Arab countries, there is a large contraction of educational attainment following the onset of conflict. Yemen, for example, had been making great strides in achieving universal access to primary education, having achieved in 2006 enrolment rates above 90 per cent for all children aged 6-12 (ESCWA, 2019a). However, that positive trend was reversed by the instability and violence afflicting the country since the 2011 uprisings, and the situation has had a particularly detrimental effect on already vulnerable groups, such as girls.

Figure 4.16 shows differences in enrolment rates by age in Yemen for two years. In 2006, more than 90 per cent of primary-school-age children were enrolled, with virtually no gender disparities until the age of 12. Thus, **Yemen was well on its way to ensuring that all boys and girls complete full primary schooling. However, the 2013 data show a turn for the worse. There was a substantial decline in overall enrolment rates for all ages for all children, but especially for girls.** Delayed entry and higher rates of early dropout led to an "inverted-U" age-enrolment profile (ESCWA, 2019a). That pattern is of concern because evidence suggests that children who enter school late are also more likely to exit early, further reducing their human capital accumulation and exposing them to other negative outcomes (ESCWA, 2019a). Children not enrolled in school today will face worse earning prospects than children who completed their education. The associated reduction in earnings potential will have adverse repercussions. Children who interrupt their educational trajectories will be more likely to rely on government assistance and have a higher incidence of poverty. Similar downward trends are evident for other developmental factors, including nutrition and mortality.

Figure 4.16 Investments in children: age enrolment profile for Yemen



Source: ESCWA, 2018a, based on HBS (2006) and DHS (2013) data.

F. Summary

The Arab region still has a long way to go to achieve gender parity. Even though progress has been made in the past decade, there are persistent gender disparities in health, education, and economic and political participation. Furthermore, numerous conflicts across the region have had prevalent negative effects on the relative socioeconomic status of women.

While great strides have been made towards gender parity in education, numerous conflicts across the region appear to be subverting these promising trends. Moreover, child marriage and high fertility rates of adolescents appear to be on the rise in conflict afflicted countries across the region, generating not only larger gender inequalities, but also marginalisation of certain groups of women, mainly the younger cohorts. Even though the gender gap in education narrowed in many countries, this improvement was not translated into gender parity in labour markets. Women are less likely to participate in the labour force, work mainly in informal sector, and are more likely to be unemployed. Thus, women are one of the region's unutilised resources.

Moreover, all Arab countries have in place family laws – also known as personal status codes – that impose upon women the status of a dependent minor, with respect to marriage, divorce, child custody, and inheritance (UNDP, 2005). Women remain associated primarily with their family roles, and a kind of "patriarchal gender contract" prevails across the region (UNDP, 2005). The cumulative effect is gender-based discrimination and inequality.

Additionally, pre-existing gender inequalities appear to be exacerbated by the dynamics of violence, leaving women and girls at a higher risk of being further marginalised. For many

Arab countries in conflict, violence has destroyed systems of social protection, reduced access to safe services and support, displaced communities, and increased vulnerabilities (ESCWA, 2019a). The consequences appear to be disproportionally dire for women, not only because they may be deliberately targeted, but also because conflict engenders insecurities that reduce women's rights, agency and decision-making power.

5. Inequality Drivers

A. Introduction

This chapter has two main objectives. Based on findings of earlier chapters and elsewhere, section B summarises the major social and economic inequality stylised facts in relation to human development progress or lack thereof. Sections C and D then complement this narrative with three mega trends that arguably drive these inequality outcomes: low productivity and high informality, coupled with high wage-capital inequality; limited fiscal space for social expenditure; and weak institutional and governance frameworks, coupled with influence of natural-resource riches. These factors have debatably created an inequality trap, in which several Arab countries seem to be caged. Analysis of the key drivers is guided by questions such as: (a) Did the growth process improve labour income share and living standards of people? (b) Is the share of capital in revenues dominant in the private sector? (c) Did public expenditure policies support bridging achievements in health and education? (d) Did social assistance in the form of subsidies benefit the poor as expected? (e) Are taxation systems progressive enough to make the societies equal? and (f) What is the role of inequality in autonomy and that of cronyism in shaping these socioeconomic outcomes? Section D is also forward looking; it assesses the escalating fragility of rent-based growth and development models, particularly in view of the waning of oil prices in the past decade, which should impel adopting a new enabling political economy framework.

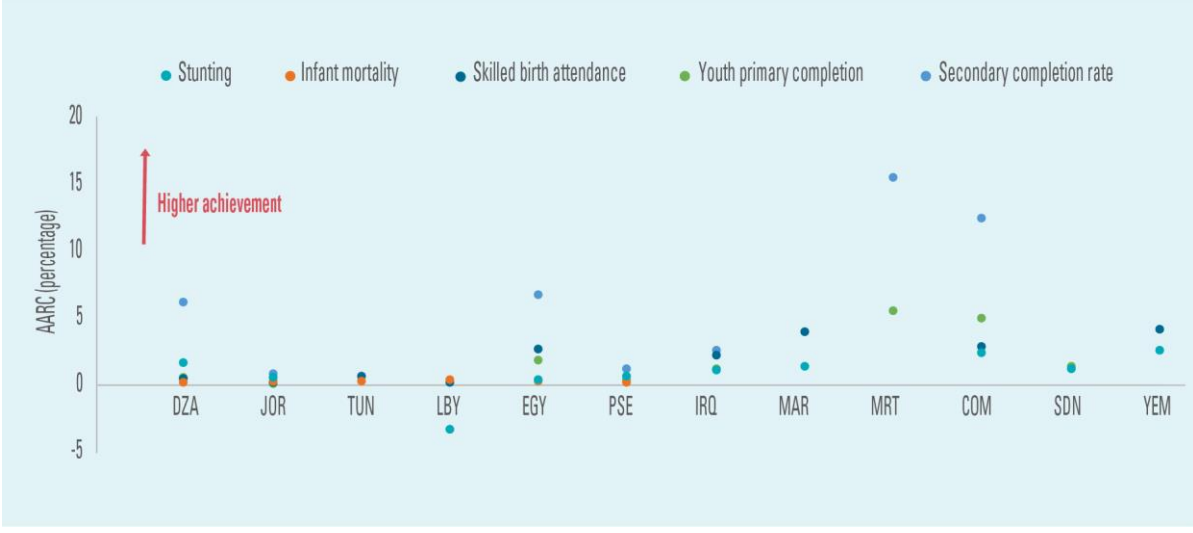
B. Summary of stylised facts

1. Declining trends in inequalities in health and education outcomes are not closely matched with declining inequality of opportunity

As seen in the preceding three chapters, inequality in health and education outcomes is a mixed bag of results, depending on indicator and type of inequality (i.e., spatial, wealth, parent's education, gender, etc.). Figure 5.1 and figure 5.2 present some of the main results found in the household surveys conducted over the period 2000-2015. Note that all indicators, including those of health, are reported as achievements; hence, the wealth ratio measures the richest to the poorest quintiles.

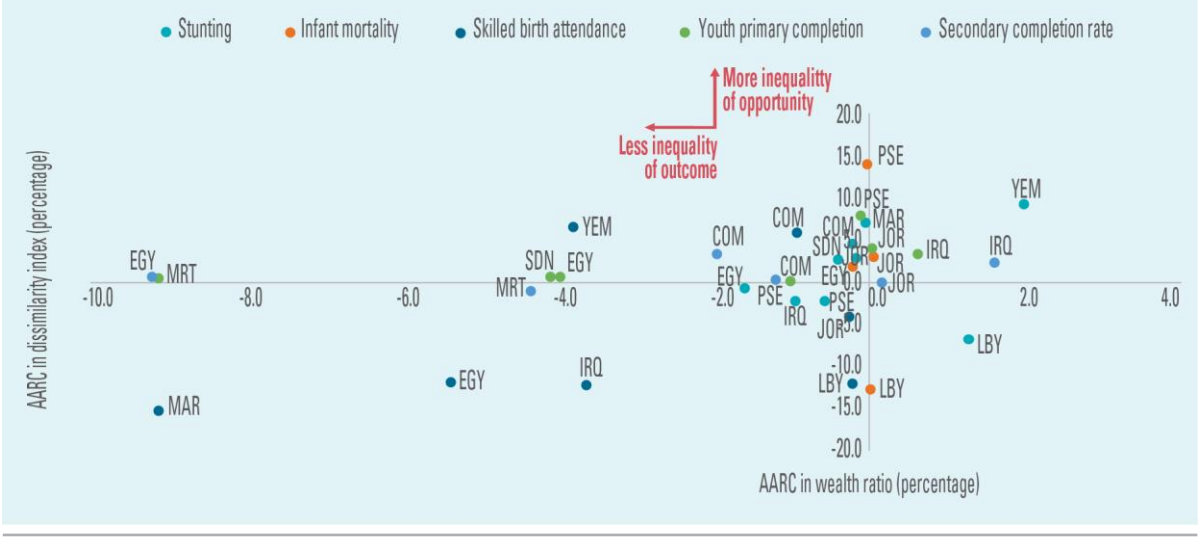
Over the past two decades, the Arab region has achieved significant improvements in health and education, as reflected in the positive average annual growth rates of the corresponding indicators (figure 5.1). These improvements were coupled with decreasing outcome inequalities, with few exceptions in the LDCs and conflict afflicted countries (figure 5.2). Nonetheless gaps remain wide between the richest and the poorest quintiles, as well as among the other socioeconomic groups considered, especially the groups of extremes. As for gender, analysis shows that females are largely on a par with males in terms of human capital.

Figure 5.1 Average annual rate of change (AARC) in selected indicators



Source: Authors' calculations.

Figure 5.2 Average annual rate of change (AARC) in dissimilarity index and wealth ratio for selected indicators

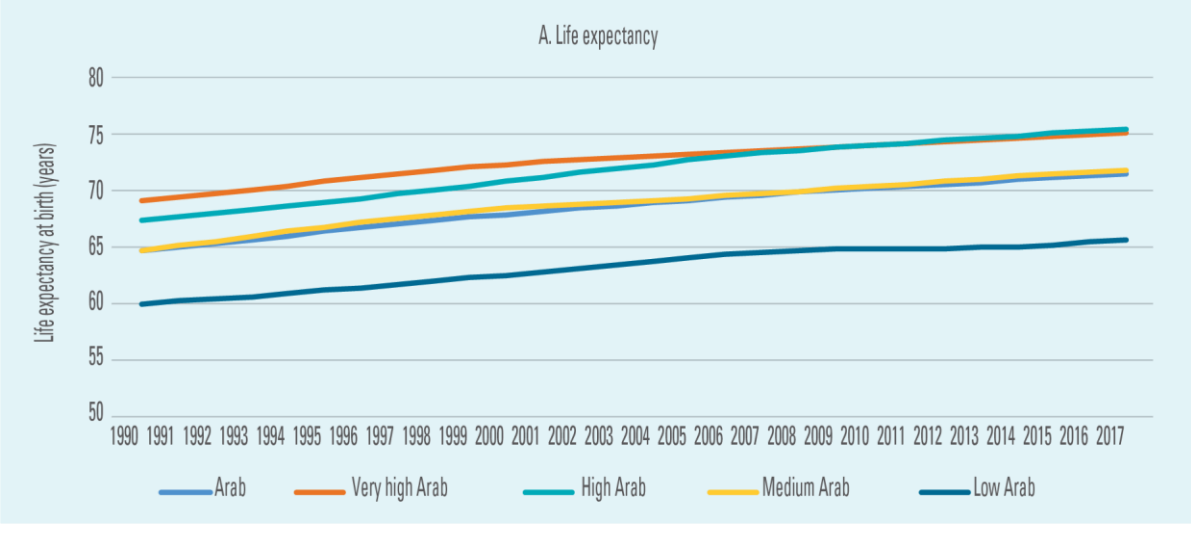


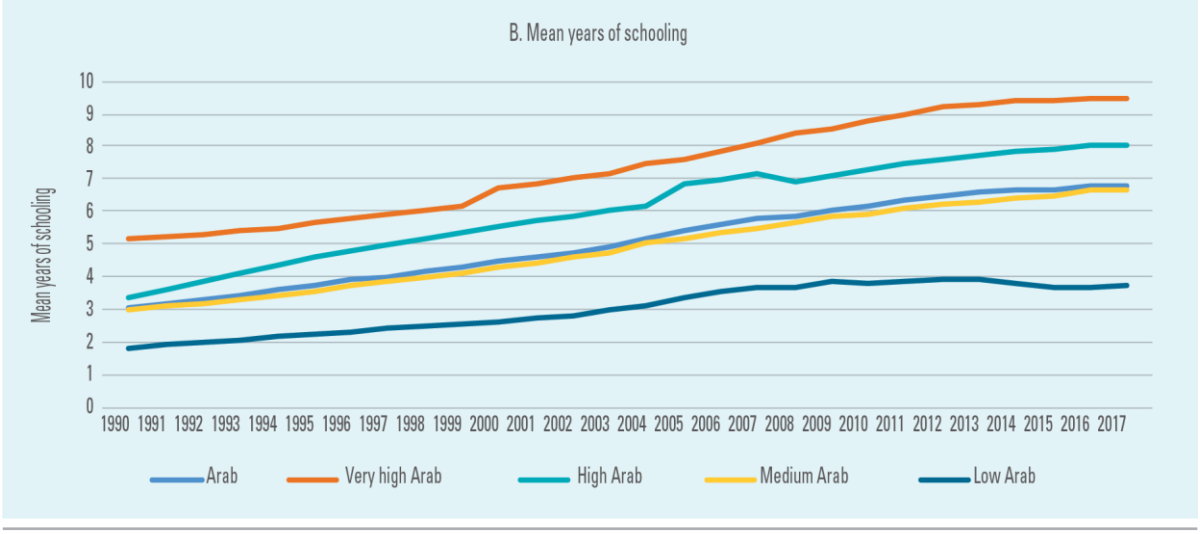
Source: Authors' calculations.
Note: All indicators are reported as achievements; hence, the wealth ratio measures richest to poorest quintile.

IOP as measured by the dissimilarity index reveals some incongruence, with more incidences of increasing inequality in health and education, particularly in higher educational attainments (figure 5.2). In particular, wealth and education of household head remain critical determinants of the health and educational opportunities of

the individual. Hence, inequality of outcome and inequality of opportunity are not necessarily moving in tandem in the region.[27] Generally, **more progress has been achieved in reducing health gaps than education gaps, in terms of both inequality of outcome and inequality of opportunity.** The highest average annual reduction in both forms of inequality was achieved by Morocco in skilled birth attendance, while the highest increase in inequality was for Yemen in stunting (figure 5.2).

Figure 5.3 Trends in life expectancy and mean years of schooling, 1990-2017

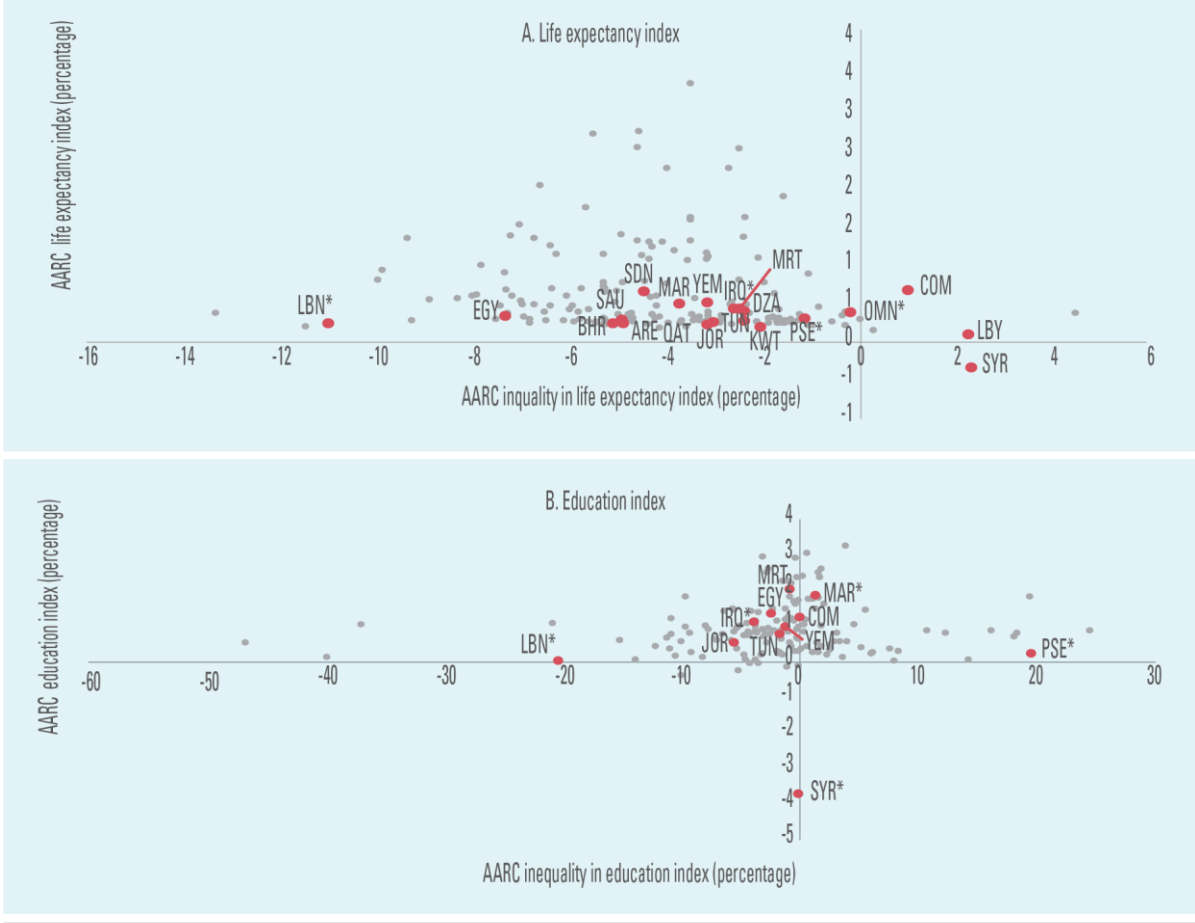




Source: Authors' calculations based on UNDP, Human Development data. Available at http://hdr.undp.org/en/data (accessed on 15 August 2019).

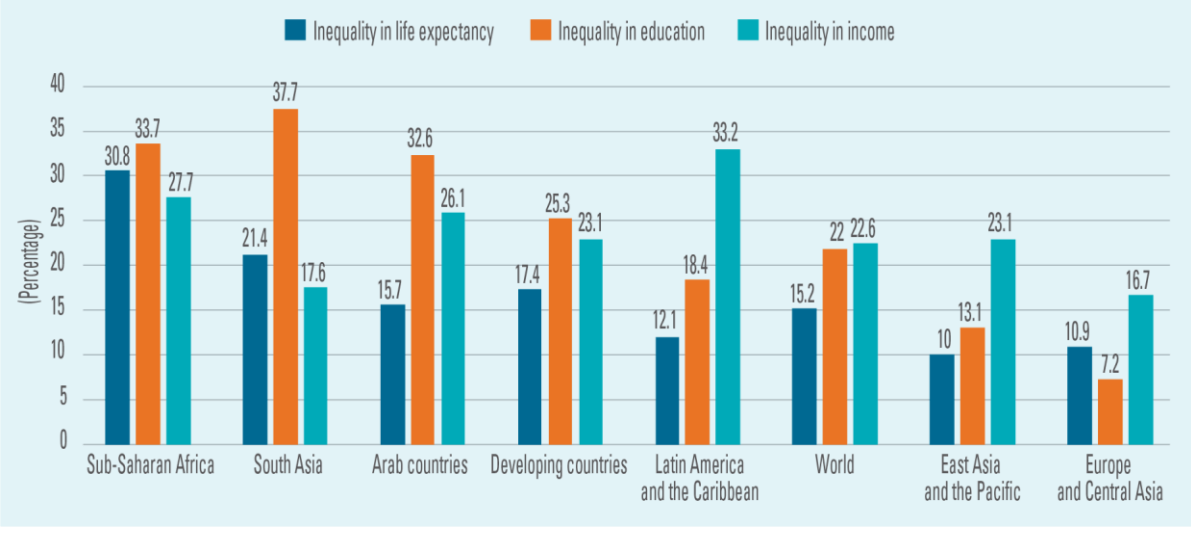
To give an updated comparative assessment of these reductions in inequality of outcome, data from the 2018 Human Development Report (HDR) are reviewed. While HDR relies on different indicators for health and education, the observed outlook of human capital of the region is consistent with our results using household surveys. Average life expectancy increased from 64 years in 1990 to roughly 72 in 2017 (figure 5.3), and mean years of schooling rose considerably from 3.1 in 1990 to almost 7 in 2017. As already noted, probing the outlook for development entails factoring in inequality. As of 2010, the HDR adjusts achievements along each dimension using the Atkinson measure of inequality.

Figure 5.4 Average annual rate of change (AARC) in life expectancy and education indices and their Atkinson measures



Source: Authors' calculations based on UNDP, Human Development data. Available at http://hdr.undp.org/en/data (accessed on 15 August 2019).
Note that for life expectancy, in Lebanon, Iraq, Oman and the State of Palestine, the baseline year is 2011 due to unavailability of data for 2010.
For education, in Lebanon, Iraq and the State of Palestine, the baseline years are 2011, 2012 and 2013, respectively, due to unavailability of data for 2010. For Morocco and the Syrian Arab Republic, the end line year is 2015 and 2016, respectively, due to unavailability of data for 2017.

Figure 5.5 Inequality in Human Development Index (HDI) measures by region (Percentage)



Source: UNDP, 2018.

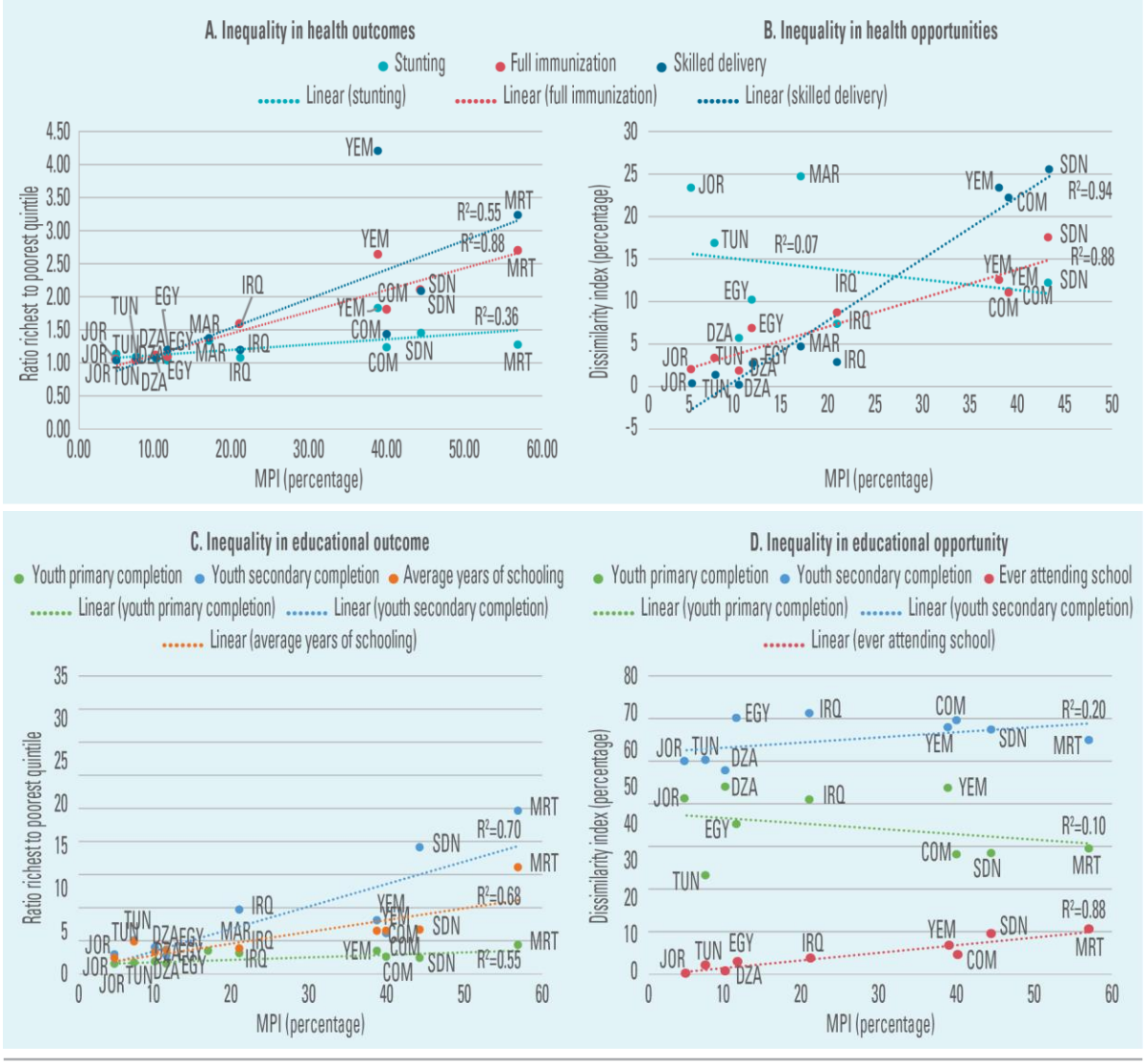
Figure 5.4 shows AARC in health and education indices against their respective Atkinson measures over the period 2010-2017. **As in household surveys, most countries are located in the upper right quadrant, indicating an increase in health and education achievement, along with a reduction in inequality,** though reduction of inequality is, again, more pronounced for health than for education. Put differently, despite their location in the upper right quadrant in figure 5.4B, clearly, the vast majority of countries are clustered around the y-axis, indicating minor changes in education inequality.

With the exception of Lebanon (6.2 per cent), inequality in education remained high in 2017; close to 20 per cent in most Gulf countries and more than 40 per cent in the LDCs. In fact, **average inequality in education in the region (32.6 per cent) exceeds that of the world and that of developing countries** (figure 5.5). Figure 5.4B also shows the Syrian Arab Republic as a distinct negative outlier on the education achievement index. This is not unexpected, given indiscriminate attacks on school facilities and increased security threats amid the intensified conflict in the country, which along with poor governance, scarce resources, and imbalances in political participation drive education inequality. Protracted conflict has thus reversed Syria's development trends and resulted in it slipping from a medium human-development country in 2010 into the low human-development group in 2017.

Overall, the Arab region has high levels of human development inequalities, especially in education and income, compared with other regions, including developing countries. The Inequality-adjusted Human Development Index (IHDI) accounts for distributions of health, education, and income among population and, depending on the level of inequality, "discounts" the dimensions of the

HDI. **Factoring in inequality, the Arab region loses 25.1 per cent of its HDI value in 2017;** thus slipping from being a high human-development region (0.70) to becoming a low human-development region (0.52). The adjustment from HDI to IHDI, mainly due to high levels of inequality in education, is one of the highest average losses globally, and places the Arab countries just behind Sub-Saharan Africa and South Asia. The main conclusion is that while inequalities of outcome in health and education declined, they are still higher than the global average, especially for education.

Figure 5.6 Multidimensional poverty and inequalities in health and education



Source: Authors' calculations.
Note: MPI values are taken from Arab Multidimensional Poverty report E/ESCWA/EDID/2017/2.

2. Poorest countries incur highest inequality burdens

In practice, it is often difficult to disassociate poverty from inequality. Using the Arab multidimensional poverty index (MPI) developed by ESCWA (2017), we examine how inequality of outcome and inequality of opportunity correlate with MPI for selected health and education indicators. Figure 5.6 shows that, generally, Arab countries with a higher level of multidimensional poverty, particularly the LDCs, tend to also have higher levels of inequality in both outcome and opportunity. This correlation is conspicuous for certain health indicators, such as full immunisation of children and skilled birth attendance (SBA). For instance, levels of inequality of outcome and inequality of opportunity in child immunisation in the Sudan, in which MPI exceeds 44 per cent, are almost twice and 9 times, respectively, those of a middle-income country, like Jordan that has an MPI below 5 per cent. This variation is more evident in SBA. While Jordan has reduced inequality in SBA opportunity to near zero, the dissimilarity index of the Sudan is more than 50 times that of Jordan. Similar observations can be made for educational outcomes and opportunities, especially when considering indicators for attending school and average years of schooling. These observations suggest that multidimensional poverty and multidimensional inequality should be addressed simultaneously.

3. Human capital gains set against stagnant income per capita and rising inter- and intra-country income inequalities

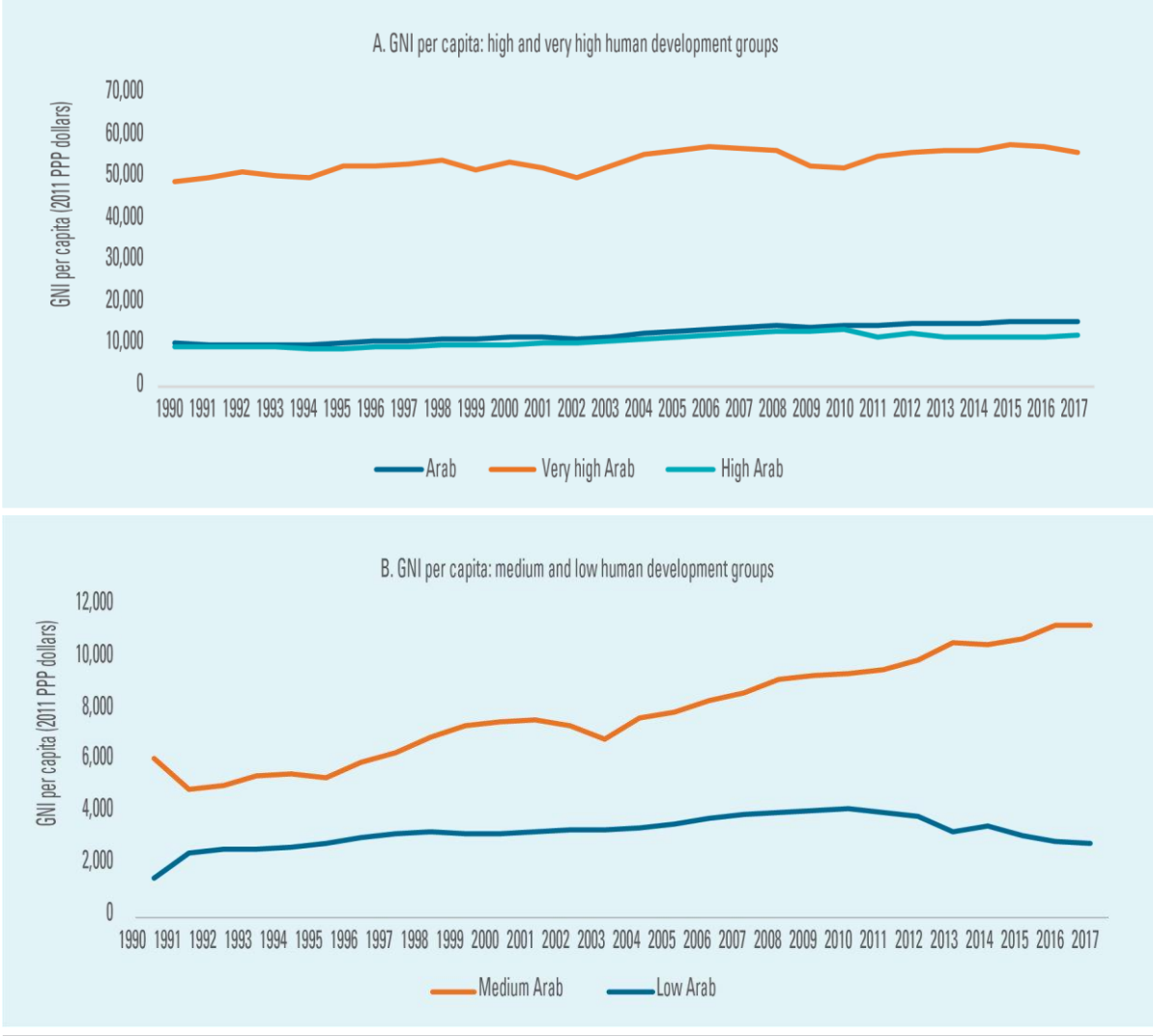
Any discussion of human development in the Arab region should acknowledge that it is highly heterogeneous, with major and rising differences among countries, especially in terms of income per capita. For example, Qatar, which has the highest HDI ranking among Arab countries, has a gross national income (GNI) per capita of around $117,000 (2011 PPP dollars), nearly 80 times that of Comoros. Average GNI per capita for the five Gulf Cooperation Countries, which have a very high HDI score (above 0.8), is significantly higher than that of the OECD, but life expectancy in the latter is 10 years higher. Conversely, Egypt, the State of Palestine, Iraq and Morocco, the four countries that belong to the medium HDI category (0.55-0.7 HDI score), have a GNI per capita close to the average for developing countries, but have better education and health outcomes despite occupation, political instability and conflict afflicting some of these countries. Hence, the stylised fact that the region is richer than humanly developed (Abu-Ismail and Sarangi, 2019) does not really apply if the resource-rich and very high-income group of GCC countries is excluded. Indeed, the other fifteen countries have health and education outcomes close to other developing regions with the same income per capita.

Nonetheless, economic progress in the Arab region did not match the social progress described in the previous section. Income per capita growth remained sluggish in all groups over the 2000-2017 period. Although income per capita (2011 PPP dollars) for Arab countries grew by 50 per cent over the period from 1990 to 2017 to reach $15,700 (figure 5.7), most of the growth took place in the decade from 1990 to 2000. Over the period from 2000 to 2017, GNI per capita rose by only 30 per cent; the second lowest growth rate after Latin America and the Caribbean. Moreover, Arab countries did not grow evenly. Over the period 1990 to 2017, income per capita more than doubled (from 4,893 to 11,217 in 2011 PPP dollars) for the most populous group of medium human-development countries, but only slightly increased for the (mainly oil rich and GCC) very

high and high human-development countries that had already reached comparatively worldwide high levels of income per capita by 2000. Post 2010, progress slowed down for the medium human-development group.

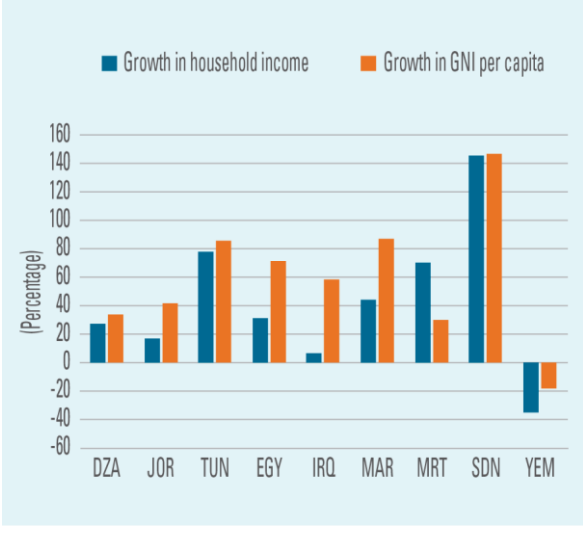
The low human-development Arab countries had the fastest rate of income growth from 1990 to 2010, more than doubling their per capita income; yet progress was reversed since then (declining from $4,170 in 2010 to $2,835 in 2017). This is unsurprising for conflict-afflicted countries, such as the Syrian Arab Republic and Yemen, where protracted violence appears to be wiping away years of development gains, as is evident in the decreasing trend in years of schooling for the low human-development group since 2013.

Figure 5.7 Trends in GNI per capita (2011 PPP dollars), 1990-2017



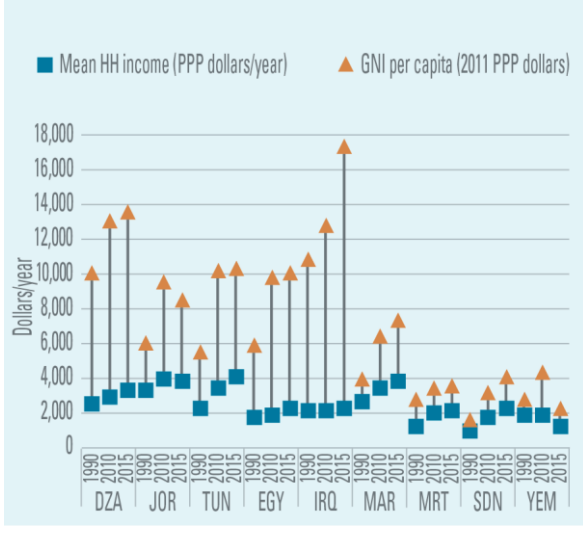
Source: Authors' calculations based on UNDP, Human Development data. Available at http://hdr.undp.org/en/data (accessed on 15 August 2019).

Figure 5.8 Growth in GNI per capita (2011 PPP dollars) and household income, 1990-2015



Source: Household income levels are based World Bank, PovcalNet database. Available at http://iresearch.worldbank.org/PovcalNet/povOnDemand.aspx (accessed on 23 September 2019); and GNI per capita levels are based on UNDP, Human Development data (1990-2017). Available at http://hdr.undp.org/en/data (accessed on 23 September 2019).

Figure 5.9 GNI per capita levels versus household income (Annual)



Source: Household income levels are based World Bank, PovcalNet database. Available at http://iresearch.worldbank.org/PovcalNet/povOnDemand.aspx (accessed on 23 September 2019); and GNI per capita levels are based on UNDP, Human Development data (1990-2017). Available at http://hdr.undp.org/en/data (accessed on 23 September 2019).

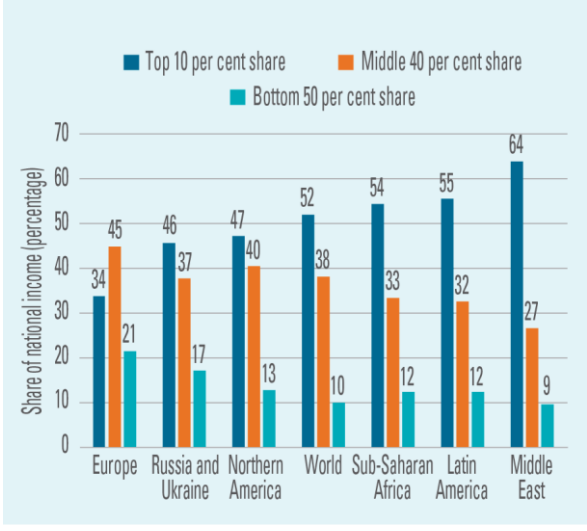
Income growth looks grimmer if we consider household income. Figure 5.8 clearly shows that the growth rate in household income fell below the growth rate in GNI in most countries. Household incomes had been generally stagnant over time. Gaps between GNI per capita and average household income were extensive and had persistently widened over time, particularly in the medium human-development countries, such as Iraq and Egypt (figure 5.9). For the latter, the data reveal that households witnessed a growth of nearly 30 per cent in real income over the period of 25 years, while the economy as a whole grew by more than 70 per cent.

Low human-development countries, such as the Sudan and Mauritania, had minor gaps between GNI per capita and household income. Generally, then, **Arab countries have weak linkages between the aggregate economy and the micro economy, with increases in national incomes not translated into higher household incomes.** The question that then arises is: where or to whom is income allocated?

To answer this question, we must look beyond conventional measures of inequality that are derived from household surveys, since these largely fail to capture total income

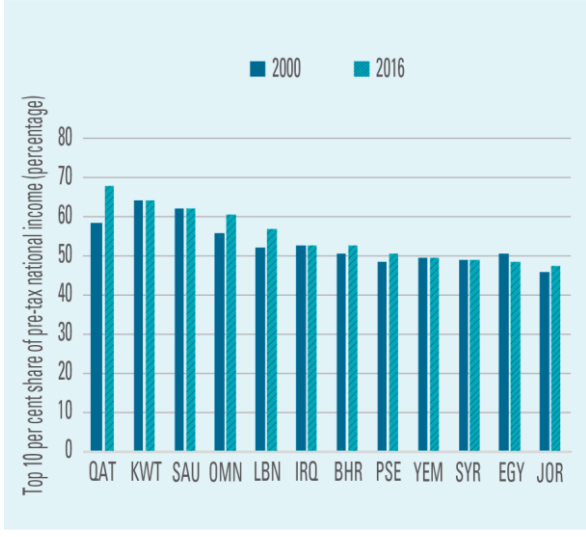
distribution, in particular to those in the top decile. For example, examining the World Inequality Database that relies additionally on national income and wealth accounts, fiscal data from taxes on income and some other sources, reveals that income inequality had sharply increased. In fact, **the Middle East ranks highest in income inequality, with 64 per cent of pre-tax national income captured by the top 10 per cent of earners, while the middle 40 per cent and bottom 50 per cent of population get less than 30 per cent and 10 per cent, respectively** (figure 5.10). Moreover, this high regional inequality average is not attributable solely to oil-rich countries but is quite homogenous across all countries. In several, such as Qatar, Oman, Lebanon and Jordan, the lion's shares of the top earners had even increased over the past two decades, as shown in figure 5.11.

Figure 5.10 Top 10 per cent, middle 40 per cent and bottom 50 per cent shares of national income in 2016 by region



Source: data based on World Inequality database. Available at https://wid.world/data/ (accessed on 10 January 2019).

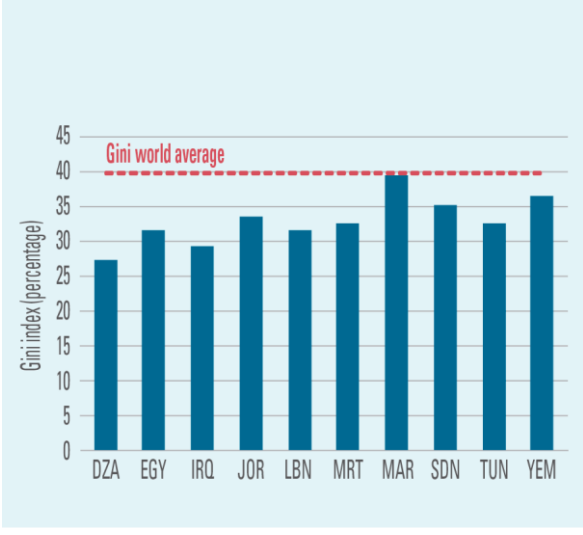
Figure 5.11 Trends in Top 10 per cent shares, 2000-2016



Source: data based on World Inequality database. Available at https://wid.world/data/ (accessed on 10 January 2019).

This finding runs directly opposite to the conventional wisdom on income inequality based on Gini estimates, by which most countries in the region have comparatively low to moderate levels of income inequality (figure 5.12). In fact, many of the countries with a reported moderate level of Gini recorded the largest rising discrepancies between household expenditure surveys and household final consumption expenditures from national accounts, suggesting that it is in these countries where the order of magnitude of the inequality problem is most underestimated. More importantly, inequality among the surveyed households (using the Atkinson measure of inequality, which gives more weight to the lower tail of the income distribution) appears to have been fast rising since 2010 (figure 5.13). Hence, even if we disregard the discussion on the uncaptured income of top earners, inequality poses a major policy challenge, regardless of the measurement approach.

Figure 5.12 Arab countries' Gini coefficient versus that of world



Source: World Bank, 2019.
Note: The reported Gini index for each country is the latest available between 2010-2015. For the Sudan, the latest available Gini index is for 2009.

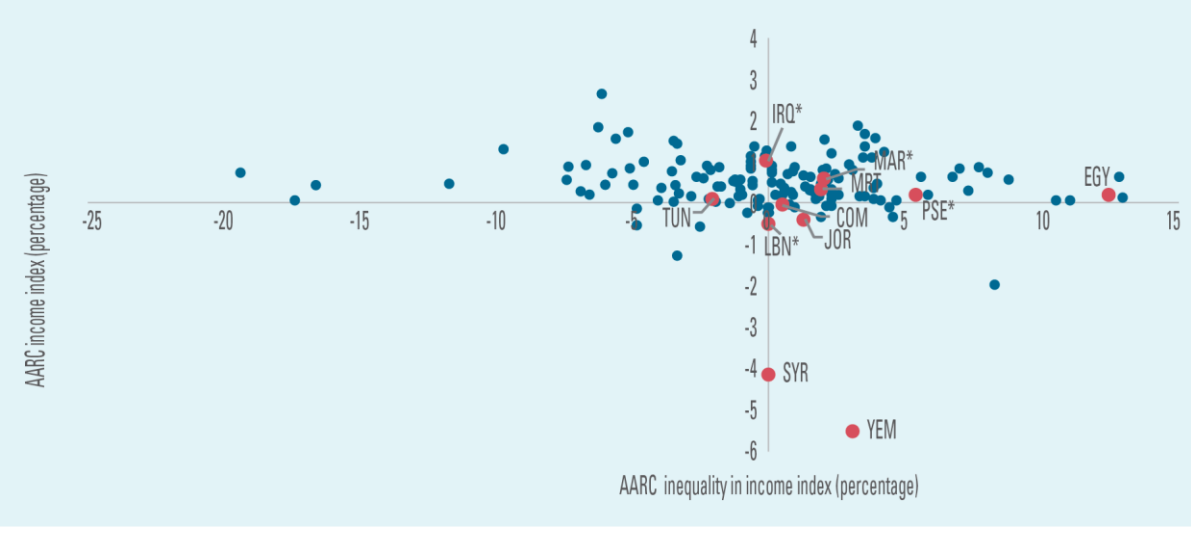
It is important to highlight that these within-country income inequality trends do not consider the impact of large refugee movements, such as the influx of Syrians to Jordan and Lebanon. These displaced populations will have had an impact on the overall level of inequality in the host countries, since the vast majority of refugees are much poorer than their host communities. With the region having several ongoing conflicts, the impact of these population movements on inequality needs to receive far more attention at both the national and regional levels.

As already noted, inequalities between countries are another important aspect of intra-regional inequality and are also fast rising. The gap between the very high and low human-development group has increased dramatically. In 2010 the average GNI per capita of the former was 13 times the latter. In 2017, it reached a multiple of 20. Corroborating evidence of the enormously large intra-regional inequalities can also be found in the fact that the total wealth of the 42 richest Arabs (which according to Forbes 2017 list is 123.4 billion dollars) exceeds the GDP of the Sudan, Yemen, Mauritania and Comoros (figure 5.14). An interesting observation when probing the Forbes list is that around 40 per cent of those who made it had previously held government or political positions or were closely affiliated with government officials and politicians. To a certain extent, this signals deep entrenchment of crony capitalism and nepotism in the Arab region, as will be discussed later.

In conclusion, the above analysis suggests that **inequality levels in the Arab region are higher than commonly assumed.** Increases in national incomes, modest as they may be, are not systematically translated to higher household incomes, thus delinking the growth process from its social impact and producing two contradictory inequality narratives.
As argued in the ESCWA Vision 2030 Report (2015), by the 1990s, the Arab economic development model had reached its limits, which is evident in the significant deceleration of HDI progress since then and more so since 2010. This model could not deliver on growth or decent employment and fell short of meeting the aspirations of an increasingly educated youth and the middle class.

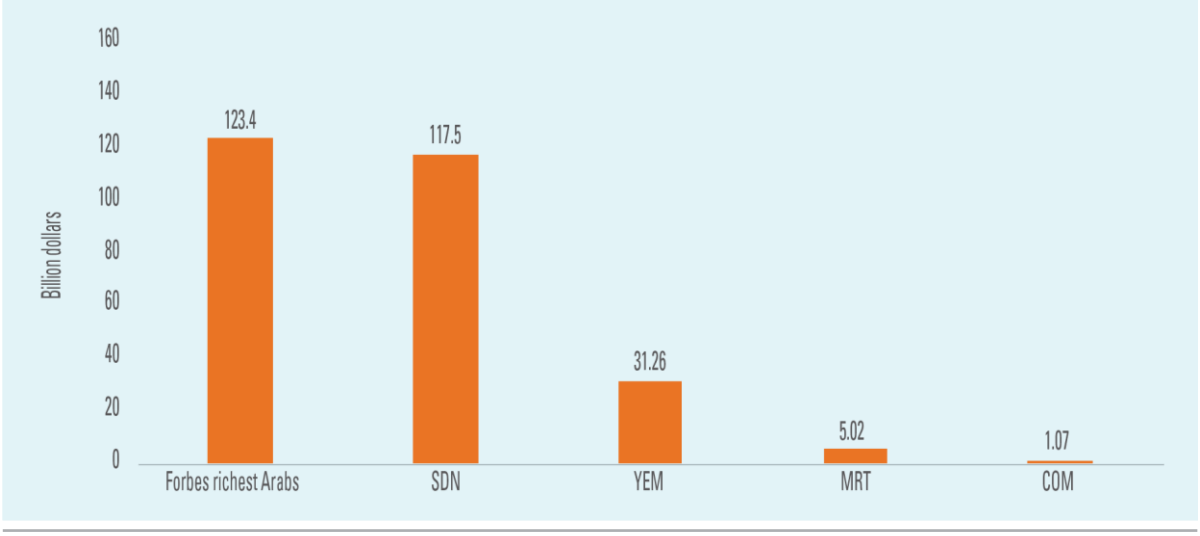
Socioeconomic inequalities are propelled by complex economic and political structures, and these are addressed in the next section.

Figure 5.13 Average annual rate of change (AARC) in income index (i.e. normalized GNI per capita, 2011 PPP dollars) and its Atkinson measures, 2010-2017



Source: Authors' calculations based on UNDP, 2018.
Note: For Iraq, Lebanon and the State of Palestine, the baseline years are 2011 and 2013 respectively due to data unavailability in 2010. For Morocco and the Syrian Arab Republic, the end-line year is 2015 and 2016 due to data unavailability in 2017.

Figure 5.14 Wealth inequality: richest Arabs versus GDP of Arab LDCs in 2017



Source: GDP from World Bank, 2019; and Forbes, 2017.
Note: Figures are reported in current dollars.

C. Inequality drivers

1. Economic reforms squeezing the middle class

The income and wealth inequality stylised facts discussed above are in large part due to the impact of liberalising economic reforms. To understand why, it is useful to review briefly how these reforms are supposed to work. Economic reforms have two components: a short-term stabilisation component, and a longer-term structural adjustment component. Stabilisation primarily aims to reduce inflation and deficits (budget and balance of payments) and correct "wrong" prices. Two examples of such 'wrong prices' that haunted several Arab governments are the overvalued official exchange rate and undervalued or heavily subsidised fuel or commodity prices. Right prices are necessary for efficient and sustainable use of resources, as well as ensuring specialisation in areas where the economy is most productive. This will boost domestic production and competitiveness, leading to high growth led by exports and inflows of foreign investment. The resulting surpluses in the current and capital accounts reduce balance of payments deficit and restore equilibrium to demand and supply of foreign currency. Usually, therefore, after episodes of macroeconomic instability, restoring stability is the first and foremost concern of agreements between governments and the IMF.

Will restrictive stabilisation-focused monetary and fiscal policies translate into more investments and better-quality jobs? The answer offered by Breton Woods Institutions (the IMF and the World Bank) is a conditional yes. If accompanied by complementary medium- and long-term structural adjustment policies, such as trade liberalisation and regulatory/governance reforms, stabilisation will lead to higher private sector and foreign investment, growth, employment generation, and productivity growth. Poverty reduction and an expanding middle class would then be the final outcomes.

Does the theory work? The evidence is mixed. Let us consider the part where it does seem to work. Indeed, several Arab country experiences show that austerity measures can deliver lower inflation. Restrictive monetary and fiscal policies (raising interest rates, imposing taxes and slashing subsidies) can restore macroeconomic stability and in some cases even restore growth. However, economics and social policy literature is replete with examples where structural adjustment policies failed to induce higher productivity and long-term growth. In fact, evidence from the region suggests that, in the absence of high economic governance quality, some key components of liberalisation programmes, particularly trade liberalisation, privatisation and financial deregulation, have exacerbated crony capitalism and worsened socioeconomic inequality. Thus, as discussed earlier, economic growth, albeit modest by global comparison, would be restored in the aggregate, but with little trickle-down effects.

This is, for example, what happened in Egypt's first reform experiment during the 1990s. From the late 1990s to 2010, micro surveys were indicating very sluggish growth of household consumption expenditure, while aggregate macro-level national accounts covering the same period were pointing fast growth in per capita private consumption expenditure. Essentially, there were two post-stabilisation narratives: a mainstream story based on low inflation and higher aggregate GDP growth, and another less rosy one coming from the sectoral and micro data showing higher poverty,

vulnerability and informal sector employment with declining real wages. Through their impact on prices and real wages, stabilisation and structural adjustments had thus built-in mechanisms that specifically harmed the vulnerable lower middle class, even when growth in the economy as a whole was restored. Meanwhile, as other data on distribution of income and wealth to the top 1 per cent showed, inequality was much higher than recorded by household expenditure surveys, which is an important issue since it touches on the grievances of middle-class youth, who played a pivotal role in the 2011 uprisings (UNDP, 2011).

Impacts of economic reforms in other oil-poor middle-income countries, such as Jordan, Tunisia, Lebanon and Morocco, and in the LDCs, such as the Sudan, had similar aspects to this middle-class squeeze. The cardinal challenge facing each of these countries is that its lower middle class, who constitute the majority of the middle class, are located right above the vulnerability line, and thus even a small increase in prices will cause them to fall into moderate poverty and become vulnerable to extreme poverty (Arab Middle Class report, ESCWA 2015). Moreover, **when impact of recent inflationary episodes resulting from devaluation in several of these countries on changes in real income and expenditure is factored in, we find that poverty may have increased.**

This narrative is reflected neither in poverty lines based on purchasing power parity (PPP) nor in Gini estimates. A snapshot of headcount poverty rates in 1990 and 2015 across a wide range of poverty lines, starting from $0.5 per day and ending at $10 per day, suggests that poverty declined regardless of the choice of poverty line (although at a much slower pace in the region, relative to the global average). Moreover, it shows that a high share of the population in the Arab region is clustered between the $1.9 and the $3.5 lines. In other words, extreme poverty is low in Arab countries, but vulnerability to it is high. The policy implication is that the negative (or positive) poverty impact of social and economic policies will be comparatively higher in the region (Abu-Ismail and Kiswani, Background paper to the ASDR).

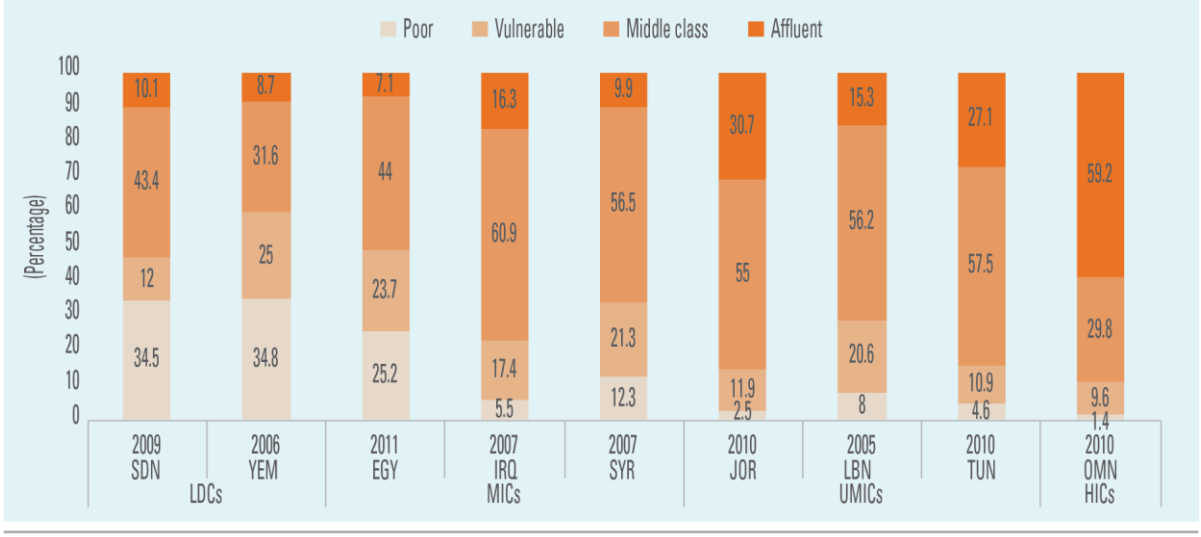
National poverty lines give an alternative perspective. As they build on household specific characteristics to estimate basic needs, national poverty lines have several advantages. However, their main limitation is lack of comparability across countries, due to differences in poverty definitions, welfare measurement techniques, survey designs, questionnaires, etc. To minimise these comparability problems, in 2015, using household income and expenditure surveys in nine Arab countries,[28] comprising over two-thirds of the Arab population, ESCWA led a research effort with a common measurement approach to examine distribution of population across four economically distinct household categories (poor, vulnerable, middle class and affluent). The question of what happened to the middle class after the Arab spring was pertinent at the time and provided the motivation for this study.

To ensure consistency with national definitions, the study harmonised, to the extent possible, the poverty measurement techniques applied in national poverty assessments of the countries concerned (a task that was made easier by the fact that these assessments were all conducted with technical support by the World Bank and the UN, and, hence, had applied very similar poverty definitions and measurement

procedures).[29] Thus, a household whose expenditure is less than the lower threshold for the cost of basic needs is considered 'poor', while a household whose expenditure lies between the lower and upper thresholds of the cost of basic needs is considered 'vulnerable'. The middle class were correspondingly defined as households whose expenditure lies above the upper threshold and below the minimum line for affluence. The latter is defined as the level of expenditure on non-essential goods and services equivalent to the value of the lower poverty line (Abu-Ismail and Sarangi, 2015). This definition draws on the fact that poor households seldom have much choice in their expenditure decisions. Non-food expenditure choices, particularly non-essential ones (such as air conditioners, washing machines, cars, etc.) are a main feature of the expenditure of the middle class and affluent households.[30]

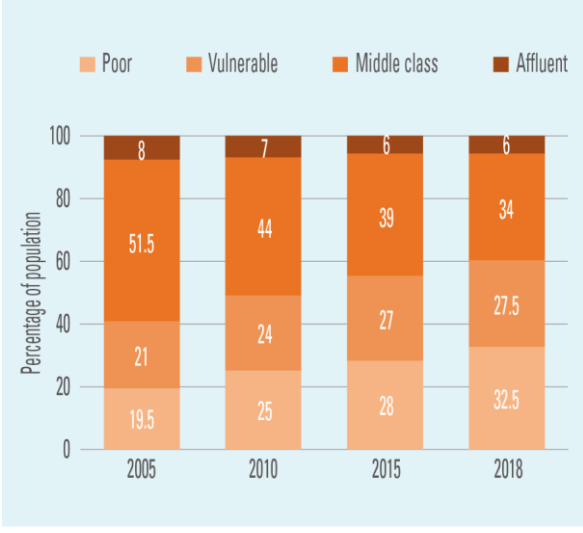
The results shown in figure 5.15 confirm that, up to 2010, the middle class constituted nearly half the population of the nine Arab countries (47.3 per cent). The (population weighted) regional average for poverty was 21 per cent and, except in Yemen and Egypt, headcount poverty did not exceed 13 per cent. An additional 20 per cent of the population were vulnerable. On average, 12 per cent of the population belonged to the affluent category, but, given their higher expenditure per capita, Jordan, Tunisia and Oman recorded significantly larger shares.

Figure 5.15 Population distribution across poor, vulnerable, middle class and affluent groups, 2005-2010 (Percentage)



Source: E/ESCWA/EDGD/2014/2.
Note: The household-specific cost of basic needs approach to define the food and non-food components of the poverty line, following the methodology in El-Laithy, Lokshin and Banerji (2003).

Figure 5.16 Population distribution across poor to affluent economic groups in Egypt using national definitions, 2005-2018



Source: Estimated based on Abu-Ismail and Sarangi, 2015; and Egypt Independent, "CAPMAS: 32.5 percent of Egyptians live below poverty line", 30 July 2019.

Interestingly, the study reported little change in poverty, vulnerability and size of middle class over the decade from 2000 to 2010, with the exception of Egypt, where economic pressure on the Egyptian middle class was clearly evident over the period from 2005 to 2010. These trends provide a basis for understanding the economic concerns of the vulnerable and lower middle-class groups in the period leading up to the Egyptian revolution (Abu-Ismail and Sarangi, 2015). It should be noted, however, that **much has changed in the region since 2010. Poverty and vulnerability are expected to have stagnated or increased in most Arab countries, due to factors related to conflict and economic recession.** Adjusting estimates to reflect the impact of these factors, ESCWA estimated the regional average for poverty in the nine countries to have increased to 26 per cent and the size of the middle class to have shrunk to 42 per cent of population in 2015. As poverty worsened even further in conflict afflicted countries (Syrian Arab Republic and Yemen), and even in some other countries due to economic reforms (for example in Egypt as shown in (figure 5.16), the size of the middle class is expected to have shrunk even further since then.

The conclusion to draw is that the growth process from 2000 until today was neither pro poor nor pro middle class. The mechanism through which national income is channelled to households is crippled, which certainly calls for addressing the contraction of middle class and the worsening of its wellbeing, as well as the repercussions of that on political stability. Two aspects of economic reforms that appear to have propelled these inequalities are lack of structural transformation and constrained fiscal policies. These are discussed in the following sections.

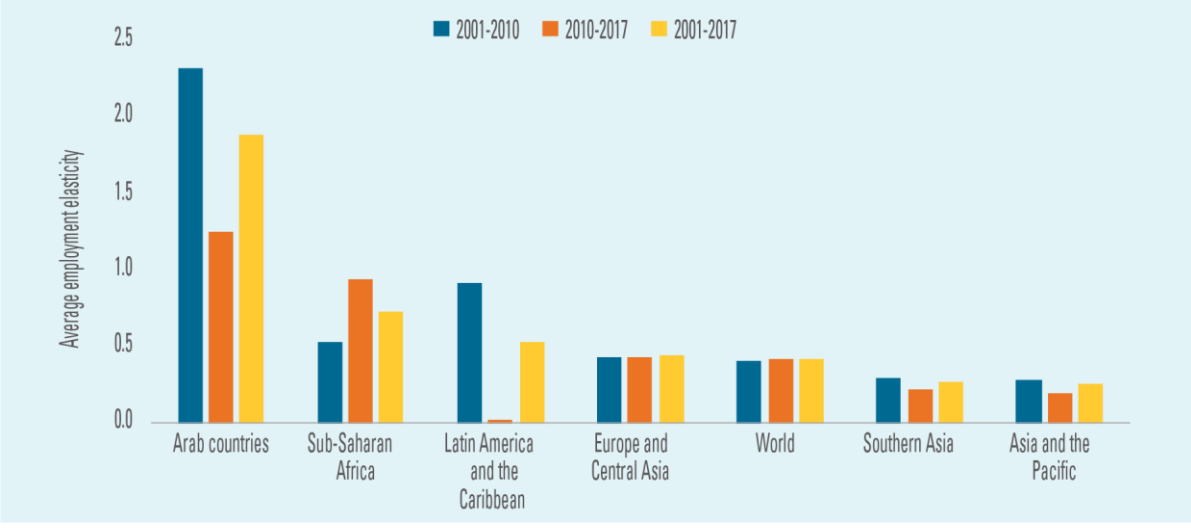
2. Lack of structural transformation, poor labour market outcomes and growing inequality between wages and capital

A prerequisite for reducing socioeconomic inequalities is having inclusive economic growth. However, as articulated in SDG 8, the latter would be largely infeasible without provision of inclusive productive employment. The compelling need for an integrated growth-development paradigm necessitates assessing the status quo of Arab labour markets. Figure 5.17 presents employment-output elasticity, defined as the responsiveness of employment to a change in economic output. The Arab region appears to have a comparably high employment-output elasticity, indicating that growth was not jobless. Still, elasticity nearly halved in 2010-2017 relative to 2001-2010. This can be contextualised

by taking into consideration the rent economic structure that the region has long relied upon, and which paved the way for an inflated public-sector employment, which is the chief source of formal employment. Nonetheless, since late 1980s, and even more so over recent years, repeatedly low and fluctuating growth episodes, in both oil-exporters and non-exporters, significantly limited public sector capacity to absorb excess labour supply. Simultaneously, the role of the formal private sector in employment expansion was limited and did not rise to the challenge of absorbing the growing influx of labour market entrants. Instead, most employment opportunities arose in low value-added and low paying informal service sector activities. In short, many of the jobs created were largely far from being decent.

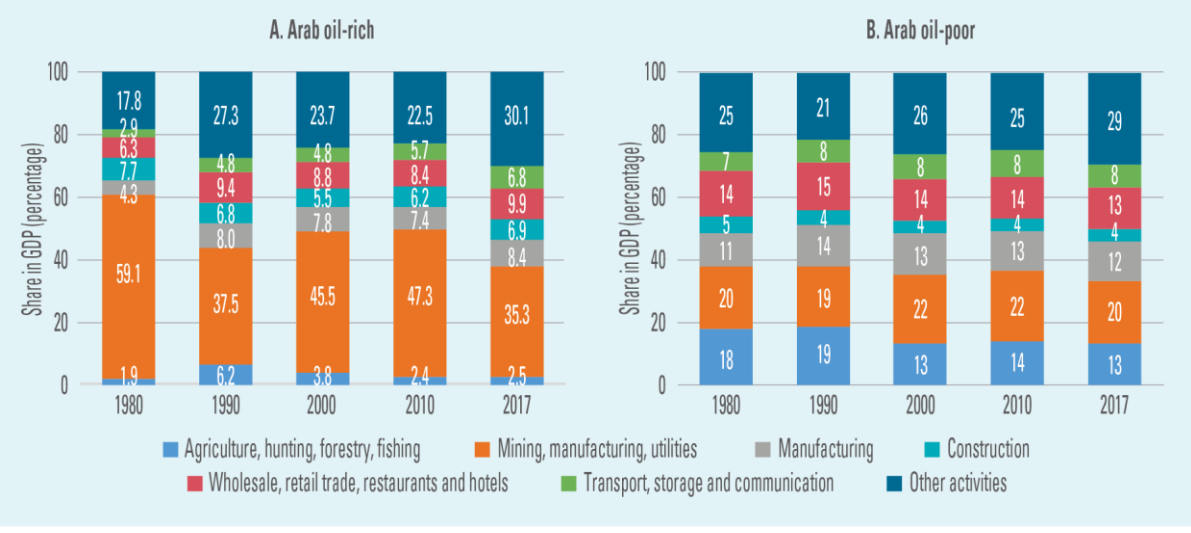
The challenge facing Arab economies is not limited to public-private imbalances but extends to overall lack of economic structural transformation. Figure 5.18 depicts shares of sectors in GDP in Arab economies over 1980-2017. Evolution of sectoral growth of Arab economies over this period shows significant volatility in the share of the hydrocarbons sector in GDP in oil-rich countries (it declined from 59.1 per cent to 37.5 per cent over 1980-1990, then rose to 47.3 per cent in 2010, to decline to a low of 35.3 per cent in 2017). These trends are in line with movements in oil prices, while the structure of Arab oil rich countries in 2017 remained very similar to that in 1990, prior to the era of rising oil prices from 2000-2010. Moreover, since 1990, services and other activity categories continued to be the primary growing sectors in both oil-rich and oil-poor countries, at the expense of agriculture. Employment shares moved in the same direction, from agriculture to services (figure 5.19). Workers moving from agriculture to services are likely to be engaged in low value-added services. The fastest rate of employment growth was recorded in the construction and internal trade sectors in oil-poor countries, while employment shares in other activities also grew slightly in oil-rich economies.

Figure 5.17 Employment-output elasticity, 2001-2017



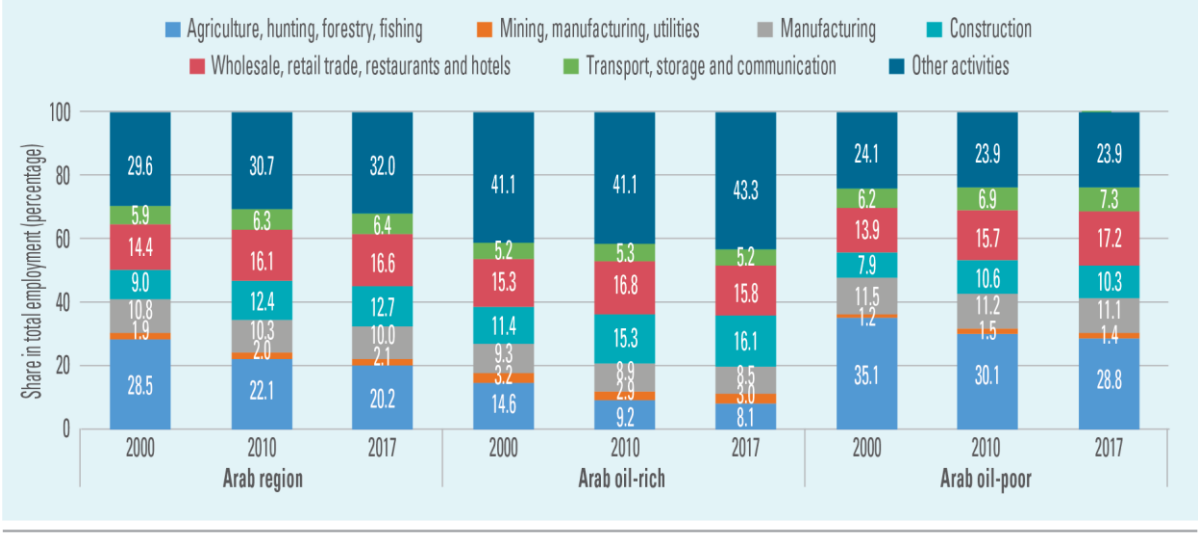
Source: Authors' calculations based on World Bank, 2019; and ILO, 2018c.

Figure 5.18 Sectors' shares in GDP in Arab oil-rich and oil-poor countries (Percentage)



Source: Authors' calculations based on United Nations Statistical Division, 2017.

Figure 5.19 Sectors' shares in total employment in Arab oil-rich and oil-poor countries (Percentage)



Source: Authors' calculations based on ILO, 2018c.

The poor economic structure is manifested in poor labour market outcomes, as well as in labour market informalisation. As previously noted, the Arab region performs poorly in labour force participation. **LFPRs have been generally stagnant since the 2000s, with persistent gender and youth gaps** (figure 5.20). In fact, in the Arab world,

LFPR was the lowest worldwide in 2018; mainly due to low female economic participation. As shown in chapter 4, Arab females are largely on a par with males in educational attainment. Yet, these gender gains have not been translated into the labour markets where gender gaps persist, with males having a LFPR 3.5 times higher than that of females. In nearly two decades, female LFPR only increased by 1 per cent to remain, at around 21 per cent, the lowest in the world.

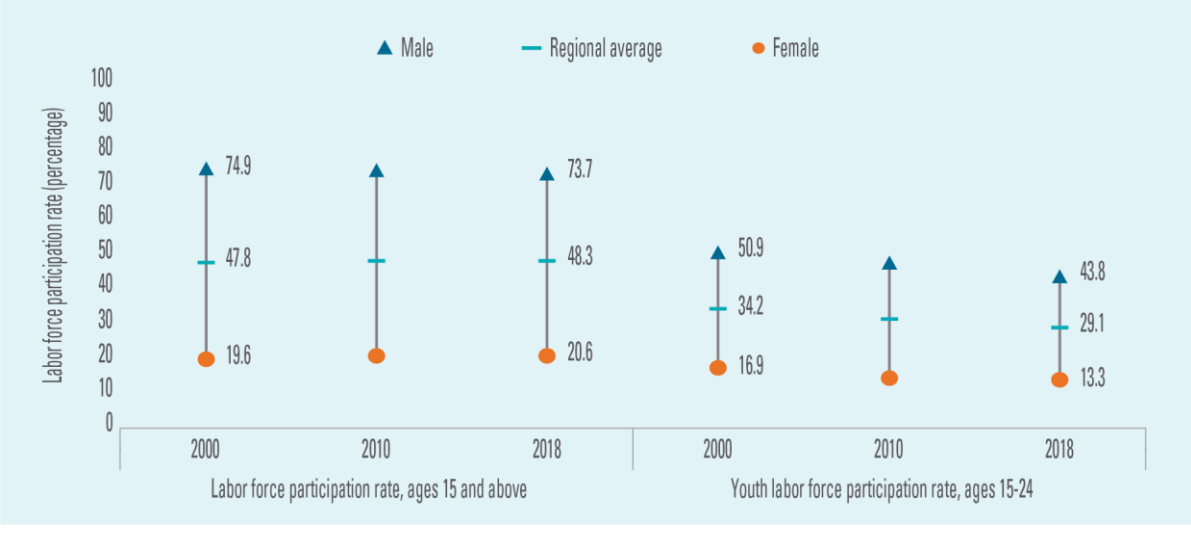
The region also suffers a very low youth LFPR that has been worsening, dropping to 29.1 per cent in 2018 (figure 5.20). Various factors contributed to this decline, including: increase in educational attainment of youth, especially females, which may delay their entry into labour markets; increase in youth emigration as they seek better job prospects oversees; and increase in discouraged workers among the youth, who give up looking for a job after prolonged periods of unemployment. The latter phenomenon is reflected in high rates of youth who are not in employment, education or training (NEET) across the region, which exceeded 20 per cent in non-GCC countries, such as Algeria and Egypt, in 2017 and surpassed 40 per cent in conflict-afflicted countries, such as Yemen in 2014 and Iraq in 2012 (ILO, 2018c). In fact, reported unemployment rates, especially for youth and females, underestimate actual unemployment, as they overlook discouraged workers who do not even enter labour markets. Figure 5.21 presents unemployment rates disaggregated by age and gender across the region. The aggregate regional unemployment rate declined to near 10 per cent in 2018, but this decline predominately reflects improvements for males. **Gender gaps remained persistent, with female unemployment rate (18.7 per cent) more than double that of males (7.7 per cent).** Clearly, female disadvantage in labour markets is more pronounced among young females whose unemployment rate was nearly 38 per cent and whose LFPR actually dropped to less than 15 per cent in 2018. Moreover, the slight increase in female economic participation was more in the form of rising unemployment rather than employment (Assaad et al, 2018).

Similarly, the youth disadvantage is manifested in higher unemployment rates of 26 per cent. This points out to two key challenges. The first one is the large youth bulge and the high number of graduates, which outpace employment creation within the present economic structure. The second is the impaired school-to-work transition, partly due to the lack of an enabling learning environment that provides younger generations with skills demanded by labour markets, particularly in the private sector. Moreover, as previously mentioned, the increase in low-value added and informal sectors leads to low-quality low-paid jobs, especially among youth. As the fourth industrial revolution proceeds, the need for reassessing educational systems and reskilling workers, particularly the youth, becomes pressing.

Hence, when the above trends in GDP composition are combined with outcomes such as high informality, low labour force participation and high unemployment, especially among youth and women, it becomes clear that the growth process was neither productive nor inclusive. Based on ILO (2018), average informality levels in the five non-GCC Arab countries (Syrian Arab Republic, Yemen, Jordan, Iraq and State of Palestine) exceed the world average, with 68.6 per cent of total employment, including agriculture, being informal. The agriculture sector typically drives informality levels upwards. Hence, in

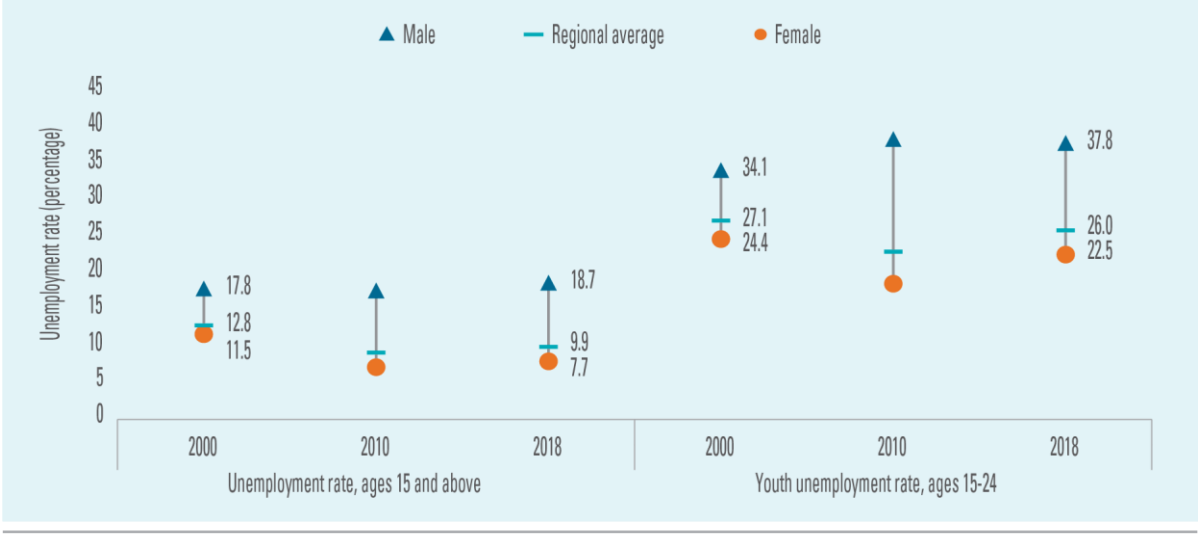
accordance with SDG target 8.3, we examine non-agriculture informality levels better to assess informality across the remaining economy. Strikingly, while excluding agriculture led to considerable reductions in informality levels for the world average (from 61.2 per cent to 50.5 per cent) and other regions, including developing countries (from 69.6 per cent to 59.5 per cent), in these Arab countries average informality levels only declined to near 64 per cent. This underscores the bloating of informal economies beyond the agriculture sector.

Figure 5.20 Labour force participation rate (LFPR) in Arab region by age and gender, ILO modelled estimates



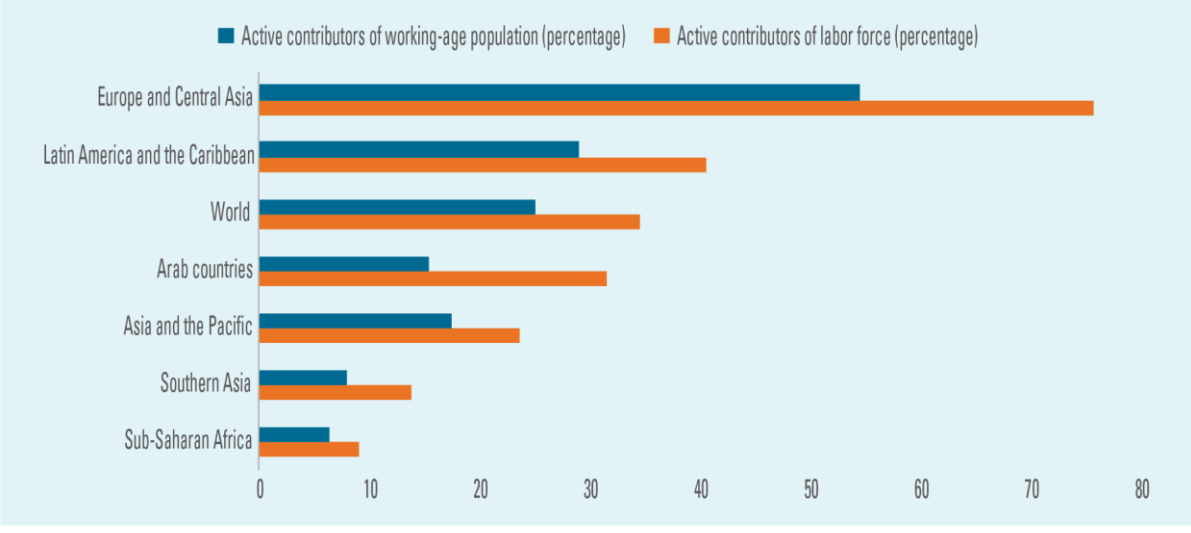
Source: World Bank, 2019.

Figure 5.21 Unemployment rates in Arab region by age and gender, ILO modelled estimates



Source: World Bank, 2019.

Figure 5.22 Old-age pensions effective coverage: active contributors as a percentage of labour-force and working-age population



Source: ILO, 2017.
Note: ILO's definition of Arab countries excludes North Africa.

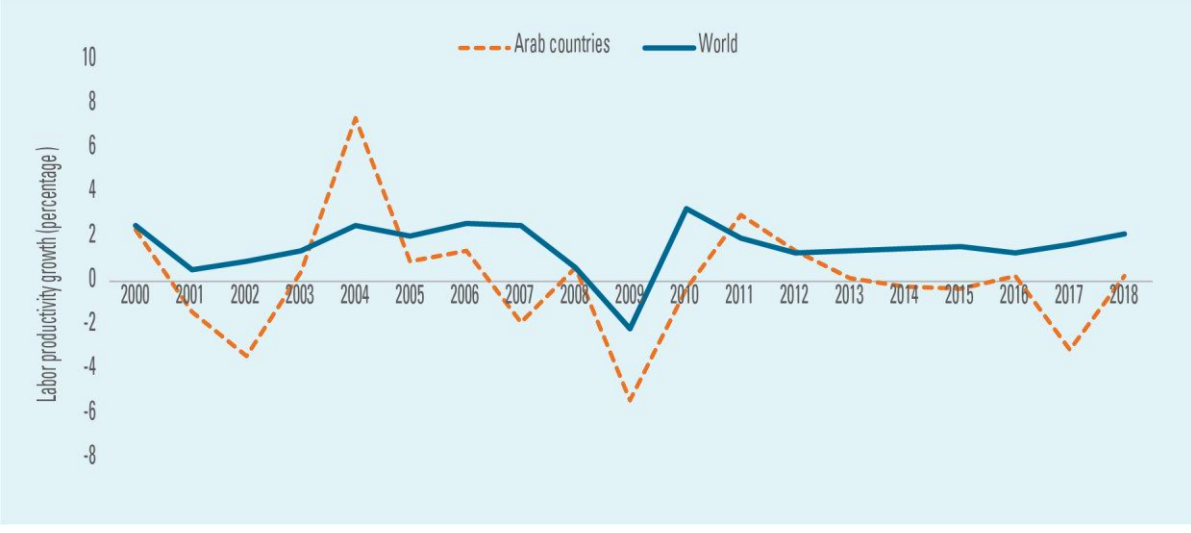
Moreover, another key point is notable with regard to informality. According to ILO (2018) report, youth employment, in five Arab countries, has a higher informality level (85.1 per cent) than the adult population (61.1 per cent). The **higher engagement of youth in the informal sector reflects the limited employment opportunities available for them.**

Perry and others (2007) argue that job informality is not restricted to unregistered firms, but extends to all firms, including those incompliant with some government regulation, such as tax and social security evasion. Thus, when contributory social protection schemes are considered as an additional indicator, it turns out that **only 31.4 per cent of labour force are active contributors and are effectively covered by old-age pension schemes, which leaves more than two thirds of the labour force without future social protection** (figure 5.22). Effective coverage is halved to 15.3 per cent if the total working-age population is considered instead.

High levels of informality, along with concentration of economic activity in medium to low value-added sectors, may curtail GDP growth and affect labour and overall productivity growth. While, measured by output per worker, labour productivity in the Arab region may be higher than that of the world, its growth has been generally below that of the world, as seen from (figure 5.23). Indeed, **labour productivity growth in the region was largely negative over 2014-2017 and remained close to zero in 2018,** partly due to the decrease in aggregate output, following the drop-in oil prices, and partly due to recurrent conflicts. In this regard, continuous sluggish growth may have adverse impacts on labour productivity growth and output per worker levels in the long term, which in turn may impact real wages, well-being and inequality. Several other factors contribute to declining output and labour-productivity growth

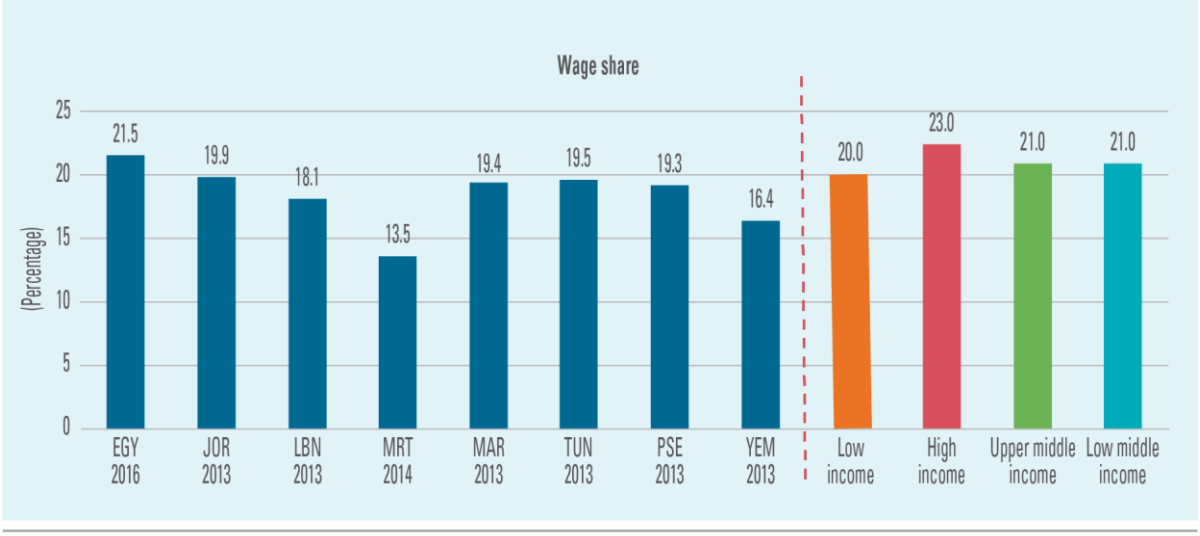
rates, including increased conflict across the region, slow adoption of technologies (ESCWA and ILO, 2019) and low investment in worker skills and training.

Figure 5.23 Annual labour productivity growth based on output per worker (measured in GDP constant 2010 dollars, ILO modelled estimates) (Percentage)



Source: Authors' computations based on ILO, 2018c.
Note: ILO's definition of Arab countries excludes North Africa.

Figure 5.24 Wage's share in manufacturing sector as a percentage of total sales for selected Arab countries in comparison with world averages by income group



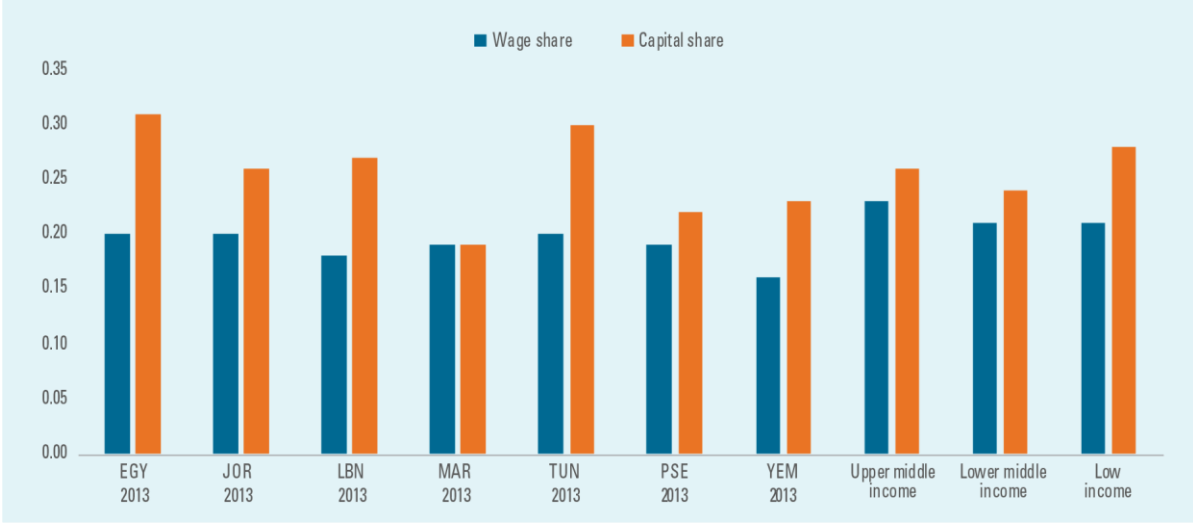
Source: Authors' calculations based on the World Bank, Enterprise Surveys database. Available at https://www.enterprisesurveys.org/en/survey-datasets (accessed on 10 august 2019).

Hence, as public-sector employment absorption capacity continues to shrink, all the figures above emphasise the worsening crisis of securing decent and productive jobs and the need to engage with the formal private sector for employment creation.

However, it is crucial to note that in the manufacturing formal private sector (which has low informal employment), productivity and wage shares have been largely consistent with the global averages (with the exception of low-income Yemen and Mauritania where it is distinctly lower) (figure 5.24). The lesson to draw is that the low productivity growth in Arab economies is not an economy wide feature.

Nonetheless, Arab manufacturing enterprises tend to be more capital intensive than other countries at similar levels of income and human capital as found from the enterprise surveys results (figure 5.25). The higher capital shares relative to labour income shares in total revenues of firms, most evident in the cases of Lebanon, Egypt and Jordan, partly signals capital to labour substitution and low employment demand, notwithstanding abundance of educated labour and high unemployment, especially among youth and females. Not only does this contribute to distorting employment incentives and increased unemployment in the near term, it may over time also negatively impact average wages, job quality, and inequality (ESCWA and ILO, 2019). The basic mechanism is the concentration of capital ownership among the most affluent, i.e., increases in capital shares boost incomes at the top of the income distribution, leading to deepened income inequalities (IMF, 2017). Moreover, divergence between trends of labour and capital share of income, with that of capital increasing faster than that of labour, implies growing inequalities.

Figure 5.25 Cost of capital and wages as a percentage of total sales for selected Arab countries in comparison with world averages by income groups



Source: Authors' calculations based on the World Bank, Enterprise Surveys database.
Note: Enterprise surveys use a stratified random sampling methodology with three strata: region, sector and size. In our analysis, we use the sector stratification. We restrict our analysis to countries that have an acceptable level of observations across all variables of interest. We also drop outliers, thus avoiding measurement biases and reducing their impact on our estimates to guard against over and under estimation of variables.

In essence, the share of wages in income signifies the importance of labour participation in output creation and measures intensity of labour inputs in the production process, and can, at the same time, be a measure of productivity, since firms that could generate a higher level of revenues with a constant level of labour cost have a higher production efficiency. It is possible for that share, which, additionally, expresses the share of labour in production, to exhibit a certain level of fluctuation over the business cycle, responding to technological shocks. However, an increase in productivity relative to factor cost may not be permanent, as higher income could generate higher demand for both capital and labour (Mangin, 2014).

Box 5.1 Capital and Wage shares in income across sectors: cases of Egypt and Tunisia

Both Egypt and Tunisia experienced a higher capital share, signalling higher capital intensity in production, in almost all the sectors presented below. As mentioned previously, due to higher growth in total output, technological advancement reduces cost of capital and share of capital and wages in total income. However, this may not be the case in countries such as Egypt and Tunisia, especially since total factor productivity stagnated and output growth was limited in both countries during their political transition period. Furthermore, energy subsidies in both countries played a significant role in favouring capital over labour in production. With the Hotel and Restaurant sector being labour intensive, it is expected to have the highest share of wages in income. Yet, the share of capital is significantly higher. Other notable observations are as follows: the construction sector is more labour intensive in Egypt, but more capital intensive in Tunisia; the real-estate, renting and business sector in Egypt has a higher share of wages compared with other sectors; the manufacturing sector in Egypt and Tunisia has similar shares of capital and labour, but unlike Tunisia, Egypt's manufacturing is less labour intensive than all services other than wholesale, retail and trade.

Figure 5.26 Wage and capital shares by sector in Egypt

Figure 5.27 Wage and capital shares by sector in Tunisia

Source: Authors' calculations based on the World Bank, Enterprise Surveys database.

Production processes with subsidised energy prices, as in several Arab countries, favour capital and capital-augmented technologies, putting significant downward pressure on wages and fuelling inequality. Nonetheless, there are various other factors that also exert downward pressures on wages, including high informality, predominance of low value-added sectors, absence of unions and weak bargaining power of labourers.

Box 5.2 Impact of economic migration on inequalities

Economic migrants leave their country of origin in search for better employment and economic prospects. It was estimated that by 2017, around 164 million people had migrated globally for economic reasons, out of whom 13.9 per cent are in Arab countries (ILO, 2018a). At 40.8 per cent, the Arab region has the highest share of migrant to total workers (ILO, 2018a). Immigrants in Arab countries, particularly in the Gulf countries, work in various sectors. However, most work in construction and domestic work, which tend to be perceived as low-skilled sectors, with men tending to be concentrated in the former, women in the latter. Migrants working in oil and gas, transport, and hospitality are perceived to be higher-skilled workers. We focus on low-skilled migrants, as they form the majority.

Migration benefits the economies of both sending and host countries. For sending countries, the higher wages earned by economic migrants in the host country are sent back to their home country as remittances. This is particularly important for low- and middle-income countries that are highly reliant on remittance inflows for supporting the economy in its entirety, including small businesses, healthcare, education, and financial institutions. The flow of money incentivises employment in a variety of sectors, in addition to invigorating economic growth and access to international capital markets through wealth generated from foreign exchange earnings. Thus, migration plays a positive role in decreasing poverty levels in sending countries and reducing global inequalities.

For host countries, the effect of migrants on the economy depends on various factors, including the skillsets that migrants have relative to native workers (Wolla, 2014), i.e., on the substitution and complementation effect. For instance, high-skilled migrant workers add to the human capital of the host country, but if they have similar skills to those of native workers, increased competition for job opportunities and wages would ensue. Since most immigrants tend to be low skilled, immigration has a substitution effect on low-skilled native workers. In contrast, when immigrants complement native workers, the host county can address skill shortages and boost productivity, leading to an increase in employment rates and wages. For instance, when low-skilled migrants meet existing demand in occupations that native workers do not engage in, the result is an increase of economic output and labour demand, including for higher-skilled workers (Borjas, 2003).

As stated earlier, the Arab region, especially GCC countries, absorbs large numbers of low-skilled economic migrant workers, which has been a major driver in closing the global income gap. Nonetheless, in some cases, immigrants are subjected to precarious working conditions, including low earnings and limited social, political and economic rights; all of which may increase internal inequalities in host countries. An extreme case in point is the Kafala system, particularly for domestic workers, with foreign workers offered temporary contracts with limited earnings, no union representation and no residential rights within the host country, in addition to having their passports retained to limit their travel (Malit and Naoufal, 2016). Such unfavourable working conditions may increase internal inequalities.

In sum, the net effect of migration on global inequalities depends then on a multiplicity of factors. In order for both host and sending countries to reap the benefits of migration and decrease global inequalities, well-managed migration policies need to ensure for labour rights, social protection, and access to healthcare and basic education, as articulated in SDG 10.

To shift attention to policies favouring structural transformation towards manufacturing, shares of wage and capital in the manufacturing sector (sector classifications are based on ISIC 3.1) were investigated, to reveal that wage shares in manufacturing in most of the countries examined (except for Tunisia and Morocco) are even lower than in country aggregate averages, while capital shares are higher, indicating more capital deployment in almost all Arab countries. This is exactly the opposite of what happened in Asian and Latin American manufacturing sectors, where the share of wages in the manufacturing sector is higher than in country aggregate averages (ESCWA and ILO, 2019). This is not to claim that transformation in production toward manufacturing is a failing strategy; rather that transformation plans toward higher productive activities, such as manufacturing, should address expanding the employment demand capacity of manufacturing firms, especially for educated youth and females, for this would both utilise their talent and reduce poverty and inequality.

At a broader level and as illustrated in the IMF's World Economic Outlook 2017, **the share of national income paid to workers has been falling globally since the 1980s for both advanced and emerging market economies.** According to ILO's global wage report 2014-15, growth in average real wages and labour productivity between 1990 and 2013 diverged, with labour productivity continuing to outstrip real wage growth among developed economies. This clearly implies that large economic rents are accruing to the top end of the income distribution. **The Arab region has a much lower labour income share in GDP (between 30 per cent and 40 per cent in 2016) than its counterparts.** A slight improvement in labour shares can be noted for some GCC countries over the period 2008-2016. The technological gap and factor substitutability in production across the private sector, as discussed above in the case of non-GCC countries, may explain the bigger role of capital employment that fuels inequality. Nevertheless, it is worth noting that the forces behind the overall declining share of wages in income are not fully understood and are yet to be investigated fully (ILO, 2015).

3. Fiscal policies and debt obligations adding pressure on social expenditures

Social and development programmes are primarily financed by tax revenues. In the Arab region, taxes are comparatively low, particularly in resource-rich countries, where oil proceeds provide an alternative source of income for social expenditures. Tax revenues have generally amounted to less than 5 per cent of GDP in the oil-rich countries but increase to an average of nearly 20 per cent of GDP in the relatively resource-scarce countries (World Bank, 2019). **Fiscal policy challenges intensify for countries reliant on taxation as the major source of revenue. Their share of income tax in total tax revenue remained either steady or declined over the years between 2005 and 2014** (E/ESCWA/EDID/2017/4).

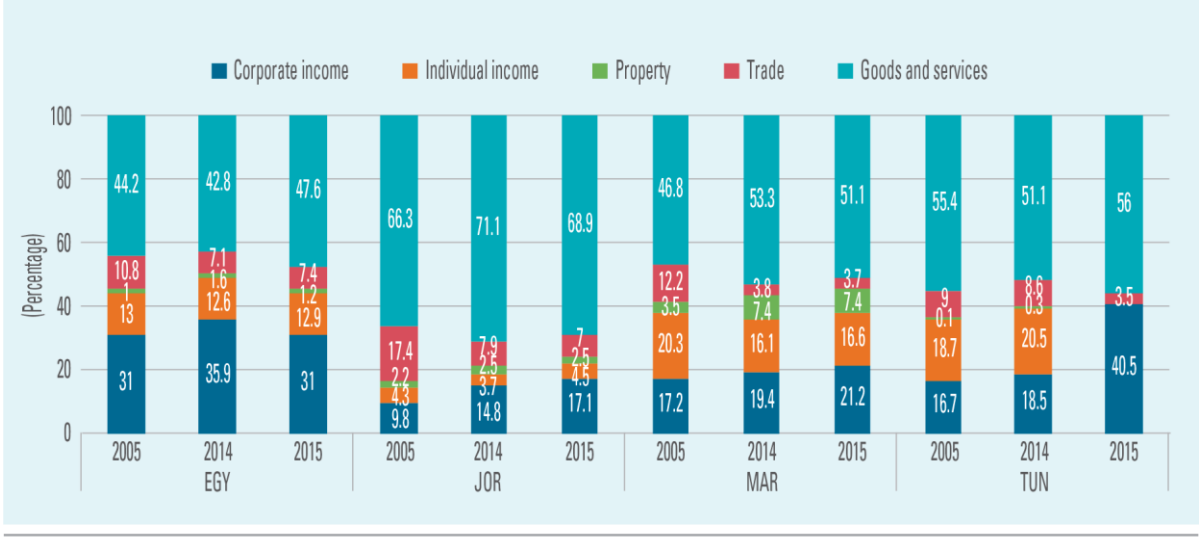
Although tax levels vary across Arab countries, tax structures are largely similar: most countries, including the GCC, have relied primarily and increasingly on indirect taxes (e.g., VAT). Figure 5.28 shows that the share of indirect taxes (taxes on goods and services) in total tax revenue remained high and increased over the same period for several oil-poor countries. For instance, in Jordan, indirect taxes constituted around 69 per cent of total tax revenue in 2017, increasing from 66 per cent in 2005. During the period considered, the share of

income tax in total taxes in Tunisia improved somewhat, although the major contribution to tax revenue has come from indirect taxes on goods and services.

Essentially, indirect taxes imposed on high-consumption goods and services are regressive,[31] in that, the tax burden falls primarily on middle- and low-income earners, who constitute the largest sections of consumers in the Arab countries, thereby increasing their vulnerability and impoverishment. A paradox that then arises is that while these taxes may contribute to funding pro poor social programmes and cash transfers to enhance equity, they may end up increasing poverty if the net amount paid in taxes by the poor offsets the gains from the transfers and subsidies they receive. Such regressive taxation may also push those belonging to the middle class down into the bottom rungs of the income distribution.

In addition to low significance of income tax, the wealth tax constitutes a negligible share of total tax revenue in most countries in the region. Among the four countries in the figure 5.28, Morocco had a relatively larger share of earnings from property tax, which increased from 3.5 per cent of total tax revenue in 2005 to 7.4 per cent in 2014 and 2017. In Egypt, contribution of the wealth tax to total tax revenue increased meagrely from 1.0 per cent in 2005 to 1.6 per cent in 2014, to decline to 1.2 in 2017. Moreover, in Egypt, evident increasing inequality notwithstanding, the share of property tax was negligible.
In addition to possibly being a major potential source of revenue, a property tax can be a useful tool for correcting imbalances in any society by improving tax fairness. Globally, taxes on property constitute around 7 per cent of total tax revenue, a much larger share than in Arab countries.

Figure 5.28 Composition of tax revenue in selected oil-poor countries (Shares in percentage)

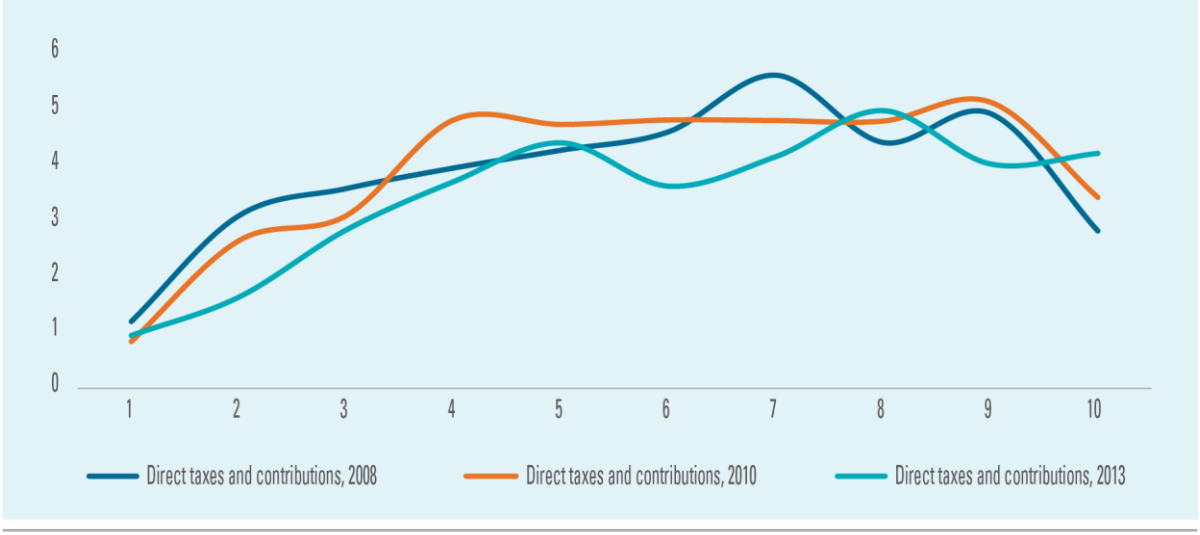


Source: Authors' calculations based on data from IMF, "Tax revenues". Available at http://data.imf.org/?sk=77413F1D-1525-450A-A23A-47AEED40FE78&sId=1390030341854 (accessed on 15 June 2019).
Note: For Tunisia, the yellow section reflects both corporate and individual income.

Furthermore, though progressivity in burden of direct taxes is not enough to correct inequalities, it does help. However, **in the region, personal income taxes lack progressivity due to low top-tier rates and exclusion of non-wage earnings.** For instance, a study in Lebanon shows that income is highly concentrated at the top end (Assouad, 2019). In Jordan, direct taxes and social security contributions broadly show mild progressivity (figure 5.29), with higher income deciles contributing a larger share of taxes and contributions than that of the lower-income deciles, although the pattern varies over the years. However, direct taxes on, and social security contributions from, the top decile remained lower than those of the middle-income deciles (between the 5th and the 8th deciles). Such a pattern of tax burden, which is associated with the distortionary effects of either corruption or discretionary application of rules that help the upper-income bracket avoid paying tax or understate income (Jewell and others, 2015; E/ESCWA/EDID/2017/4).

In short, the tax system in the Arab region suffers from two core problems: regressivity and high incidence of evasion. While the first relates to the tax structure itself, tax evasion is linked to the prevailing weak institutional and governance framework, which itself influences the choice of tax structure. Lack of good governance may incentivise corruptive behaviour, such as financial underreporting and resorting to the informal economy, since gains from evasion tend to outweigh costs of noncompliance. Thus, the rationale behind governments opting for indirect taxation is closely linked to their weak ability to enforce proper tax collection. With proper governance in place, governments can increase their revenues by widening their tax base, instead of imposing higher tax rates. Prevalent weak governance does not only influence tax schemes, but also impairs overall development-growth channels.

Figure 5.29 Direct tax progressivity across market income deciles for Jordan



Source: Authors' calculation based on Economic Research Forum, "Jordan, HEIS, 2008, 2010, 2013 and 2014", Open Access Micro Data Initiative. Available at http://erf.org.eg/data-portal/.

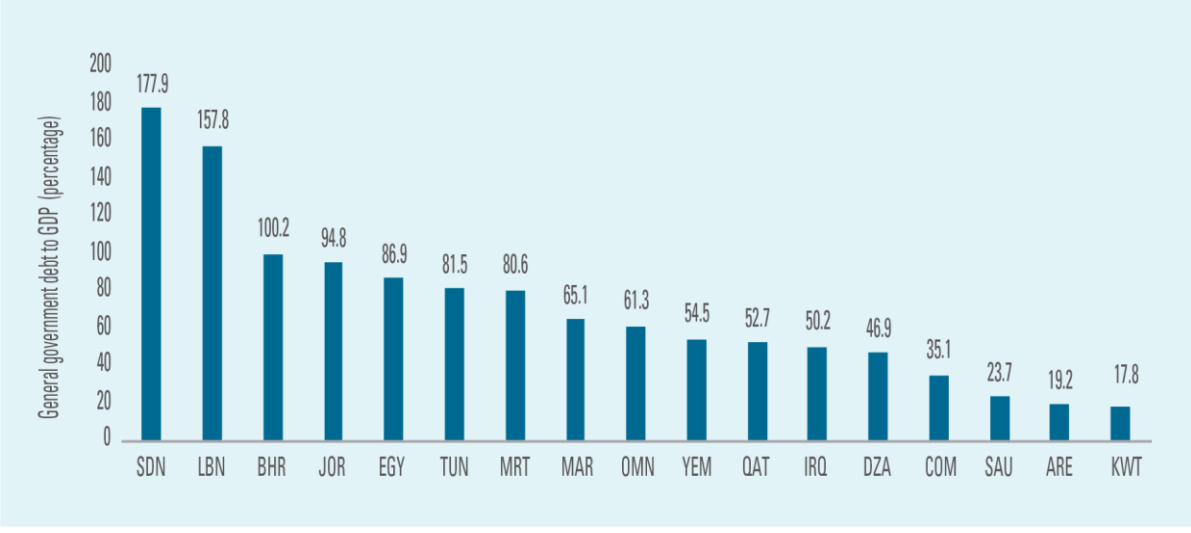
Tailoring an efficient tax scheme is complex, as governments need, first, to balance their redistributive objectives with their economic growth goals, and, secondly, to avoid falling inadvertently into the fiscal paradox of inequality reduction policies possibly exacerbating poverty. On a related note, while social expenditure is relatively high in the Arab region, most subsidies are poorly targeted, effectively subsidising the rich and fuelling inequality. Precise estimates of subsidies are not easily available across countries, as they are often combined with transfers or other social-benefit expenditures. Nevertheless, estimates show more than three quarters of subsidy expenditure in the region was on fuel, representing a large share of total energy subsidies, approximately 27 per cent (IMF, 2013).

The main beneficiaries of energy subsidies tend to be middle- and high-income populations, since their consumption is significantly larger than that of the poor (Gelil and Saab, 2015). Furthermore, "Rethinking Fiscal Policy for the Arab Region" (2017) underlines the fact that public expenditure on education and health remains largely overlooked across the region, especially post eighties and nineties reforms, with the poor and middle class relying mainly on out-of-pocket expenditure for health services.

Fiscal capacities for development expenditure are further constrained by high debt obligations. Caner, Grennes and Koehler-Geib (2010), established a public debt-to-GDP threshold of 77 per cent, over which cumulative debt would lead to a slowdown in growth. As seen from figure 5.30, 7 Arab countries have passed this threshold, with the Sudan and Lebanon having dire ratios. This raises concerns for unsustainability of debt trajectories and for their repercussions on growth and development; all the more so, since resources are constantly diverted to finance debt-service payments and military expenditures, while public investments and social expenditures are reduced. Oil-rich countries tend to have moderate debt-to-GDP ratios, but, with their social expenditures being based on oil returns, they have been consistently under pressure over the past few years due to low oil prices.

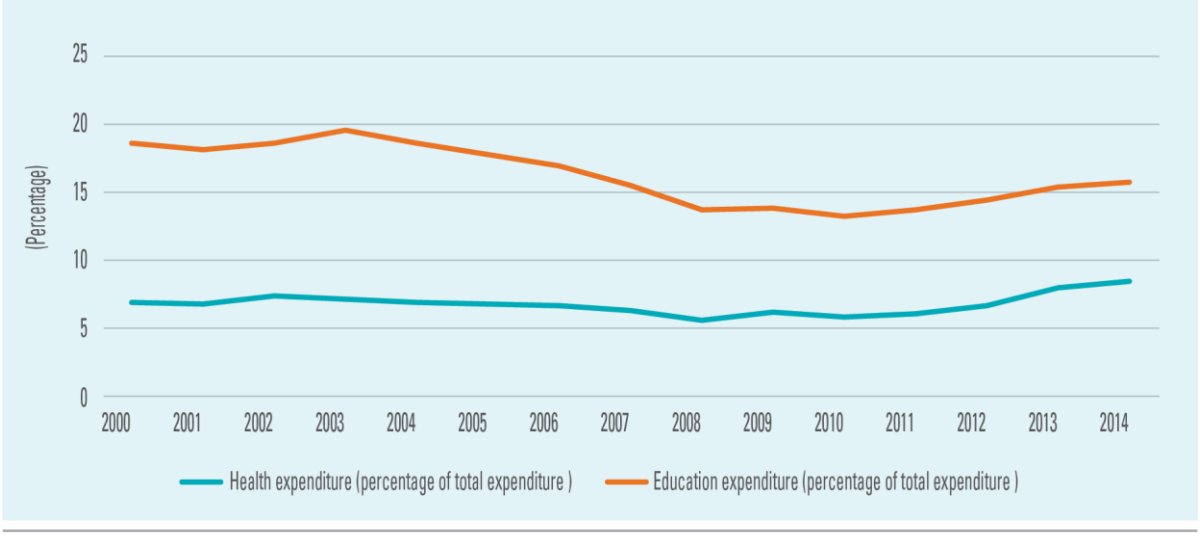
Examining the structure of public expenditure in the Arab region shows that it has not addressed well shortfalls in education and health (E/ESCWA/EDID/2017/4). In fact, in terms of share of total expenditure, public expenditure on education registered a continuous decline from around 18 per cent in 2000 to 13 per cent in 2010, and average health public expenditure declined slightly from 7 to 6 per cent over the same period (figure 5.31). After 2010, there has been a tendency to improve health and education expenditure to avoid popular discontent following the Arab spring and respond to increasing demands for greater social-sector expenditure. In 2014, the respective shares of total expenditure of health and education improved to 9 per cent and 16 per cent. However, increasing public debt and low oil prices since 2014 have put heavy pressure on public budgets across the region, which adversely impacted public expenditure in general and called for economy-wide expenditure reforms. Thus, the constrained fiscal space across the region continues to struggle with meeting the greater need for enhancing social expenditure to achieve the SDGs.

Figure 5.30 General government gross debt (Percentage of GDP)



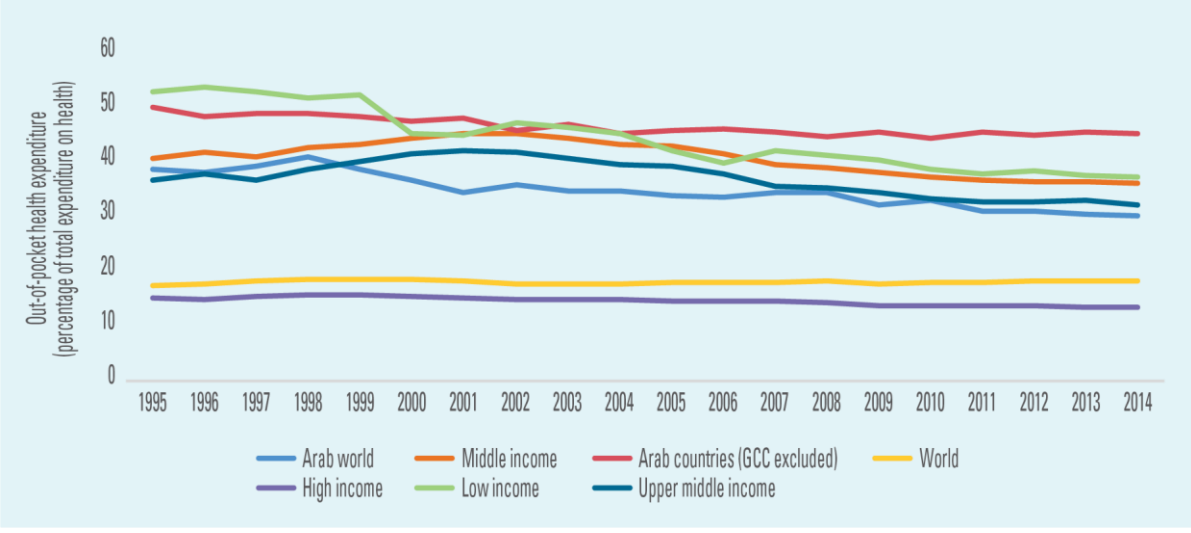
Source: IMF, "General government gross debt", IMF DataMapper. Available at https://www.imf.org/external/datamapper/GGXWDG_NGDP@WEO/EURO/EU/USA/JPN/CHN (accessed on 20 April 2019).

Figure 5.31 Health and education expenditure (Percentage of total expenditure)



Source: Authors' calculation, based on IMF Government Finance Statistics (GFS) data for nine countries in the Arab region. More details and country level data are in Sarangi and von Bonin, 2017.

Figure 5.32 Out-of-pocket expenditure on health, 1995-2015



Source: World Bank, 2019.

Unsurprisingly, the region has unusually high out-of-pocket expenditure on healthcare (figure 5.32). **Out-of-pocket spending on both health and education consumes up to 8 per cent of the disposable income of the poor and 11 per cent of that of the middle class (ESCWA, 2014b).** This is perhaps expected, since the share of students enrolled in private educational institutions is markedly high in several countries, e.g., 34.5 per cent in Jordan and 73.9 per cent in Lebanon in 2014 (Sarangi and Bonin, 2017), compared with the world average of 13.4 per cent. Neglect of public social expenditure on education and health does imply that financial burdens on poor and lower middle-income households may be high, adversely affecting outcomes and opportunities that contribute to narrowing inequality.

D. Political economy drivers

In an attempt to discern the salient features of political economy in the Arab Region, this section takes a long-term view, delving into the past half century of evolvement of income and inequality to establish that over time the State has become deeply entrenched and has retreated from providing quality social services. The predominant rentier nature of Arab economies is characterised by a weak governance and institutional framework, emergence of crony capitalism, restrictions on freedoms, and low political participation that adversely impacted autonomy. Inevitably, this has deepened existing economic, social and political inequalities and reinforced social and economic arrangements that systematically favour the interests of those with more influence, i.e., it resulted in an inequality trap. The following subsections discuss two of these features to understand better the dynamics of rentierism and its repercussions on socioeconomic outcomes and inequalities.

1. Cronyism and clientelism

Reforms imposed in the late twentieth century, containing the private sector

in an effort to dampen opposition to the state, have led to a distorted transition from state-driven growth to market economy. In a report, ESCWA (2018c) finds that this period led to emergence of "narrow networks of privileges" characterised by private sector enterprises close to the ruling class offering critically important political loyalty and support, while controlling entry to markets and benefiting from weak rule of law.

In trying to underscore further the multi-layered crony capitalism in the Arab region, the report employs a classification of state-business relations based on the Korean, Brazilian and Russian models. In the Korean model, patrons dealt with clients by providing economic incentives in exchange for increased dividends and those who underperformed faced jail. In the Brazilian model, firms receiving economic privileges would pay back through political financing or employment of people close to the politicians. In the Russian model, firms allied with the ruling class were allowed to benefit and operate unrestricted, thereby preventing the opposition from gaining economic strength. The ESCWA reports links lack of inclusive growth in the Arab Region to the third, i.e., Russian, model, where firms close to the ruling elites (at least until the eve of the 2011 uprisings) in Egypt and Tunisia benefited from economic privileges the most, which is also another reason for informalisation of labour markets and inability to reap the demographic dividend.

Indeed, **as part of this bargaining rentier deal, the crony capitalist class that emerged cemented patron-client models of doling out services to the privileged few at the expense of excluding those with no political connections.** The privileged few who benefited from their closeness to the ruling class and who established an exclusive economic model are 'insiders', differentiated from the 'outsiders' who are societal groups that found insecure employment with no social benefits in the largely informal sector. To illustrate the point, the ESCWA report cites two stark examples of emergence and entrenchment of networks of privileges from Egypt and Tunisia. In Egypt, 500 firms controlled by 32 businessmen with strong political connections, "most of whom occupied political posts in the mid-2000s", controlled "60 per cent of the overall corporate profits in the country, even though they employed 11 per cent of the labour force in the formal private sector". Similarly, in Tunisia, prior to 2011, firms close to the ousted president controlled 21 per cent of private sector profits, while employing only 1 per cent of the labour force.

In short, this political settlement describes a relationship between state, private sector and labour in which 'outsiders' and 'insiders' play distinct roles, with the 'insiders', backed by the state, defending their privileges and resisting efforts by the 'outsiders' to enter the labour market, thus impeding social mobility. The model of crony capitalism in the region perpetuates this political settlement and, with noticeable lack of autonomy, aggravates inequality. In several economies in the region, very small firms of 4 employees or less occupy a sizeable share of the bottom of the private sector, while at the other end of the spectrum, large firms closely connected to decision makers make up the top of the private sector, with a "missing middle". Widespread clientelism essentially hampered market competition and undermined development of a dynamic private sector, consequently leading to lack of employment creation, prevalence of white elephant projects and low value-added economic growth. Put differently, the 20th century reforms distorted the market economy and cultivated instead influence of the well-connected incumbents.

In this context, the Arab Region experienced labour dualism, which the ESCWA study expounds on by explaining that insiders, with their vested interest in blocking reform, make it difficult to transform the economic system, by gradually allowing outsiders in, to render it more inclusive and, hence, less unequal. **A major contributor to wage inequality, therefore, is the schism between a small formal sector and a bloated informal sector, caused largely by prevalence of crony capitalism** as an outgrowth of the structural-adjustment policies of the late twentieth century.

Indeed, **metastasis of a narrowed network of privileges and prevalent cronyism not only hampered growth and job creation and aggravated inequality, but also made for onerous opportunity costs.** For instance, the report estimates that "Egypt's growth could have been 1 per cent larger per year and labour demand 20 per cent larger over the past decade, in the absence of privileges of the politically connected". Another cost of cronyism is that after two decades of mismanaged economic liberalisation, the formal sector still employs "less than 15 per cent of the labour force". In parallel with cronyism, meritocracy was replaced by networks of nepotism (*wasta*) and connections in the formal labour market, particularly in the public service; thereby excluding those with modest and unconnected backgrounds and creating a scarcity of formal jobs.

Essentially, the reforms were devoid of the necessary political liberalisation and the governance modes that needed to accompany them and, hence. sowed the seeds of inequality, which was further aggravated by a retreat in government public investment in the eighties and nineties, to rise again only in 2000-2005. For instance, in Egypt and Tunisia, by 1998, state expenditure was cut by 36 per cent and 16 per cent of GDP, respectively. This scaling back inevitably impacted state institutions and the ability of governments to provide the services needed. Public investments were hardest hit, decreasing from a high of 19 per cent GDP to about 8 per cent in Egypt, and from 14 per cent of GDP to about 3 per cent in Tunisia. As argued by the ESCWA report, rollbacks in public expenditure affected mostly the already poor and underprivileged who had a limited voice and restricted avenues of participation. In the same vein, reduced expenditure also affected spending on health and education, which hurt the neediest who had the most restricted access to these services; hence increasing inequality. Similarly, subsidies in Egypt fell from a whopping 23 per cent of GDP at their height in the 1970s to less than 2 per cent of GDP at the end of the adjustment period of the 1990s, while in Tunisia, they fell from a height of 11 per cent of GDP to close to zero. While subsides increased in the early 2000s, they were largely benefiting regime supporters among the middle and upper classes, instead of benefiting the poor. In the meantime, there was an increase in tertiary education enrolment in several countries, which led to an increase in expectations of educated youth, while foisting upon several countries the phenomenon of 'unemployed graduates'.

These developments were also conjoined with severe restrictions on freedoms that adversely impacted autonomy. Civil society was restricted, and such powerful groups as organised labour unions were either co-opted or kept in check. Moreover, severe divisions and fragmentation of social groups precluded formation of such broad-based coalitions as would be needed for enacting true reforms, aggravating tensions in society instead.

2. Inequality in autonomy

Following the Arab uprisings, the region, with the exception of Tunisia, did not experience an improvement in human rights, political rights, or overall governance. In fact, post the uprisings, there has been a marked decline in social activism and civic rights. No country in the region, except Tunisia, ranks above average on the Worldwide Indicator of Voice and Accountability of the World Bank. Additionally, laws favouring equal treatment are weaker than in other countries in the rest of the world. Using data compiled from the Rule of Law database to construct an equal legal treatment index, ESCWA (2018) finds that regardless of income level, "in contrast to the average situation in the rest of the world", laws for equal treatment in the Arab region were "rated worse than the overall rule of law".

There cannot be access to, and full enjoyment of, socioeconomic rights without full recognition of political rights, which underlines the role of personal autonomy. ESCWA's (2018c) "Inequality, Autonomy and Change in the Arab Region" defines autonomy as the ability to act independently without constraints and take control of one's life. The report also nuances the definition by differentiating between perception of independence and control over one's life and aspiration to be autonomous as an intrinsic value to be pursued, arguing that negative autonomy is characterised by perception of control over one's life and freedom of choice of how to live, while positive autonomy is measured by self-expression of individuals and how much they value autonomy as an aspiration.

The report argues that autonomy goes beyond securing basic freedom of choice, control, self-expression, and empowerment to widen choices for action and reinforce capacity for participating better in public life. It is, thus, a major pathway for social emancipation. It further contends that **increased autonomy allows individuals and societies to feel empowered and hence more included in the development process, thereby positively contributing to both equality of opportunity and equality of outcome.** Indeed, the major contribution of the report is in devising a creative framework that ties autonomy to inequality through three different perspectives. First, autonomy gives people freedom and capability to act. Secondly, positive autonomy, in the sense of freedom of expression, can have important social benefits, positively impacting social changes, especially on issues such as gender equality, income equality, civic engagement, attachment to democratic values, social and religious openness and tolerance. Thirdly, autonomy leads to better representation, which, in turn, can lead to welfare, thus improving societal outcomes and promoting inclusivity. In short, improved autonomy gives people a stronger voice and the ability to exercise their civil and political rights, and, hence, ensures effective participation in policymaking.

In this section, in an effort to place autonomy at the heart of the inequality debate in the Arab region, we draw on the main findings of the ESCWA report, with emphasis on how existing political and institutional arrangements engender a low sense of autonomy, especially among youth. In general, the educated and the youth drive social change, the more autonomous they feel; an issue that is key in the Arab region, where the youth bulge is significant and the desire for inclusive development, reduced inequality and effective participation in policymaking is high.

Two key findings of the report are that: first, on average, personal autonomy tends to be relatively low in the region, compared with the rest of the world, particularly in terms of self-expression; and, secondly, there is unequal distribution of autonomy among population. Whereas in the rest of the world, the main division is between the educated and the uneducated, in the Arab region, it is often between the young and the old. This negatively impacts likelihood of social change, since educated, autonomous youth usually display more preference for equality, openness and social tolerance, which is why they form a critical mass pushing for change. While the youth may have a high degree of ambition and aspiration, they do not necessarily possess the sense of negative autonomy needed to do something about it; a revelation that is key to understanding how people with a strong sense of autonomy act on their political choices. The causes for the peculiar distribution of autonomy in the Arab region are posited to be: (a) an unequal and exclusive system of legal rights; (b) an education system that does not promote personal autonomy (or promotes it much less than in the rest of the world); (c) a dominant system of patriarchy that plays a significant role in constraining individual behaviour and autonomy, particularly for youth and women; and (d) various other cultural, economic and political forces suppressing self-expression, all linked to rising economic insecurity, religiosity, physical repression, and, more recently, physical insecurity.

The report put forward further interesting revelations about the Arab region. In rich countries, the more educated people are, the richer they get, with self-expression and control over one's lives being upward curves moving in parallel. In the Arab region this is not the case. While, on average, life control tallies with the rest of the world, there is regression in the autonomy as a vehicle for self-expression. Where income is high, as in Kuwait and Qatar, the degree of control over life is higher. In comparison with the rest of the world, distribution of aspects of autonomy reveals that among the old and educated in the Arab region, control over life is higher. Among young Arabs, the degree of control over life is low, most likely due to high rates of unemployment and other similar economic woes, in contrast with non-Arab youth who worry less about economics and exhibit more autonomy and control of their future.

Education, religiosity and insecurity play a critical role in shaping autonomy. In contrast with the rest of the world, education is not necessarily a tool of emancipation in the Arab region, since, with the exception of Lebanon and Tunisia; few young people find stronger self-expression as a result of higher education rates. Possibly as part of the social contract, **education has been used as an instrument of indoctrination, to ensure obedience and sustain conservative values, instead of promoting critical thinking.** Students who refuse to conform are often considered rebels and are basically rejected by the system. This partly explains inequality in access to education between those who acquiesce and those who refuse, and, in addition to antiquated teaching methods, explains prevalence of poor educational quality and low skilling.

To a certain extent, when religion instils values that fetter social emancipation or even social change, religiosity and piety play a similar role. Research found that higher levels of piety are associated with low levels of activism, support for patriarchy, and social intolerance. The ESCWA report notes that, with the failure of the state-led modernisation drive,

there has been an increase in religiosity since the end of the 1970s. Arab citizens tend to be more religious by significant margins than citizens with similar socioeconomic characteristics in the rest of the world. Furthermore, the rise of political Islam served to deepen religious conservatism. Additionally, low levels of autonomy and rising threats of insecurity translate into high levels of intolerance and lack of support for such issues as political rights, gender equality and inclusive and democratic values, giving way to favouring authoritarianism.

Indeed, **the deep entrenchment of the patriarchal system is a foremost reason for low autonomy especially among youth and females.** Evident in the persistence of wide gender gaps in politics, labour markets, education and family roles, this is also embodied in gender-discriminatory laws, including labour and inheritance laws, in addition to being supported by societal perceptions and sociocultural norms. Hence, the Arab region scores much lower in terms of gender equality than countries with similar development levels. However, over the past few decades and more so post 2011 uprisings, most Arab countries have experienced improvements in pro gender attitudes, with Tunisia's progress being most noteworthy; advancing from being the third pro gender country in the region to becoming the first. In general, women, youth and educated individuals tend to form major pro gender groups, relative to the rest of the population.

In short, along several dimensions, such as gender equality, commitment to democracy and religious tolerance, the region is more conservative than elsewhere with the same levels of development. Due to an education system that does not encourage civic activism, self-expression does not automatically translate into social emancipation. While there is some progress on self-expression and, generally, more liberalism and less respect for authority, conservatism is still prevalent and serious moves towards dismantling the patriarchal system remain sorely lacking. Notably, the information revolution and higher rates of internet and social media penetration over the past few years have played a role in increasing self-expression and autonomy and advancing progressive values, such as gender equality and civic engagement. Yet, change in social norms is slow, due to persistent lower levels of personal autonomy. It is, indeed, difficult to instil new ideas and values in society, particularly among the youth, if citizens do not feel they can become influential, for, as result, they remain under the influence of their elders in forming their own sets of values.

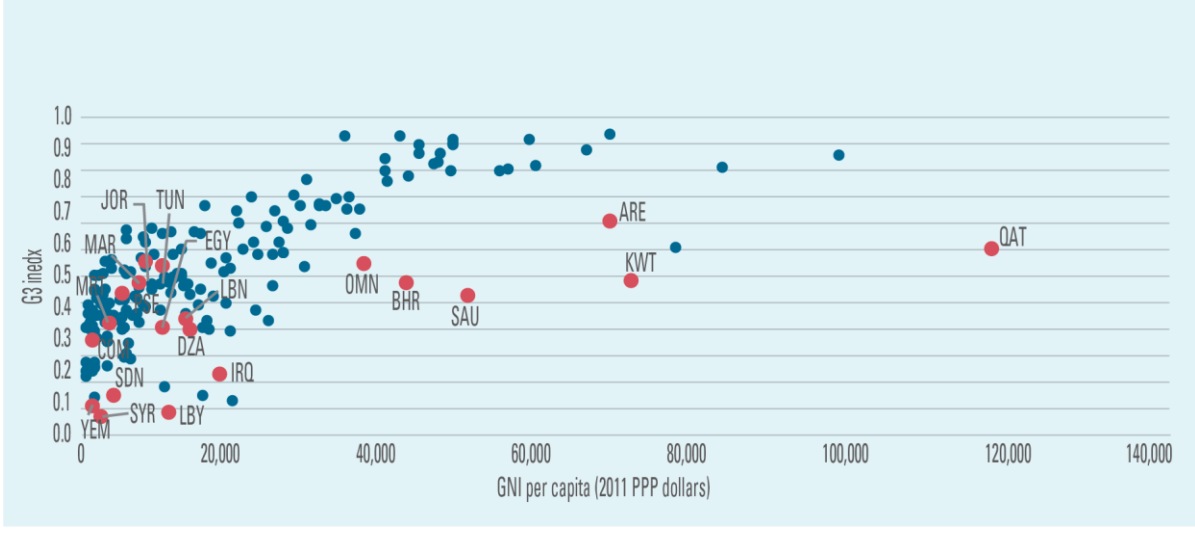
The above discussion raises two questions. First: how does low personal autonomy relate to inequality in the Arab region? A startling revelation of the ESCWA report is that on average the Arab region seems to be more accepting of inequality than globally. Preference for equality is low, even though preference for redistribution of income is higher. The report argues that "One can hypothesise that the low preference for equality and redistribution among educated Arab citizens reflects the unequal distribution of education in the region and their logical rejection of being taxed for the purpose of redistribution to the uneducated part of the population. On the other hand, the dislike of the old for redistribution may be related to the fear of the type of socialism they experienced in their youth. The position of the educated youth is most surprising – they do not value equality per se, probably on account of their high level of

self-expression, yet they do support income redistribution". Self-expression is associated more with an attachment to social solidarity and "self-expression and control over life are both negatively correlated with a preference for an active state on the social justice front".

The second question is: how does low personal autonomy relate to rentierism and conflict?

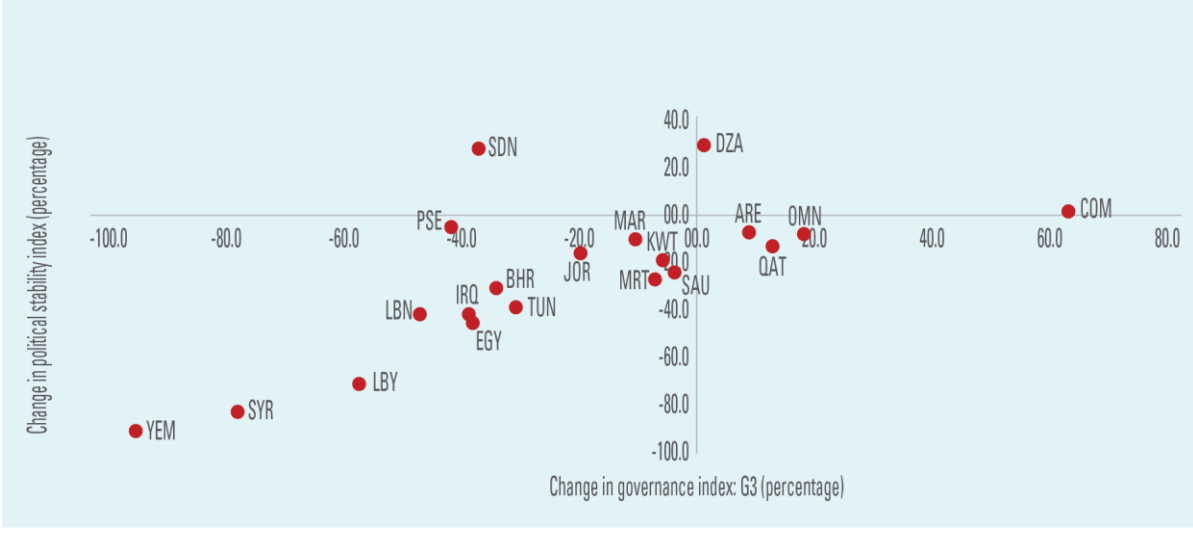
Essentially, the rentier social contract is built on the exchange of high per-capita rents for low accountability and transparency, low political participation and regime legitimacy. Put differently, low self-expression and autonomy are inherently built into the social and institutional arrangements of the rentier countries, including their educational system. Nonetheless, sustainability of this deal is questioned as youth increasingly call for more political participation, autonomy and democracy and certainly for decent economic opportunities. In fact, the ESCWA report points out that civic engagement appeared to be highest among youth leading up to the popular uprisings – largely due to low sense of control over lives and a strong ambition for self-expression. Aside from participating in demonstrations, the report finds, civic activism is weak and far below the global average. Due to severe restrictions on activism, such as restrictive laws, need for permits, etc., it becomes common in new forms, such as on social media. In short, the report finds that Arab youth, more than the older generation, tend to be in favour of democracy. Hence, as their low sense of control over lives and failing aspirations persist, they may gradually push for change in socio-political structure.

Figure 5.33 GNI per capita (2011 PPP dollars) and Governance index (G3) in 2017



Source: World Bank, Worldwide Governance Indicators database. Available at http://info.worldbank.org/governance/wgi/#reports (accessed on 10 January 2019); and UNDP, Human Development data. Available at http://hdr.undp.org/en/data (accessed on 15 August 2019).
Note: We normalise the governance (G3) and political stability (PSI) indices using min-max criteria.

Figure 5.34 Percentage change in governance and political stability indices, 2000-2017



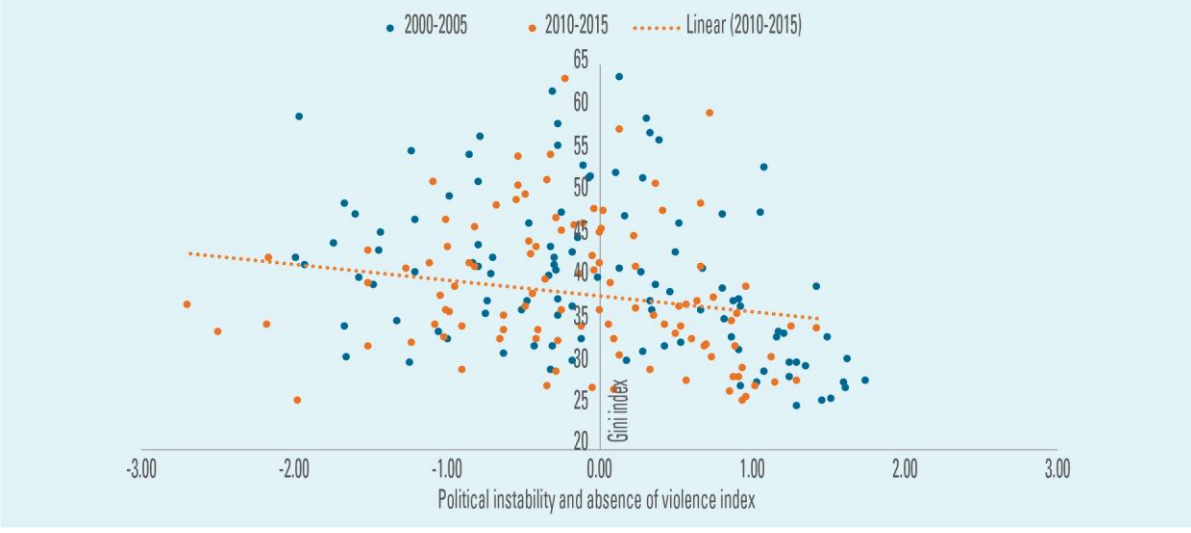
Source: World Bank, Worldwide Governance Indicators database. Available at http://info.worldbank.org/governance/wgi/#reports (accessed on 10 January 2019); and UNDP, Human Development data. Available at http://hdr.undp.org/en/data (accessed on 15 August 2019).
Note: We normalise the governance (G3) and political stability (PSI) indices using min-max criteria.

The result may be a rise in conflict. As argued above, rent-based economies nurture an environment of weak governance and accountability, with the concentration of political power in the hands of a few. Figure 5.33 plots GNI per capita versus our composite governance index (G3). Following the methodology of Abu-Ismail, Kuncic and Sarangi (2016), G3 is the geometric mean of 5 World Governance Indicators (WGI), namely rule of law, voice and accountability, governance effectiveness, regulatory quality and control of corruption, and ranges from 0 to 1, with higher values indicating better governance.

Generally, Arab countries have low governance scores, especially the LDCs and conflict-afflicted countries, such as Yemen, the Syrian Arab Republic and the Sudan. Consistent with the rentier social contract, oil-rich countries have high GNI per capita and relatively low governance levels. More interestingly, figure 5.34 shows that over the period 2000-2017, most Arab countries had declining governance and political stability indicators, including some oil-rich countries, such as Saudi Arabia and Kuwait. The close association between poor governance and political stability may be due to several factors. The demonstrations of the Arab Spring were not only a call for economic opportunities and social justice, but also for increased democracy, freedom, accountability and transparency (World Bank, 2015b).

However, socioeconomic inequalities accentuate importance of good governance, for not only would it lessen the inequalities themselves, as previously argued, but may also, and particularly in terms of voice and accountability, mitigate risks of political instability due to inequality.

Figure 5.35 Inequality and political instability



Source: Gini from PovcalNet database; and PSI from Worldwide Governance Indicators database.
Note: Where Gini values for 2002 and 2015 were missing, we took the values for the closest years.

Figure 5.35 shows a weak negative relationship between inequality (Gini) and political stability (PSI indices), which is consistent with the lack of consensus among scholars on the relationship between economic inequality and political violence, especially since altering the definition or the measurement of inequality (e.g., vertical vs. horizontal) yields different empirical results. Nonetheless, theoretically, as posited by Gurr (1970),[32] inequality, or relative deprivation, may be a key prompter of social frustration and political instability. Goldstone (2011) stresses that in the wake of the Arab Spring, persistent poverty and, even more importantly, skewedness of economic growth benefits to the elite played a critical role in prompting the uprisings.

Essentially, **analysing whether income inequality leads to political violence requires considering several influencing factors.** Inequality alone may not necessarily result in political instability. Yet, its synchronisation with multiple socioeconomic shortfalls, such as a deteriorating standard of living, paucity of decent jobs, poor economic performance, environmental degradation and governance deficits, may fuel social frustration and prompt instability. Moreover, government response to social grievances, whether by introducing reforms or supressing the voice of the people, plays a critical role in determining the outcome (Gurr,1970), which again places governance at the heart of the issue.

3. Falling rents call for rethinking Arab development model[33]

Natural resource endowments have been shaping Arab economies for decades, especially in the nine resource-rich net oil-exporters (i.e., the GCC countries and the three remaining OPEC members) where high per capita rents, in the form of government provision of subsidies, low tax rates and public-sector employment, have been a pillar of development

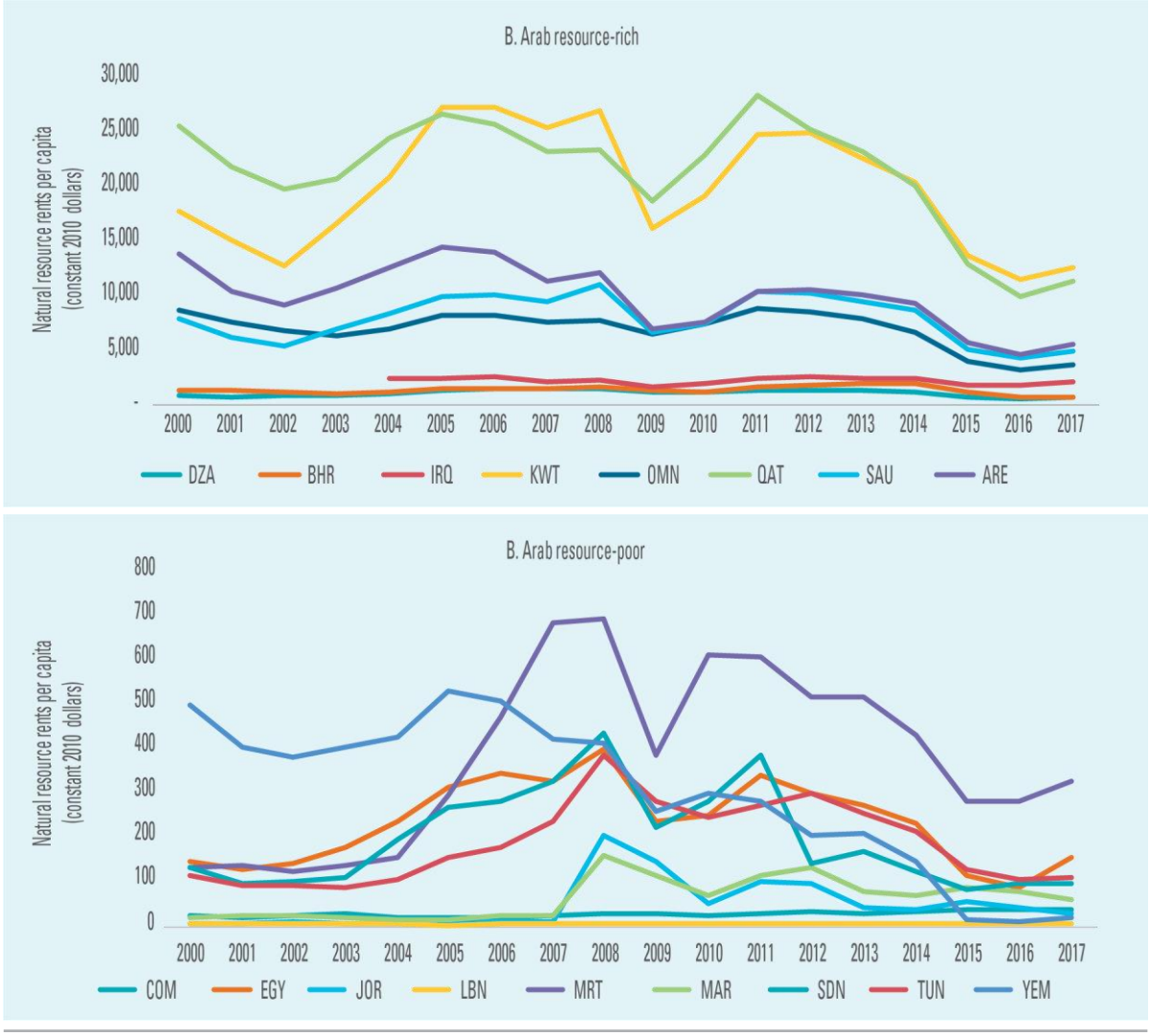
policy since the 1950s. Natural resource riches have also influenced Arab oil-poor and non-oil exporting economies through capital flows from the resource-rich countries, especially investment, and remittance and tourism inflows. These rents and their spillover effects have thus played the lead role in promoting social and economic development over the past four decades across most Arab countries.

However, rents and their spillover effects have also cemented authoritarianism and, in some countries, directly or indirectly led to rising political instability and conflict. The key question is whether the region's development prospects can be delinked from these resource rents? And if so, when and how? More specifically, what would incentivise Arab regimes to embark upon difficult governance reforms? While clearly not an easy question to answer, Paul Collier (2019a, 2019b) suggests that the declining rents per capita are key to establishing the case for the urgency of such reforms. Accordingly, in this section we ask three questions: What would happen to per capita natural resource rents by 2030 if post 2008 trends continue? What are the possible ramifications on oil-poor economies? And finally, do these projections imply urgency in terms of the need for political-economy and institutional reform?

Since the non-oil exporting economies of the Arab region are heavily reliant on capital flows from the resource-rich oil-exporting countries, a high correlation between trends in rent flows in both groups would be expected. Moreover, the existing rentier development model is increasingly being pressured by the frustrated youth calling for increased autonomy and political participation, and, more importantly, given that the core rent economy structure is highly susceptible to oil price volatility, it is being squeezed by developments in oil markets. Indeed, oil price drops in the last few years, particularly in 2014-2015 following growth of United States shale oil production, put in question the sustainability of rentierism, considering the evolving global patterns in oil supply and demand. Figure 5.36 depicts real natural-resource rents per capita (2010 constant dollars) for Arab oil exporters and non-exporters over the period 2000-2017, showing high fluctuations in both sets of countries, especially post the 2008 Great Recession. Troughs in 2001-2002, 2008-2009 and 2014-2015 coincide with the plummet in global oil price during those periods. Subsequent periods of oil price recovery are also reflected in steep rises. Notably, upward swings are more observable in the pre-2008 phase and peak at 2008, reflecting the 2004-mid 2008 commodities price boom. Post 2008, downward trends became more salient and prolonged, which suggests a post 2008 structural break. These figures emphasise overall vulnerability to oil-price shocks of the socioeconomic structure in the vast majority of Arab countries. In figure 5.37, the post 2008 break is clearly revealed by negative average annual rate of change for almost all the countries over the period 2008-2017.

Interestingly, figure 5.36 shows that across the GCC, rents considerably rose in 2011, compared with 2010. For instance, they increased from $19,210 to $24,781 in Kuwait, $22,854 to $28,328 in Qatar, $7,476 to $10,378 in Saudi Arabia and $7,674 to $10,417 in the United Arab Emirates. This reflects the response of GCC governments as the Arab Spring emerged: increasing share of citizens of natural resource rents to maintain political legitimacy and stability.

Figure 5.36 Real natural resource rents per capita across Arab oil exporters and non-exporters, 2000-2017



Source: Authors' calculations based on World Bank, 2019.

Nonetheless, **in 2011, and more so in 2013, rents per capita fell steeply.** In terms of group averages, during 2011-2015, they fell from $5,968 to $3,257 (figure 5.39A), with this sharp contraction being homogenous across oil-exporters. While 2017 registered some increases, possibly partially reflecting oil price increase, levels were still much lower than in 2011.

Overall, **sharp contractions and volatility crucially accentuate the mounting unsustainability of rentier economies to the extent that it may even pressurise the existing political order.** Figure 5.39A also presents a possible projection of natural resource rents per capita over 2018-2030 (depicted by the dotted line),[34] taking into account projected population growth. Building

on post-2008 trends, projected rents per capita in 2030 could drop in oil-rich countries to $2,240, less than half of their 2008. Furthermore, the impact on oil-poor countries would be even harsher, with rents levelling at less than one third of their 2008 levels.

Remarkably, rent per capita levels not only differ between oil exporters and non-exporters, but there are also wide disparities within the former. While rents can reach $12,000 in Kuwait and Qatar, they drop below $1,000 in Algeria and Bahrain. Moreover, in the more populous oil-rich countries, further expansion of rents is already infeasible, which may result in both a lower ability to sustain the socio-political structure and higher risk of conflict.

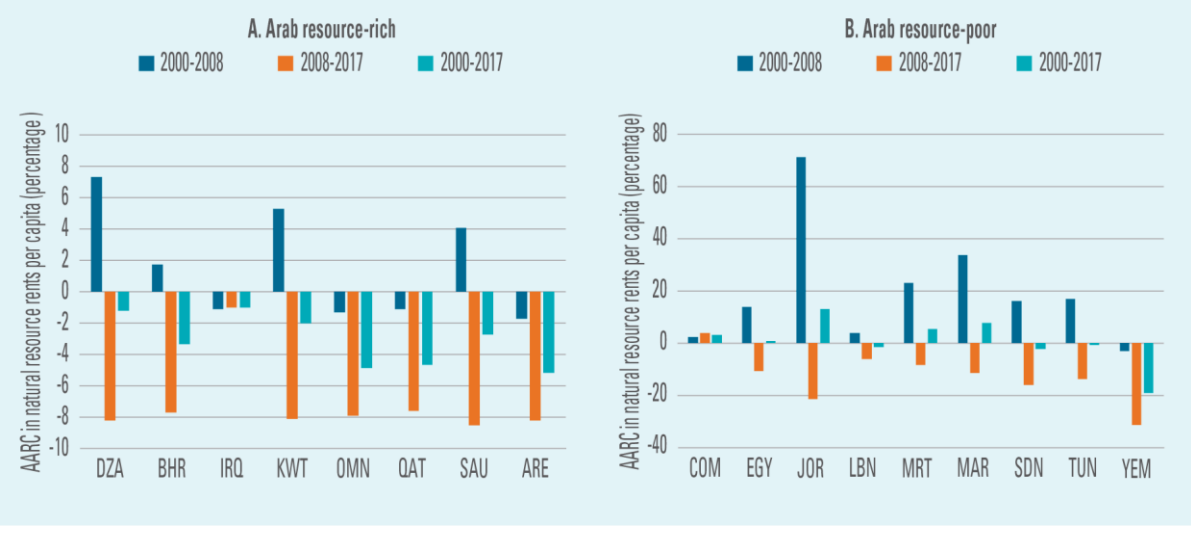
Figure 5.36A and figure 5.36B clearly show closely aligned trends for both groups of countries, indicating, as argued earlier, strong spillover effects. A similar negative growth is marked in 2008-2016 for the relatively scare-resource group average. Yemen and the Sudan, which were previously considered resource-abundant, have had negative growth rates in rents over that period, reflecting increasing resource-depletion risks in both countries, partly due to ongoing conflicts and political instability.

Generally, the relatively resource-poor economies have low levels of rent per capita and are not impacted directly by oil proceeds. Nevertheless, they are highly reliant on the sheer size of remittance and tourism inflows tied to oil returns. Thus, booms in oil-exporting countries have spillovers in the form of increased remittances from expatriates working there, increased touristic visits, and, to a lesser extent, increased grants and assistance; all of which boost economic growth across the region. In times of bust, the exact opposite is anticipated. Hence, it is likely that **troughs in remittances and tourism inflows per capita across Arab non-oil exporters would largely coincide with the previously identified trends in per capita natural-resource rents** (figure 5.38A and figure 5.38B). Post 2010, Arab resource-poor countries, on average, had stagnant per capita remittance receipts and declining per capita tourism receipts. Countries, as Lebanon, that are more reliant on remittances and tourism had sharper declines, leaving their economies more vulnerable. While 2017 shows some increases in receipts of tourism and remittances, these are not expected to shoot up, given expected rises in fiscal pressures in oil rich economies, nationalisation of employment initiatives and regional conflicts.

In conclusion, long-term trends in oil prices will undoubtedly continue to be difficult to predict, given uncertainty in global economic growth, geopolitical factors, availability of other sources (shale oil) and the challenge posed by green technologies (low-cost renewables). However, barring a return to historically high oil prices prior to 2008, which is highly unlikely under present and expected future circumstances, **it is projected that rents per capita will continue to dwindle in most oil-rich economies of the region.** This is also an expected outcome of the rapidly rising size of population in several oil-rich countries and of the consequential increases in own energy consumption (leaving less for exports). **This trend is also expected to affect oil-poor countries indirectly, especially through workers remittances, which are still their main source of hard currency inflows.** Such remittances are not expected to rise and may very well decline after 2020, given the increasing pressure on the fiscal space in the GCC, especially the Saudi Arabia. Likewise, tourism receipts, which are also a significant

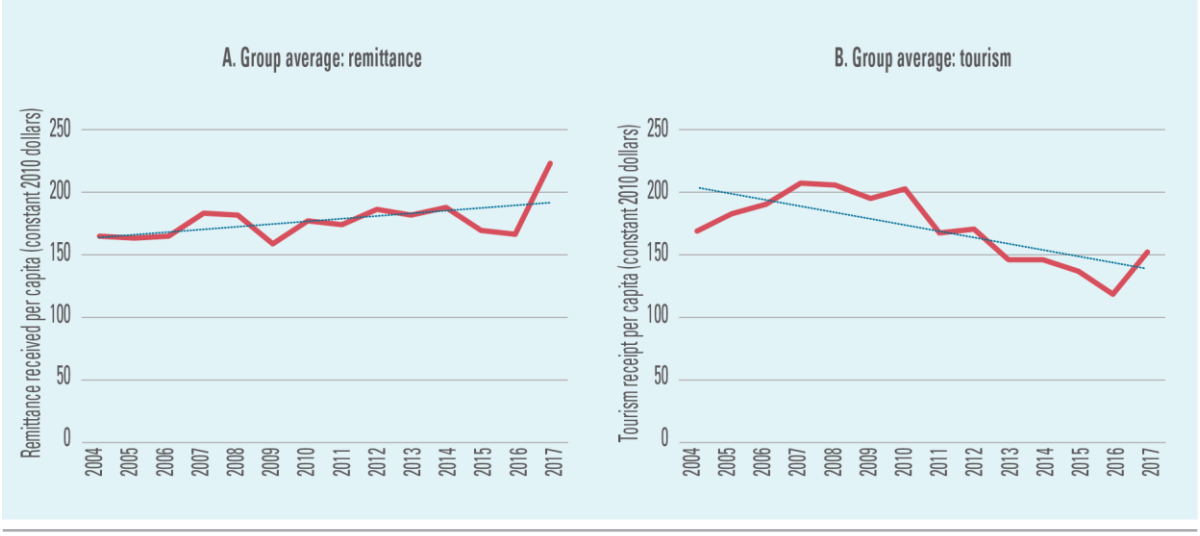
source of foreign exchange, have been hard hit since the uprisings and a rebound to the 2010 levels is unlikely for most countries in the short and medium run.

Figure 5.37 Average annual rate of change (AARC) in natural resource rents per capita



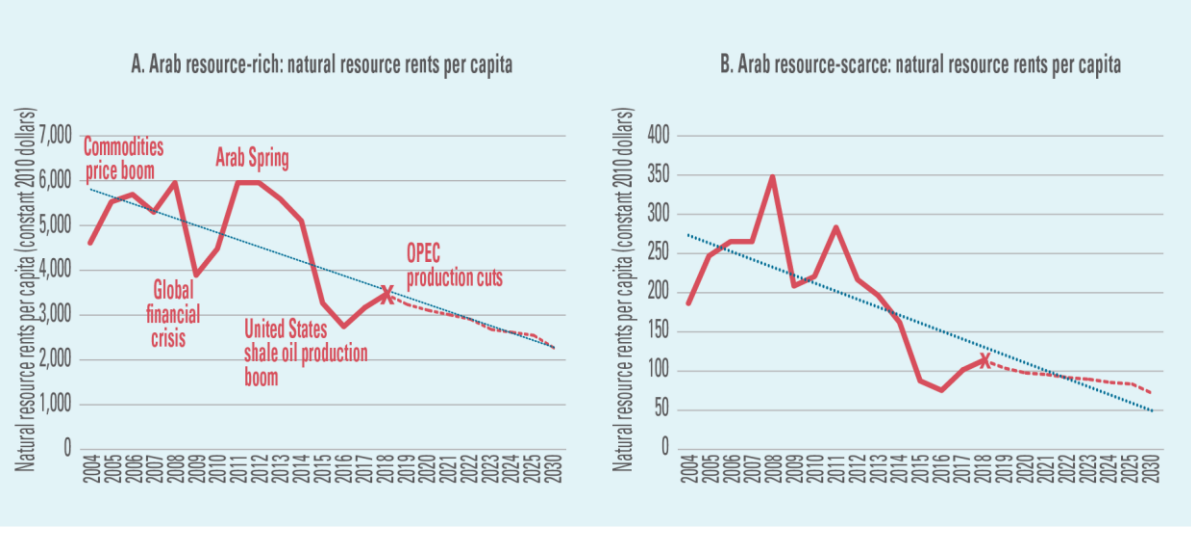
Source: Authors' calculations based on World Bank, 2019; United Nations Department of Economic and Social Affairs, Population Division, 2019.
Note: In Iraq the data starts as of 2004. Hence, the first period reflects 2004-2008 and the total period reflects 2004-2016.

Figure 5.38 Remittance and tourism receipts per capita across Arab resource-poor countries, 2000-2017



Source: Authors' calculations based on World Bank, 2019; UNDESA, Population Division, 2019.

Figure 5.39 Group average: real natural resource rents per capita across Arab resource-rich and resource-poor countries, 2000-2017 and their projections, 2018-2030 (Dashed part)



Source: Authors' calculations based on based on World Bank, 2019; UNDESA, Population Division, 2019.
Note: Arab oil exporters include Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, the United Arab Emirates, Iraq and Algeria. Arab oil non-exporters include Comoros, Egypt, Jordan, Lebanon, Mauritania, Morocco, Tunisia, Yemen and the Sudan. For 2018, projections are estimates, while for 2019 onwards, figures are forecasts based on the World Bank forecasted commodity prices published in April 2019.

E. Summary

Over the past few decades, the Arab region achieved considerable human capital gains, accompanied generally by decreasing inequalities in health and education outcomes. Nonetheless, declining trends in inequality of outcome were not closely matched with declines in inequality of opportunity. Moreover, the human-capital pool remains largely an untapped economic resource, with income per capita stagnant and income inequality rising.

Socioeconomic inequalities are propelled by poor economic structures and mismanagement of reforms. Arab economies tend to be disproportionately concentrated in low value-added and unproductive sectors, which results in labour market informalisation and poor outcomes. Above all, the rentier nature of Arab economies, coupled with weak governance and institutional frameworks, crony capitalism, restrictions on freedoms and low political participation, has resulted in socioeconomic arrangements that systematically favour the interests of those with more influence. Altogether, rentierism and its features have deepened existing socioeconomic and political inequalities.

Nonetheless, per capita rent projections show that lavish social contracts that have been a main pillar of regional development policies for the past four decades are on their way to becoming a historical past fact. Although trends in oil prices underlying these projections are difficult to predict, the numbers should raise concern, especially given reconstruction demands in some countries (Yemen, Syrian Arab Republic, Iraq, Libya), high debt-to-GDP and debt-service ratios (most resource-poor

middle-income countries) and high and rising military expenditure (most Arab countries, especially the resource rich). All this is expected to add more downward pressures on rent per capita and, thus, directly affect social expenditure outcomes.

The Arab rentier state, with its current institutional capacity and governance framework, is ill equipped to address these multiple challenges (Abu-Ismail, 2019). Policy responses since 2010 have been offering additional rents (GCC in 2011 till 2013) and/or less space for real voice and accountability and other governance reforms (resource poor). These responses are an extension of the same policies that led to the uprisings.

Arab countries need to think beyond temporary fixes and address root causes of endemic development challenges that are not isolated one from another, such as weak school-to-work transition, youth unemployment, low labour productivity with high informality, and lack of structural transformation. Addressing these challenges depends on achieving two strategic objectives: capitalising on the youth bulge through structural transformation, and reforming institutions, which itself is a prerequisite for structural transformation.

Furthermore, enhanced governance must be at the heart of any integrated development-growth paradigm. Good governance would allow prudent policy making that effectively targets the disadvantaged and reduces poverty and inequality, while simultaneously ensuring a competitive thriving economy able to absorb the young and capitalise on the human capital in the region, which would foster political stability and reinforce the links between human development and economic growth. Failing that, Arab countries will remain trapped in a vicious cycle of low and deteriorating governance and rising political instability, as was the case from 2000 to 2017 for most countries.

This chilling conclusion naturally gives rise to a few questions. The term “institutional reforms” itself needs to be unpacked. What are these reforms? Are some more urgent than others in some country contexts and why? Which Arab countries are more likely to pioneer such reforms and why? Those in the eye of the storm (resource poor and resource rich with large populations and rapidly dwindling per capita rents), or those on its periphery (resource rich with small populations and rents per capita projected to remain high well beyond 2030 due to wealthy sovereign funds)? Will the chill of the eroding rentier social contract scare elites in the region impelling them to defeat all social institutional reform movements? Does the global erosion of commitment to liberal democratic values (key for institutional reforms) reduce outside pressure on the region for institutional reform? The answer to these questions could very well determine development prospects for Arab countries from now until 2030 and even beyond.

6. Policy Considerations

Social dimensions of inequality include education and health, which together form foundational aspects of daily life and play a shaping role in determining both lifelong wellbeing of individuals and economic and social prosperity on a national level. Individual education and health are affected by circumstances, including place of residence, parental wealth quintile and parental education.

Over recent decades, Arab countries across the region have on average made significant progress in access to education. Yet, deficits remain in educational enrolment and attainment, compounded by major education quality issues. While primary educational attainment has risen, regional dropout rates in secondary school remain high, compared with both the global average and that of developing countries. In health, significant progress has been achieved in child and maternal health. However, significant disparities persist between the group of least developed and conflict-afflicted countries and the rest.

Combined with a persistent gender gap and increasing economic inequalities, within the labour market and between capital and labour, these social inequalities are further aggravated by conflicts.

If Arab countries are to build sustainable inclusive economies, major interventions are needed to enhance access to and quality of key public services. Such interventions would address three interrelated set of challenges: social, economic and institutional reform.

A. Social challenges

Education is among the most critical indicators of individual lifelong wellbeing outcomes, including employment, income, and health. On an aggregate scale, education is at the centre of the types of knowledge economies that are part of national development strategies across the Arab world, and beyond producing competent workers, it also is a shaper of social and citizenship identities.

Challenges of educational attainment are compounded by others pertaining to quality of education. International metrics, such as the Trends in International Mathematics and Science Study (TIMSS) pin several Arab countries behind global averages, or even developing-country averages, especially at the secondary level. The dual social structure that marks the region – a small upper class and large lower class – is mirrored in the education system. Privatisation has ensured elite access to higher quality education, while a failing public system serves the majority.

The pattern of unequal access is also evident in health. Socioeconomic indicators, such as education level, are closely tied to self-reported ability to reach hospitals, with vulnerable groups reporting difficulty at higher

rates, and health outcomes, such as child mortality rates, are also closely linked with household background.

The recommendations put forward here seek to enhance access to and quality of services, with the overlapping goals of boosting individual wellbeing, mitigating inequality, and enabling economic growth. Particular attention is devoted to education and health systems, as critical elements of individual and national wellbeing. In addition, the recommendations address design of social safety nets, as a tool for addressing multiple dimensions of inequality.

1. Consideration one: reinvigorate commitment to public services

There is an urgent need to reinvigorate commitment to public services, with education needing added attention. Revisiting prevailing concepts of the role of education in social contracts and strategies that in several cases have not been significantly altered for decades, as well as resource allocation practices, can lead to higher quality systems conducive to social and economic goals on a national scale.

Social contracts in several Arab countries have been conceptually influenced by post-colonial era trends of considering free universal education – through tertiary levels – and health services as basic rights and intrinsic to uplifting individuals, societies and economies. An independent Egypt played a critical role in shaping and articulating narratives around the role of the state, some forms of which were embraced by several Arab countries. The position expounded by the mid-twentieth century writer and Egyptian knowledge minister, Taha Hussein, that “Education is as water and air, the right of every human being” continues to implicitly form the foundation of education policies and social expectations of state provision of education region wide. Armed with this commitment to universal quality public education, Arab countries made monumental strides in raising educational attainment and literacy rates in the post-colonial era. Yet, today, international metrics point to the low quality of education across the region.

Arab countries should revisit and strengthen their commitments to education, as a right, as an equalising force, and as a catalyst for societal and economic growth. Globally, education has generally been a publicly provided good, despite its complex theoretical status as both a private and a public good. While education results in several benefits on the individual level, such as income and wellbeing, it has externalities on society, economy, and political system. Arab social contracts of the post-colonial era leveraged education as not only a tool for individual wellbeing but also as a pivotal component of establishing a newly independent society and economy. Education was further conceived of as an equalising service; the main conduit through which socioeconomic mobility is achieved.

In tandem with revisiting social contracts, education strategy itself should be rethought. In several cases, education systems have not been significantly reformed since the post-independence period of the 1950s and 1960s. These systems were designed with the economic and social goals of their time periods. Curricula, examination structures, college admissions processes and fields of study were tailored to the anticipated skill needs of that era. Centralised planning meant that professions were planned in alignment with state-sponsored industries that would lead to national economic

growth. Economists have called for resurrection of state roles in strategically planning, protecting, supporting, and investing in industries as a critical factor in economic growth. Education policies that make aligned investments in nationally strategic fields are critical to this form of industrial growth, a type of growth that requires "deliberate and constant investment" (Meyer, 2019).[35]

While cases vary by country and some modifications may have been made, in several countries there has been no significant overhaul of the education system to meet contemporary needs. A manifestation of this problem is an unprepared workforce and a skills mismatch across countries. Graduates are not armed with the skills demanded by contemporary economies. There is, thus, no systematic strategic alignment between education systems and national economic needs.

In addition to strategic alignment, education quality can be improved through more efficient resource allocation. While greater transparency of public budgets and spending is needed, there is evidence of existing inefficiency. For example, in 2005/2006, Ministry of Education in Egypt allocated 63 per cent of its non-wage budget to printing textbooks in large numbers, while the low rate of recovery of used textbooks remained unaddressed (World Bank, 2005a). More transparent budgets will likely identify a slew of other areas where cost savings can be made and reallocated to strategic reform, curricular development and teacher training. Budgeting procedures themselves should be reconsidered, for centralised budgeting tends to be rigid and unresponsive to local needs, while some degree of administrative and financial decentralisation is likely to enhance efficiency of resource allocation.

A potential area where resources can be allocated more efficiently is in tertiary education. In several Arab countries, the potential for revenue generation and cost savings in universities is relatively untapped. Freeing some public resources from universities would allow refocusing resources on primary and secondary schools. Moreover, contributions from students who can afford paying higher tuition and bolstering a more robust ecosystem for research and development may both enrich university education and allow for reallocation of funds.

Above and beyond resource allocation, the region needs to rethink and eventually overhaul the overarching goal of the education system from one of indoctrination (E/ESCWA/SDD/2017/6) **into one for emancipation, and, hence, greater autonomy and freedom for individuals.** While the argument has often been made for improving quality of teaching and teaching methods, enhancing infrastructure of schools and tools, limiting truancy and matching skills to jobs, what has been ignored is the dire need for reconsidering the function of the education system, which currently perpetuates patriarchy and instils conservative values. Education is not only about learning and being 'educated', but also about being 'cultured' and able to critically view the world. Instilling innovation and free and creative thinking should be the primary goal of any education system, and this would eventually require decoupling education from religious learning, as well as from values of obedience and respect for authority. This is not a single-policy decision, it is a monumental undertaking that requires political courage and avant-garde policies, along with effective interventions at the level of family, religious establishment and individuals.

Beyond education, **renewed public commitment is needed across basic services; notably, health and housing.** The recommendations put forward here should simply be viewed as the starting point of a holistic approach centred on strategic alignment aimed at boosting quality and access to services in line with economic and social development goals.

2. Consideration two: conditioning cash transfers

The design of social welfare programmes can be leveraged to boost access to education and health services. Traditional forms of social welfare programmes consist of means-tested cash transfers aimed at protecting the poor. In their simplest form, these programmes guarantee a basic income. Design particularities vary depending on the specific programme. However, essentially, the trade-off is between providing protection for families that need it the most to secure long-term benefits for children of poor families and minimising risks of disincentivising work.

In the late 1990s, in an effort to meet their human capital goals, Latin American countries innovated on traditional welfare by adopting Conditional Cash Transfers (CCTs). These vary in design depending on the specific programme, but typically include an educational and/or health behavioural requirement as a condition for receipt of cash transfers. Such conditions may include enrolment in schooling through a certain age or grade-level, or receipt of pre-natal medical care or vaccinations. The purpose is both to enhance individual wellbeing and to achieve wider social and economic development goals.

In large part, CCT programmes have made notable achievements in reduction of poverty, increasing educational attainment, and improving health outcomes for beneficiaries. This has not come without costs, limitations and trade-offs. One difficulty is in the high administrative cost of monitoring behaviour. Indeed, cost effectiveness of CCTs, and even traditional cash transfer programmes, is widely disputed.

A critical limitation specific to CCTs is that they do not address structural weaknesses. The programmes incentivise use of services, but do not address wider questions of supply, quality and broader incentive structures. For example, a decision not to enrol in education may be for a wide range of reasons, including mobility or proximity to services, poor quality of services, and low incentives due to low payoffs. This is tied to a key weakness in CCTs, which is that they do not account for potential legitimacy of a decision not to take up an education or health service (Baird and others, 2013). Beyond incentive structures, social norms may also contribute to limiting use of services. It is, thus, important that the reasons behind decisions are well understood, in order to address root causes of lack of take up. A well-designed CCT programme will take such considerations into account.

Design limitations aside, CCTs have been shown to yield important positive effects. **In terms of primary programme goals, CCTs do significantly increase take up of health or education services, and in some cases boost outcomes.** For example, the Mexican *Progresa* programme, conditioned on proper care during pregnancy and after birth, did significantly lower rates of infant mortality (deaths of infants under the age of one). In rural

areas, a 17 per cent decline in the number of infant deaths was observed. However, no effect on neonatal mortality (infant deaths within the first 28 days) was observed, with unsanitary facilities as one potential reason (Barham, 2011) which re-emphasises the criticality of quality of services in reaching the desired outcomes.

In education, it was found that CCTs do conclusively increase school attendance. Studies on the *Bolsa Familia* scheme in Brazil and *Familias en Accion* in Colombia found increased school attendance. Other studies also found decreases in dropout rates and improvements in grade-level promotion. Evidence on learning outcomes, however, is less conclusive. It was found that the size of the transfer is not decisive; i.e., increased transfer amount is not correlated with a larger effect on school attendance. One study did not show improved performance on achievement tests. Studies assume that increased education level results in higher long-term wages, yet no studies have effectively traced this effect in relation to CCTs.

On the key goal of cash transfers – poverty reduction – CCTs are found to be effective, with the degree of effectiveness varying by programme design. In a traditional cash transfer scheme, where benefits are provided up to a minimum income, transfers are theoretically beneficial for the most vulnerable groups. One key finding emphasised in studies of cash transfer programmes, of a wide range of designs and country contexts, is the evidence of increased long-term wellbeing of children of poor households (Barrientos and DeJong, 2006). An important trade-off in this system is the work disincentive: groups earning at, below or even slightly above the guaranteed minimum income may be disincentivised to take up formal work. The extent to which this is the case depends on the specifics of programme design.
In conjunction with human capital development, this investment in productive assets is a contributing factor in the role CCT programmes in increasing economic growth (Kabeer, Piza and Taylor, 2012) CCTs diverge from traditional cash transfers in that they are intended and expected to lower child labour.

Beyond individual benefits, CCTs address and alleviate multiple dimensions of inequality. Like traditional cash transfers, CCTs contribute to lowering gaps by raising post-transfer income and consumption levels of the vulnerable groups. There is evidence from Mexico's *Progresa* programme that beneficiaries invest in productive assets and in improving their living conditions, increasing long-term consumption (Gertler, Martinez and Rubio-Codina, 2012). The source of funding for the cash transfers further affects the degree to which they lower inequality in that the effects can be substantial if the transfers are financed by progressive taxes (Soares, Ribas and Osório, 2010). Indeed, the design and size of the programme are critical to its implications for inequality.

From a socio-political angle, CCTs represent a divergence in perspective from traditional cash transfers. Beneficiary households consider CCTs something 'earned', which may yield more political support on the level of the general population, as public spending is perceived as purposeful beyond short-term poverty alleviation (Roth, Bongestabs and Nimeh, 2016).

Among Arab countries, Egypt's Ministry of Social Solidarity, with support from the World Bank, launched the country's first CCT programme in 2015: Takaful and Karama Programme (TKP). Takaful transfers are given to women with children, with

conditions related to education and health monitoring. However, as of November 2018, conditionality had not been implemented. Early evaluations echo other studies: transfers increase spending for household wellbeing, with household consumption of beneficiaries increasing by 8.4 per cent on, inter alia, school supplies, school transportation costs and higher quality food (El Enbaby, 2018).

CCTs represent an opportunity for Arab countries with a need for boosting take up of education and health services among vulnerable groups. Countries may consider conditioning existing cash transfer programmes upon specific education or health behaviours. However, programme design will need to be tailored to the specific context. Notably, CCTs are not a substitute for supply and quality of services, nor for wider incentive structures, but should come as part of wider efforts to enhance education and health outcomes among vulnerable groups.

3. Consideration three: social protection floor

As noted, in their most basic form, social safety net programmes are critical for ensuring poverty reduction. In addition to means-tested welfare programmes, such as that described above, social insurance schemes play a critical role in absorbing shocks. In 2009, the United Nations System Chief Executives Board for Coordination (UNCEB) proposed the Social Protection Floor (SPF) Initiative under the banner of ensuring 'social protection for all'. The proposal came in the context of the 2008 global financial and economic crisis. In countries with well-designed social protection schemes, these crucially helped in preventing many from slipping into poverty as unemployment spiked during the crisis.

The SPF Initiative is intended as a comprehensive framework for a first level of social protection. As a starting point for a more comprehensive social protection system, it identifies four essential and universal guarantees to cater for:

(a) Lack of or insufficient work-related income, caused by sickness, disability, maternity, employment injury, unemployment, old age or death of a family member;
(b) Lack of access to, or unaffordable access to, healthcare;
(c) Insufficient family support, particularly for children and adult dependents;
(d) General poverty and social exclusion.

The provisions identified combine means testing with protection from situational shocks to form a comprehensive foundation for a social safety net.

Most Arab countries have established elaborate social safety-net programmes and institutions and do cover several of the described vulnerable groups. Like in many cases worldwide, due to historical evolvement, the strategy, governance and administration of safety-net programmes in several Arab countries are fragmented. Generally, in Arab countries, these programmes can be classified by typology (contributory social insurance, non-contributory programmes, and medical care), by target groups (public- and private-sector employees, and types of vulnerable groups), and by public versus private provision of social safety. The SPF Initiative urges countries to consider more centralised and coherent national social security systems to maximise effectiveness and cost efficiency and ensure reaching all relevant groups.

While extensive safety net programmes exist in several Arab countries, certain groups tend to be overlooked. For example, while public-sector employees are protected, in some cases, private-sector employees receive partial or no protection. The Palestinian territories, where private-sector employees are not covered at all, is a case in point. In several economies, including Algeria, Egypt and Tunisia, the self-employed are only partially covered. Informal, temporary, casual, agricultural, domestic or migrant workers are in some cases legally excluded from coverage. Non-participants in the labour force, especially females who have low levels of labour force participation, are also overlooked (ILO, 2009).

As discussed in previous chapters, in several Arab countries, coverage of pre-paid health funding mechanisms is limited, resulting in a high level of out-of-pocket payments (i.e., health expenditures directly paid by patients); in some, more than half of total health expenditure is covered by out-of-pocket payments, mostly user fees paid at the point of service. High out-of-pocket payments are a symptom of a poorly structured health insurance programme that fails to protect individuals experiencing health shocks. Moreover, out-of-pocket payments can push households into poverty.

Arab countries should review existing social safety-net programmes to enhance protection from poverty and shocks, while providing work incentives. Fragmented programmes risk missing groups in need of protection. Thus, a comprehensive national policy framework is needed to ensure that no vulnerable community is overlooked. Furthermore, in several Arab countries, health insurance schemes that could play a critical role in revitalising healthcare coverage and services are underdeveloped.

B. Economic challenges

The Arab region has been bedevilled with persistent and increasing social and economic inequalities that are deepened by conflicts. Moreover, the need for revisiting the role of the state in providing health and education, both in quality and quality, is urgent, and more investments are certainly needed in both sectors. Indeed, expanding social expenditure is imperative, hence the need for mobilising more financial resources, which, in turn, requires specific fiscal and labour market policies. However, for any economic policy to be successful and sustainable, there is an urgent need for comprehensive governance reforms.

1. Consideration one: structural transformation

Arab economies need structural transformation that takes into consideration the social impact of any economic policy whether fiscal, monetary, financial, industrial, trade, investment or business. Achieving economic growth is a necessary but insufficient condition; **such growth needs to be equitable, inclusive and sustainable.** Policy makers need to encourage sectors that generate decent jobs, and governments need to promote labour-intensive and higher-productivity sectors to help diversify economies away from the capital-intensive natural-resource sector, increase productivity and generate employment.

Promoting small and medium enterprises is an entry point to boosting personal initiative, promoting entrepreneurship, and generating employment. Backing micro-enterprises, whether through policies or microfinance, plays a significant role in decreasing inequalities, as it provides direct

support to the most financially disadvantaged. Industrial development, facilitated by technology transfer and innovation, is also important for structural transformation.

Public investments, both in human resources and infrastructure, need to prioritise the areas that have been deprived or are lagging. Investments in human capital need to focus on health and education, since these sectors are essential for developing a competitive labour force that can drive innovation and development, while investments in infrastructure would ensure better access to services and incentivise private sector development. Public investments in conflict-afflicted countries are crucial and need to ensure equitable distribution.

For any structural transformation to take place and be successful, good governance practices need to be embedded in all public policies. Transparency in resource mobilisation and spending is essential and monitoring and accountability need to follow. Fiscal policy reforms can be key drivers of an inclusive growth that generates decent work and reduces poverty (E/ESCWA/EDID/2017/4). Effective fiscal policies would pave the way for targeted investments and offer an environment conducive to addressing socioeconomic challenges hindering equality. For example, governments may contemplate providing fiscal incentives to high-added-value sectors that are labour intensive or that promote innovation and facilitate technology transfer.

Fiscal policies need also to examine across-the-board subsidies, i.e., subsidies need to be rationalised to become more targeted, thus maximising their impact on the most underprivileged. Coordinating fiscal and industrial policies is important for diversifying the economy and moving from capital-intensive, high-productivity sectors to labour-intensive and high-value-added sectors (E/ESCWA/EDID/2017/4). Moreover, developing strong and independent institutions is important for effective implementation of policy and for sustainability of economic growth.

Undertaking structural transformation is essential for the Arab region. However, without peace, ending all conflicts and establishing the rule of law, such transformation would be incomplete and ineffective.

2. Consideration two: widening fiscal space for social expenditures

Expenditure on health and education in the Arab region is well below global averages. In 2013, OECD countries spent around 6 per cent of GDP on health and 5.2 per cent on education, compared with between 2 per cent for the oil-poor Arab countries and 2.8 per cent for the oil-rich Arab countries on health and between 3.3 per cent and 4.7 per cent, respectively, on education. It is estimated that by increasing public spending on education by 1 per cent of GDP a year for six consecutive years, the Arab region would reach the world average of mean years of schooling (E/ESCWA/EDID/2017/4). **Improving quality of education is also essential for supporting structural transformation, while for healthcare, governments need to enhance care services and widen coverage in order to decrease out-of-pocket spending burdens on low- to middle-income groups.**

These additional investments need to be financed through additional resources; hence the **need for widening the fiscal space by adopting pro poor taxes that improve fairness.** Adopting a progressive income tax

and wealth or property taxes is likely to improve revenues while enhancing fairness. Tax collected need to be directed towards reducing inequality, particularly in health and education. However, before introducing any taxes, transparency and good governance need to be established. Hence, **progressive tax policies need to be accompanied by reforms to the tax administration system** to enhance transparency, review and widen the tax base, enhance tax collection procedures, and combat tax evasion and punish evaders.

The Arab region could also use better linkages between social expenditure and poverty and inequality outcomes. As this report showed, the region is still suffering wide inequalities along various dimensions. Poverty and vulnerability are concomitants of inequality and are intensified by conflicts and socioeconomic challenges. According to the Arab Multidimensional Index (MPI), developed by ESCWA with partner organisations, which covers education, health and living standards, multidimensional poverty is widespread, affecting around 41 per cent of the population, with significant variation among countries. Education, particular that of the household head is the largest contributor to poverty and is also a significant contributor to education and health inequalities (ESCWA, 2019c). Hence, narrowing gaps in education is essential for tackling poverty and inequalities, as well as the disparities both within countries and within the region.

In developmental plans, Arab countries need to address inequalities, at both the national and local levels, possibly within a multidimensional poverty framework. Based on its experience in providing capacity building for member states to upscale their poverty eradication efforts and create national multidimensional poverty indices, and given the close linkages between poverty and inequality, the United Nations system can provide technical support in closing inequality gaps in the region, with UN agencies helping develop interactive toolkits to generate data on inequalities, as an extension of work on multidimensional poverty. Such toolkits can provide policy makers with simple interactive tools for monitoring progress in reducing inequalities.

With regular monitoring of inequality and poverty outcomes, the UN can support Arab countries in evaluating effectiveness of national policies, plans and budgets in reducing multidimensional inequality. For example, one initiative proposed by ESCWA aims to provide tailored comprehensive support to the reform of policies, development of national measures to track multidimensional poverty, and formulation of plans and budgets to address it, using the Social Expenditure Monitor (SEM), which has been piloted in selected ESCWA member states (ESCWA, 2019b, 2019c).

Such an intervention can be crucial for reducing inequality in the Arab region. However, given the restricted fiscal space, budgeting for social development priorities is very challenging (E/ESCWA/EDID/2017/4). Fiscal policies are under severe pressures to maintain macro-fiscal sustainability, respond to growing socioeconomic needs of citizens and prioritise plans to eradicate poverty and close inequality gaps. **SEM is envisaged as a tool enabling ESCWA member states to improve efficiency of allocations across sectors and effectiveness of budgeting by monitoring expenditure management,** taking into account seven dimensions of public social expenditure, including education, health and nutrition, labour market interventions, and employment generation programmes

(E/ESCWA/EDID/2017/4). ESCWA plans to expand SEM to evaluate effectiveness of social policies and social expenditures in reducing inequalities.

3. Consideration three: addressing labour market challenges

As discussed earlier in this report, the Arab region is facing the challenge of informality. Around 67 per cent of the labour force do not contribute to social security, which may be partly explained by the high levels of informality and unemployment (E/ESCWA/EDID/2017/4). **Addressing informality and generating employment for young entrants to the labour force is essential for addressing inequality,** while raising the minimum wage in the informal sector helps close the wage gap between the formal and the informal sectors, paving the way for formalising the latter.

Employment guarantee schemes (EGSs) are public work programmes that provide households with additional income during drought and other natural disasters, especially in rural areas, with the main purpose of providing guaranteed employment at a wage level adequate for securing a certain level of income for poor households. Simultaneously, such schemes create productive activities, especially in infrastructure, agriculture, land projects and other labour-intensive activities that have a higher social long-term return. Scholars, such as Kannan (2005), argue that EGSs could create more favourable living conditions in rural areas, especially if well designed and form part of an inclusive plan targeted towards improving human development among the poor and women. Papola (2005) also claims that EGSs are beneficial if wages provided are enough to meet subsistence needs of households and argues that these should be set higher than minimum market wages.

India pioneered the use of EGSs in fighting rural poverty and unemployment of women. The federal government started introducing such programmes in the 1980s, but the most recent and most successful is the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) of 2005, which aimed at improving livelihood security in rural areas by providing 100 days of guaranteed work every financial year to households capable of doing unskilled work. Unlike other programmes that are supply driven, MGNREGA is demand driven, i.e., employment is granted when demanded by covered citizens. While providing additional job opportunities, especially for women and deprived communities, the programme also creates productive assets. Designed to work in a decentralised setting such that it can be monitored by civil society, the programme achieved multiple milestones in reducing migration and lowering dependence on landlords and money lenders in agricultural areas, in addition to increasing employment and alleviating poverty (Ehmke, 2015). It also increased the bargaining power of employees and social protection in general, thus having a positive impact on the economy of India.

However, there were also some risks and drawbacks. Ranjan (2015) points out the inflationary pressure caused by increases in food prices. In addition, such programmes may lead to a shift in economic activity from heavy manufacturing and services to agriculture and light manufacturing (Zepeda and others, 2013), and could push more young children to withdraw from school to substitute in home production and provide childcare when parents are at work (Li and Sekhri, 2013).

Can EGSs work in the Arab region?
As highlighted in this report, **educational attainment is increasing and jobs provided by EGSs may not match accumulated skills. Yet, they could temporarily provide households with sufficient income to reduce their susceptibility to poverty.** As in the Indian example, EGSs could be a viable policy tool for reducing poverty and inequality in countries with relatively high rates of poverty, such as Egypt, the Sudan, Morocco and Tunisia. They could also help reduce rural migration and enhance structural transformation in rural areas, away from the agriculture sector, thus pushing productivity up and raising rural wages to match urban wages. Since Goal 5 of the SDGs is a priority for the Arab region, **well targeted EGSs could also reduce the gender gap in income.** Above and beyond micro benefits, EGSs have multiple indirect macroeconomic impacts. As is well known, people in middle- and poor-income brackets tend to spend more on domestically produced goods. Hence, EGSs could promote domestic consumption, which eventually creates additional economic growth, or, at least, reduce the impact of economic recession.

Finally, as noted by Haddad (2019), since most of the labour force in middle-income countries, such as Egypt, is employed in the informal sector, where three quarters of workers earn less than the minimum wage, a public policy based on increasing that wage will not benefit them; in fact, it may lead to a rise in inequality. A better policy option would be to implement self-targeted public works programmes like those supported by India's MGNREGA, which raise the 'effective' minimum wage of the informal sector, thereby reducing both wage inequality and precarity of informal jobs.

4. Consideration four: promoting Arab regional integration

For several decades, Arab regional integration has been a much-vaunted aspiration. However, **even though some progress has been achieved, more needs to be done.** Indeed, **pursuing Arab regional integration would drive economic growth, contribute to poverty eradication, support job creation and help narrow inequality gaps in income, health, education and employment.** For example, adopting a common agricultural policy would protect local produce, offer markets to products, protect farmers from price fluctuations and foreign competition, and provide incentives for preserving and developing the agriculture sector. This is the approach that was adopted by the European Economic Community when, in 1962, it launched the Common Agricultural Policy (European Commission, n.d.) An Arab-region-wide common agricultural policy would, undoubtedly, have significant effects on rural areas, contribute to poverty eradication, ensure sustainable income for farmers and help close the rural-urban inequality gap.

Arab regional integration would allow free movement of labour, goods and capital, and enhance intraregional trade and investments. Free movement of labour, particularly from labour-abundant, mainly oil importing, countries, to labour-scarce, mainly oil exporting countries, would facilitate matching skills with job requirements, as companies would have access to a wider pool of labour. In 2010, around 49 per cent of Arab migrants were working in other Arab countries, which contributed significantly to reducing labour surpluses and alleviating unemployment and poverty Furthermore, Intraregional remittances exceeded $13 billion in 2010,

including $6 billion from Saudi Arabia alone. These remittances contribute to poverty eradication, and support health and education in recipient countries, thus partially narrowing the regional inequality gap (E/ESCWA/OES/2013/3).

Likewise, free movement of goods and capital promotes intraregional investments and trade, thus providing opportunities for developing wide ranging value chains that enhance production and efficiency. Indeed, there are significant opportunities for enhancing trade between sub-regional groups, as, for example, between Maghreb countries[36] and GCC countries, and between Mashreq countries[37] and GCC, particularly in agricultural and food items, fuels and textiles. Moreover, intraregional direct investments would contribute significantly to job creation, technology transfer and development of value-added chains, which, in turn, would enhance intraregional trade.

Arab development funds can play a significant role in promoting regional integration in support of socioeconomic development. The region hosts several, both national and regional, including the Kuwait Fund for Arab Economic Development, the Abu Dhabi Fund for Development, the Saudi Fund for Development, the Arab Fund for Economic and Social Development, and the Islamic Development Bank. These play a significant role in poverty eradication and in closing the inequality gap in recipient countries. Funds received from Arab donors, in the form of concessional loans, grants and technical assistance, aid in: supporting education and health services for the most underprivileged; improving water and sanitary services; linking road, electricity and water networks to and in remote areas; supporting agriculture and farmers in rural areas; and providing financial and technical support for recovery from natural disasters that tend to widen inequality gaps.

To enhance intraregional investments, Arab countries are called upon to:

- Adopt uniform policies for achieving food, energy and water securities (E/ESCWA/EDID/2015/3), starting with a common agricultural policy aimed at developing and protecting the agriculture sector in the region and contributing to narrowing urban-rural inequality gaps;
- Promote free movement of labour which would help close skill gaps in labour-scarce countries and alleviate unemployment in labour-abundant countries, while contributing to narrowing income inequality gaps;
- Remove trade and institutional barriers encumbering Arab investors to improve business environment and mobilise investment in infrastructure development, which would boost economic growth and allow governments to build fiscal space for financing social spending;
- Allocate more financial resources to Arab development funds to support local, national and regional projects that would improve access to services for citizens in the most underprivileged areas.

C. Institutional reform challenges

Rethinking the development model of the Arab region necessitates going beyond just reconsidering policy interventions, sectoral reforms and short-term economic packages, for, as this report has argued extensively, there needs to be profound stocktaking and a systemic, structural transformation at various political, economic and social levels.

Only an integrated approach that takes a long-term view would be effective in inducing real change. Prospects are not as bleak as the current state of affairs may convey. **However, addressing the chronic ills of the region requires bold thinking that questions prevalent patriarchal structures, religious teaching, economic models and political decision making.** Furthermore, if it is to succeed in driving change forward, any future interventions would have to be multidimensional and act at multiple levels.

One of the first objectives of change is to **restore credibility and trust in state institutions and reignite hope in society that there is indeed a way forward.** A major leap ahead would be effected by reinventing public services. To be sustainable, legitimate and acceptable, new policies require vast public participation. In this regard, there has been a few encouraging experiences the region is invited to replicate and disseminate.
For example, since 2011 there has been numerous national dialogues (Yemen, Lebanon, and Libya) and social dialogues (Tunisia, Morocco and Jordan) that led to significant decisions taken with wide participation of various stakeholders. The Arab region would be well advised to institutionalise the practice of national social dialogues as the main vehicle for negotiation, consensus building and win-win decisions. Such institutions are necessary for moving away from zero-sum thinking and co-optation by one actor, for they act as legitimate conveyors of participatory politics in both form and substance. Moreover, they help quieten the fears of marginalised groups and ensure participation of the voiceless by enlarging the circle of stakeholders. Such existing institutions as the Economic and Social Councils in several countries can lead and host national dialogues.

As discussed earlier, inequality is strongly correlated with lack of autonomy, which in turn is largely a factor not only of the existing political system but also of the patron-client societal relationships characterising Arab societies. In several instances, family relationships and primordial ties act as a double-edged sword, rewarding the privileged few who are connected to them and excluding the several who have no such connections. Any serious reforms would have to begin by deconstructing the patron-client networks, relying more on institutions for services, cementing the rule of law and promoting good governance. Such a transition process would be long and arduous, requiring cultural transformation, incentives, patience and an iron will to drive change. However, the only way out of clientelist practices is by reengineering societal relationships as to give a decisive role for institutions governed by the rule of law that treat citizens equally based on merit.

Additionally, as discussed earlier in this report, the informal sector remains the big elephant in the room. Beyond quick economic fixes, a longer-term strategy that bridges the gap between the formal and informal sectors is warranted. There are several successful world examples of dealing with the informal sector, 'adopting' it as part of the economy. Hence, there is no reason why the Arab Region cannot think of similar effective, but context-specific, solutions. Furthermore, **oligarchic practices prevailing in several Arab economies would have to be severely discouraged; the private sector would need to be opened up to new entrants, making it a real 'private' sector, rather than a 'family' or crony-based private sector; and healthy competition would have to be promoted.**

Whatever integrated intervention is adopted, **in the end, a solid system of accountability and strict adherence to the rule of law are indispensable for structural reforms to take root.** Ruling elites ought to realise that they have an interest in expanding participation in decision-making, stronger institutions and social dialogue. Perhaps, as argued in ILO and UNDP (2012), promoting social dialogue is the main challenge in the Arab region, particularly in transition economies or seemingly stable regimes that, nonetheless, have low voice and accountability. Indeed, **social dialogue is a central apparatus for enhancing communication between government and people and providing institutionalised mechanisms for conflict resolution.**

If post-2011 lessons taught anything, it is that resilient effective institutions are essential for shepherding transition successfully to hoped-for destinations. Expectantly, launching national dialogues, along with encouraging participation; restoring trust in and credibility of institutions; and transforming societal relationships can be the recipe for improving the socioeconomic wellbeing of the region.

Appendix Tables

Table A.1 Spatial inequalities latest point in time

		Health						Education							
Country	Year	Access to improved water	Access to improved sanitation	Skilled birth attendance	Infant mortality[a]	Stunting[a]	Overweight[a]	Primary Net Attendance Rate	Secondary Net Attendance Rate	Primary completion rate (6-24)	Secondary completion rate (6-24)	Primary completion rate (25+)	Secondary completion rate (25+)	Tertiary completion rate (25+)	Average years of education (25+)
DZA	2012	1.04	1.12	1.03	1.01	1.01	0.98	1.01	1.13	1.11	1.46	1.34	1.86	2.01	1.49
JOR	2012	1.13	1.00	0.99	1.00	1.02	1.02	..	..	0.99	1.01	1.05	1.23	1.26	1.14
TUN	2011	1.12	1.16	1.03	1.01	1.05	1.00	1.03	1.36	0.98	1.88	1.41	2.52	3.10	1.81
LBY	2014	1.05	1.09	1.01	1.00	0.98	1.02	1.00	1.01	1.09	1.06	1.00	1.08	1.24	1.03
EGY	2014	1.02	1.16	1.07	1.01	0.97	0.97	1.00	1.08	1.03	1.40	1.22	1.82	2.67	1.46
PSE	2014	0.67	1.00	1.00	1.00	1.00	1.04	1.00	0.98	0.99	0.97	1.02	1.06	1.05	1.06
IRQ	2011	1.28	1.09	1.11	1.00	1.03	0.99	1.12	1.64	1.41	2.39	1.42	2.40	2.90	1.49
MAR	2011	1.40	1.32	1.19	..	1.15	0.98	..	..	1.81	2.51	2.51	..	..	..
MRT	2015	1.34	2.69	1.76	1.01	1.12	0.99	1.46	2.22	1.74	3.77	2.88	5.09	6.29	3.85
COM	2012	..	..	1.14	1.03	1.09	0.98	1.12	1.32	1.25	1.87	1.47	2.15	2.84	1.88
SDN	2014	..	..	1.30	1.01	1.27	1.01	1.37	1.87	1.32	3.65	1.65	3.41	3.99	1.91
YEM	2013	1.52	1.84	2.14	1.01	1.37	1.00	1.16	1.33	1.38	2.06	1.61	2.29	3.55	2.07

Source: Authors' calculations.

[a] Consistent with all remaining indicator, infant mortality, stunting and overweight rates are reported in this table as achievements. Hence, the ratio measures the urban-rural gap for all indicators.

Table A.2 Wealth inequalities latest point in time

		Health						Education							
Country	Year	Access to improved water	Access to improved sanitation	Skilled birth attendance	Infant mortality[a]	Stunting[a]	Overweight[a]	Primary Net Attendance Rate	Secondary Net Attendance Rate	Primary completion rate (6-24)	Secondary completion rate (6-24)	Primary completion rate (25+)	Secondary completion rate (25+)	Tertiary completion rate (25+)	Average years of education (25+)
DZA	2012	1.20	1.34	1.04	1.02	1.03	0.98	1.02	1.37	1.37	3.01	1.84	4.95	6.46	2.39
JOR	2012	1.03	1.01	1.02	1.02	1.12	0.98	..	..	1.05	2.19	1.21	3.50	6.85	1.74
TUN	2011	1.18	1.30	1.06	1.01	1.06	1.03	1.03	1.90	1.04	3.87	2.09	7.19	13.58	3.69
LBY	2014	1.01	1.18	0.99	1.01	1.13	1.07	1.01	1.23	1.20	1.19	1.09	1.21	1.33	1.10
EGY	2014	1.05	1.21	1.17	1.02	1.01	0.97	1.03	1.28	1.10	1.95	1.70	3.89	9.31	2.71
PSE	2014	51.01	1.03	1.00	1.01	1.02	0.96	1.00	1.22	1.06	1.58	1.09	1.66	2.39	1.28
IRQ	2011	1.44	1.17	1.17	1.01	1.05	0.93	1.24	2.97	2.27	7.33	2.50	9.82	17.21	2.80
MAR	2011	1.87	2.20	1.35	..	1.30	0.95	..	..	2.58	5.08	5.08	..	..	..
MRT	2015	2.44	12.42	3.22	1.01	1.26	0.98	2.00	4.99	3.20	19.02	7.60	29.63	47.43	12.41
COM	2012	..	..	1.41	1.00	1.21	0.98	1.39	2.86	1.90	4.67	2.70	7.27	20.50	4.65
SDN	2014	..	..	2.06	1.03	1.44	0.97	1.81	7.31	1.79	14.69	3.23	15.31	21.74	5.00
YEM	2013	2.68	4.37	4.18	1.02	1.80	1.00	1.60	1.94	2.53	6.11	3.28	8.06	17.56	4.90

Source: Authors' calculations.

[a] Consistent with all remaining indicator, infant mortality, stunting and overweight rates are reported in this table as achievements. Hence, the ratio measures the urban-rural gap for all indicators.

Table A.3 Education of household head inequalities latest point in time

		Health						Education							
Country	Year	Access to improved water	Access to improved sanitation	Skilled birth attendance	Infant mortality[a]	Stunting[a]	Overweight[a]	Primary Net Attendance Rate	Secondary Net Attendance Rate	Primary completion rate (6-24)	Secondary completion rate (6-24)	Primary completion rate (25+)	Secondary completion rate (25+)	Tertiary completion rate (25+)	Average years of education (25+)
DZA	2012	2.16	1.11	1.02	1.02	1.03	0.97	1.03	1.32	1.26	2.64	1.96	6.85	7.50	3.22
JOR	2012	2.09	1.00	1.02	1.01	1.08	0.96	..	..	1.16	2.03	1.84	4.03	4.16	2.82
TUN	2011	2.09	1.10	1.05	1.02	1.06	1.00	1.03	1.59	1.11	2.60	2.34	6.05	7.09	3.99
LBY	2014	2.14	1.05	1.00	1.01	0.99	1.00	1.08	1.16	1.22	1.33	1.80	2.37	2.43	2.33
EGY	2014	2.03	1.08	1.12	1.01	1.05	0.99	1.07	1.42	1.17	2.25	2.48	8.18	13.53	6.07
PSE	2014	2.51	1.01	1.00	1.02	1.12	0.99	1.02	1.38	1.13	1.76	2.05	4.38	4.86	3.23
IRQ	2011	2.15	1.05	1.09	1.01	1.06	0.98	1.20	2.20	1.78	3.71	2.51	6.52	8.26	3.74
MAR	2011	2.26	1.23	1.14	..	1.12	0.90	..	..	1.55	3.13	3.13	..	..	..
MRT	2015	2.71	2.05	1.49	1.01	1.19	1.00	1.68	2.67	2.04	3.34	3.99	9.64	15.17	7.63
COM	2012	..	..	1.16	1.00	1.11	0.99	1.25	1.68	1.36	1.62	2.40	5.34	8.80	5.47
SDN	2014	..	..	1.51	1.01	1.42	0.98	1.66	4.71	1.65	6.79	3.24	15.93	21.69	7.06
YEM	2013	2.88	1.37	1.45	1.01	1.20	1.00	1.28	1.53	1.62	3.55	2.18	4.41	7.01	4.36

Source: Authors' calculations.

[a] Consistent with all remaining indicator, infant mortality, stunting and overweight rates are reported in this table as achievements. Hence, the ratio measures the urban-rural gap for all indicators.

Table A.4 Extreme group 1 inequalities (Wealth and education of household head) latest point in time

		Health						Education							
Country	Year	Access to improved water	Access to improved sanitation	Skilled birth attendance	Infant mortality[a]	Stunting[a]	Overweight[a]	Primary Net Attendance Rate	Secondary Net Attendance Rate	Primary completion rate (6-24)	Secondary completion rate (6-24)	Primary completion rate (25+)	Secondary completion rate (25+)	Tertiary completion rate (25+)	Average years of education (25+)
DZA	2012	1.19	1.36	1.06	..	1.05	0.95	1.05	1.53	1.51	4.23	2.65	12.74	17.48	5.53
JOR	2012	1.06	1.01	1.05	..	1.17	0.94	..	..	1.27	2.87	1.95	6.17	8.42	3.52
TUN	2011	1.23	1.33	1.11	..	1.17	1.04	1.06	2.11	1.21	4.31	3.21	13.37	26.01	8.03
LBY	2014	1.03	1.29	..	..	0.99	0.95	1.06	1.30	1.17	1.64	2.18	3.02	3.60	3.04
EGY	2014	1.05	1.22	1.24	..	1.03	0.95	1.08	1.50	1.17	2.73	2.60	11.22	27.74	7.67
PSE	2014	6.56	1.08	..	..	..	..	..	1.70	..	..	2.13	5.41	8.69	2.71
IRQ	2011	1.49	1.21	1.22	..	1.07	0.92	1.43	4.48	3.03	16.12	5.30	39.86	96.00	9.85
MAR	2011	1.80	2.25	1.34	..	1.28	0.87	..	..	2.76	7.41	7.41	..	..	..
MRT	2015	2.59	14.00	3.35	..	1.28	0.99	2.25	6.26	3.75	23.73	11.71	70.59	149.88	36.92
COM	2012	..	..	1.42	..	1.23	0.99	1.45	3.38	2.06	..	4.50	19.47	212.09	3.39
SDN	2014	..	..	2.37	..	1.60	0.97	2.05	11.06	2.08	18.07	5.11	46.10	78.83	16.19
YEM	2013	2.71	4.57	4.67	..	1.81	0.99	1.60	2.27	3.21	13.56	5.44	20.54	51.21	19.69

Source: Authors' calculations.

[a] Consistent with all remaining indicator, infant mortality, stunting and overweight rates are reported in this table as achievements. Hence, the ratio measures the urban-rural gap for all indicators.

Table A.5 Extreme group 2 inequalities (spatiality and household size) latest point in time

		Health						Education							
Country	Year	Access to improved water	Access to improved sanitation	Skilled birth attendance	Infant mortality[a]	Stunting[a]	Overweight[a]	Primary Net Attendance Rate	Secondary Net Attendance Rate	Primary completion rate (6-24)	Secondary completion rate (6-24)	Primary completion rate (25+)	Secondary completion rate (25+)	Tertiary completion rate (25+)	Average years of education (25+)
DZA	2012	1.06	0.97	1.04	..	1.03	0.98	1.01	1.21	1.16	2.21	1.29	1.68	1.92	1.65
JOR	2012	1.11	1.00	0.99	..	1.04	1.02	..	..	0.97	0.89	0.97	1.25	1.60	1.21
TUN	2011	1.12	1.15	1.16	..	1.14	0.98	1.03	1.61	1.13	2.26	1.22	2.33	3.23	1.83
LBY	2014	1.07	1.10	0.99	..	1.04	1.02	1.00	1.06	1.09	1.13	0.88	1.02	1.15	0.99
EGY	2014	1.03	1.16	1.18	..	1.00	0.91	1.03	1.24	1.09	1.66	1.37	2.60	5.99	2.04
PSE	2014	0.78	0.99	0.99	..	1.03	1.01	1.00	0.91	1.01	1.01	0.96	1.18	1.60	1.13
IRQ	2011	1.32	1.07	1.16	..	1.05	0.97	1.16	2.00	1.54	2.85	1.50	3.17	4.10	1.66
MAR	2011	1.38	1.16	1.16	..	1.16	0.95	..	..	2.05	2.26	2.26	..	..	..
MRT	2015	1.33	2.20	1.88	..	1.13	0.98	1.39	1.90	1.59	4.04	2.36	3.91	5.74	3.99
COM	2012	..	..	1.15	..	1.09	0.94	1.15	1.35	1.30	1.20	1.32	2.18	3.75	1.98
SDN	2014	..	..	1.28	..	1.33	1.01	1.26	1.93	1.10	1.46	1.38	2.92	3.71	1.84
YEM	2013	1.67	1.70	2.47	..	1.38	1.02	1.17	1.32	1.31	2.10	1.52	2.51	4.34	2.32

Source: Authors' calculations.

[a] Consistent with all remaining indicator, infant mortality, stunting and overweight rates are reported in this table as achievements. Hence, the ratio measures the urban-rural gap for all indicators.

Table A.6 Gender inequalities latest point in time

		Health						Education							
Country	Year	Access to improved water	Access to improved sanitation	Skilled birth attendance	Infant mortality[a]	Stunting[a]	Overweight[a]	Primary Net Attendance Rate	Secondary Net Attendance Rate	Primary completion rate (6-24)	Secondary completion rate (6-24)	Primary completion rate (25+)	Secondary completion rate (25+)	Tertiary completion rate (25+)	Average years of education (25+)
DZA	2012	..	..	..	1.00	0.98	0.99	1.00	0.95	0.91	0.59	1.13	0.82	0.81	1.21
JOR	2012	..	..	..	1.00	0.97	0.98	..	..	0.99	0.75	1.07	1.00	1.15	1.13
TUN	2011	..	..	..	1.00	0.98	0.99	1.01	0.90	0.98	0.73	1.23	1.13	1.00	1.31
LBY	2014	..	..	..	1.00	0.97	0.99	1.00	0.90	0.97	0.89	1.11	1.11	0.98	1.15
EGY	2014	..	..	..	1.00	0.97	0.98	1.00	0.97	0.98	1.00	1.18	1.29	1.25	1.33
PSE	2014	..	..	..	1.00	0.98	0.98	1.00	0.88	0.97	0.72	1.04	0.96	1.02	1.10
IRQ	2011	..	..	..	0.99	0.98	0.99	1.07	1.18	1.10	0.95	1.32	1.54	1.63	1.49
MAR	2011	..	..	..	..	0.98	0.96	..	..	1.07	1.40	1.40	..	..	..
MRT	2015	..	..	..	0.99	0.95	1.00	0.93	1.11	1.11	1.48	1.32	1.85	2.88	1.49
COM	2012	..	..	..	1.00	0.94	0.99	1.01	0.87	0.94	0.77	1.18	1.30	1.52	1.53
SDN	2014	..	..	..	0.99	0.94	1.00	1.02	0.92	0.99	1.11	1.21	1.20	1.14	1.34
YEM	2013	..	..	..	1.00	0.95	1.00	1.11	1.37	1.28	2.26	1.82	2.24	2.50	2.51

Source: Authors' calculations.

[a] Consistent with all remaining indicator, infant mortality, stunting and overweight rates are reported in this table as achievements. Hence, the ratio measures the urban-rural gap for all indicators.

Bibliography

Abdel Gelil, Ibrahim, and Najib Saab, eds. (2015). *Arab Environment 8: Sustainable Consumption for Better Resource Management - Incorporation Arab Public Opinion Survey on Consumption Patterns*. Beirut: Arab Forum for Environment and Development.

Abernethy, George L. (1959). Aristotle. In *The Idea of Equality: an Anthology*. Richmond: John Knox Press.

Abu-Ismail, Khalid (2019). Beyond the rentier state: can regionalism work for Arab States? In *The Politics of Rentier States in the Gulf*. POMPES Studies, No. 33. Washington, D.C.: Project on Middle East Political Science. Available at https://pomeps.org/2019/01/30/beyond-the-rentier-state-can-regionalism-work-for-arab-states/.

Abu-Ismail, Khalid, Aljaz Kuncic, and Niranjan Sarangi (2016). Governance-adjusted Human Development Index: The case for a broader index and its implications for Arab States. E/ESCWA/EDID/2016/WP.3. Beirut.

Abu-Ismail, Khalid, and Manuella Nehme (2019). Falling rents should make way for institutional reforms in Arab states, 7 May. Available at https://theforum.erf.org.eg/2019/05/07/falling-rents-make-way-institutional-reforms-arab-states/.

Abu-Ismail, Khalid, and Niranjan Sarangi (2013). A new approach to measuring the middle class: Egypt. E/ESCWA/EDGD/2013/WP.2. Beirut.

_____ (2015). Rethinking the measurement of the middle class: evidence from Egypt. WIDER Working Paper, 2015/023 (February). Helsinki, Finland: United Nations University World Institute for development Economics Research.

_____ (2019). *Arab Human Development in Comparative Context*. Routledge (forthcoming).

Ackah, Charles, Clement Ahiadeke, and Ama Pokuaa Fenny (2009). Determinants of female labour force participation in Ghana. Global Development Network Working Paper Series, No. 14 (September). New Delhi: Global Development Network.

Ahluwalia, Montek S. (1976). Inequality, poverty and development. *Journal of Development Economics*, vol. 3, No. 4.

Aizer, Anna, and Janet Currie (2014). The intergenerational transmission of inequality: maternal disadvantage and health at birth. *Science*, vol. 344, No. 6186.

Akkair, Abdeljalil (2004). Education in the Middle East and North Africa: the current situation and future challenges. *International Education Journal*, vol. 5, No. 2.

Akresh, Richard, Leonardo Lucchetti, and Harsha Thirumurthy (2012). Wars and child health: evidence from the Eritrean-Ethiopian conflict. *Journal of Development Economics*, vol. 99, No. 2.

Alesina, Alberto, and Dani Rodrik (1994). Distributive politics and economic growth. *The Quarterly Journal of Economics*, vol. 109, No. 2.

Alesina, Alberto, and Roberto Perotti (1996). Income distribution, political instability, and investment. *European Economic Review*, vol. 40, No. 6.

Ali, Abdel Gadir Ali, and Shenggen Fan, eds. (2007). *Public Policy and Poverty Reduction in the Arab Region*. Kuwait: Arab Planning Institute.

Ali, Abdel Gadir Ali (2003). Globalization and inequality in the Arab region. Kuwait: Arab Planning Institute. Available at http://www.arab-api.org/images/publication/pdfs/263/263_wps0307.pdf.

_____ (2009). The political economy of inequality in the Arab region and relevant development policies. Economic Research Forum Working Paper Series, No. 502. Cairo: Economic Research Forum.

Alvaredo, Facundo, Lydia Assouad, and Thomas Piketty (2017). Measuring inequality in the Middle East 1990-2016: the world's most unequal region? Centre for Economic Policy Research Discussion Paper, No. 12405.

Alvaredo, Facundo, and Thomas Piketty (2014). Measuring top incomes and inequality in the Middle East: data limitations and illustration with the case of Egypt. Economic Research Forum Working Paper Series, No. 832. Cairo: Economic Research Forum.

Alvaredo, Facundo, and others (2017). Global inequality dynamics: New findings from WID.world. *American Economic Review: Papers and Proceedings*, vol. 107, No. 5, pp. 404-409.

Amara, Mohamed, and Hatem Jemmali (2017). On the decomposition and dynamics of inequality of opportunities: a special focus on early childhood health and nutrition in Tunisia. Economic Research Forum Working Paper Series, No. 1093. Cairo: Economic Research Forum.

Assaad, Ragui (2010). Equality for all? Egypt's free public higher education policy breeds inequality of opportunity. Economic Research Forum Policy Perspective, No. 2. Cairo: Economic Research.

Assaad, Ragui, and others (2012). Inequality of opportunity in child health in the Arab World and Turkey. *Middle East Development Journal*, vol. 4, No. 2.

_____ (2016). Inequality of opportunity in income and consumption: the Middle East and North Africa Region in comparative perspective. Economic Research Forum Working Paper Series, No. 1003. Cairo: Economic Research Forum.

_____ (2017). Inequality of opportunity in wages and consumption in Egypt. *Review of Income and Wealth*, vol. 64, No. 1.

_____ (2018). Explaining the MENA paradox: rising educational attainment, yet stagnant female labor force participation. IZA Discussion Paper Series, No. 11385. Bonn: IZA Institute of Labor Economics.

Assaad, Ragui, Rana Hendy, and Djavad Salehi-Isfahani (2019). Inequality of opportunity in educational attainment in the Middle East and North Africa: Evidence from household surveys. *International Journal of Educational Development*, vol. 66 (April).

Assaf, Shireen, and others (2017). *Levels and Trends of Maternal and Child Health Indicators in 11 Middle East and North African Countries*. DHS Comparative Reports, No. 46. Rockville, Maryland: International Coach Federation.

Assouad, Lydia (2019). Rethinking the Lebanese economic miracle: The extreme concentration of income and wealth in Lebanon. Working Paper, No. 2019-28. Paris School of Economics. Available at https://halshs.archives-ouvertes.fr/halshs-02160275/document.

Atkinson, Anthony B. (2015). *Inequality What Can Be Done?* Cambridge: Harvard University Press.

Baird, Sarah, and others (2013). *Relative Effectiveness of Conditional and Unconditional Cash Transfers for Schooling Outcomes in Developing Countries: A Systematic Review*. Campbell Systematic Reviews 2013:8. Oslo: Campbell Collaboration.

Barham, Tania (2011). A healthier start: The effect of conditional cash transfers on neonatal and infant mortality in rural Mexico. *Journal of Development Economics*, vol. 94, No. 1.

Barrientos, Armando, and Jocelyn DeJong (2006). Reducing child poverty with cash transfers: A sure thing? *Development Policy Review*, vol. 24, No. 5.

Bastos, Amélia, and others (2009). Women and poverty: A gender-sensitive approach. *The Journal of Socio-Economics*, vol. 38, No. 5.

Becker, Gary S. (1962). Investment in human capital: A theoretical analysis. *Journal of Political Economy*, vol. 70, No. 5, part 2 (October).

Becker, Gary S., and Nigel Tomes (1986). Human capital and the rise and fall of families. *Journal of labor Economics*, vol. 4, No. 3, part 2 (July).

Berg, Andrew, and Jonathan Ostry (2017). Inequality and unsustainable growth: two sides of the same coin? *IMF Economic Review*, vol. 65, No. 4.

Bhalotra, Sonia, and Samantha Rawlings (2011). Intergenerational persistence in health in developing countries: The penalty of gender inequality? *Journal of Public Economics*, vol. 95, No. 3-4 (April).

Bibi, Sami, and Mustapha Nabli (2010). Equity and inequality in the Arab region. Economic Research Forum Policy Research Report, No. 33. Cairo: Economic Research Forum.

Biesebroeck, Johannes Van (2011). Wages equal productivity. fact or fiction? Evidence from Sub Saharan Africa. *World Development*, vol. 39, No. 8.

Bloom, David E., and David Canning (2008). Population health and economic growth. Commission on Growth and Development Working Paper, No. 24. Washington, D.C.: World Bank.

Borjas, George J. (2003). The labor demand curve is downward sloping: Reexamining the impact of immigration on the labor market. *The Quarterly Journal of Economics*, vol. 118, No. 4 (November).

Bosmans, Kristof (2016). Consistent comparisons of attainment and shortfall inequality: a critical examination. *Health economics*, vol. 25, No. 11.

Breen, Richard, and John H. Goldthorpe (1997). Explaining educational differentials towards a formal rational action theory. *Rationality and Society*, vol. 9, No. 3.

Brown, Ryan P. (2018). The Mexican drug war and early-life health: the impact of violent crime on birth outcomes. *Demography*, vol. 55, No. 1.

Buckner, Elizabeth (2013). Access to higher education in Egypt: Examining trends by university sector. *Comparative Education Review*, vol. 57, No. 3.

Buvinic, Mayra, and others (2013). Violent conflict and gender inequality: An overview. Policy Research Working Paper, No. 6371. Washington, D.C.: World Bank.

Cabieses, Baltica, Kate E. Pickett, and Richard G. Wilkinson (2016). The impact of socioeconomic inequality on children's health and well-being. In *The Oxford Handbook of Economics and Human Biology*, John Komlos and Inas R. Kelly, eds. New York: Oxford University Press.

Calderón-Mejía, Valentina, and Monika Sieverding (2019). Demographic profile of the Syrian population in Jordan and Lebanon. In *Syrian Migration During the Armed Conflict, from a Demographic Perspective*. Springer (forthcoming).

Camacho, Adriana (2008). Stress and birth weight: evidence from terrorist attacks. *American Economic Review*, vol. 98, No. 2.

Caner, Mehmet, Thomas Grennes, and Fritzi Koehler-Geib (2010). Finding the tipping point – when sovereign debt turns bad. Policy Research Working Paper, No. 5391. Washington, D.C.: World Bank.

CARE (2015). "TO PROTECT HER HONOUR" child marriage in emergencies – the fatal confusion between protecting girls and sexual violence. CARE Gender and Protection in Humanitarian Contexts: Critical Issues Series, No. 1. London.

Chamlou, Nadereh, Silvia Muzi, and Hanane Ahmed (2011). Understanding the determinants of female labor force participation in the Middle East and North Africa region: The role of education and social norms in Amman. AlmaLaurea Working Papers, No. 31. Bologna, Italy: AlmaLaurea Inter-University Consortium.

Chang, Ha-Joon (2010). *Bad Samaritans: The Myth of Free Trade and the Secret History of Capitalism*. New York: Bloomsbury Publishing.

Chen, Lincoln C., Ashish Kumar Chowdhury, and Sandra L. Huffman (1980). Anthropometric assessment of energy-protein malnutrition and subsequent risk of mortality among preschool aged children. *The American Journal of Clinical Nutrition*, vol. 33, No. 8.

Chenery, Hollis, and others (1974). *Redistribution with Growth*. New York: Oxford University Press; Washington, D.C.: World Bank.

Clarke, Philip M., and others (2002). On the measurement of relative and absolute income-related health inequality. *Social Science and Medicine*, vol. 55, No. 11 (2002).

Cohen, Gerald Allan (1989). On the currency of Egalitarian Justice. *Ethics*, vol. 99, No. 4 (July).

Collier, Paul (2019a). Productive jobs: rebasing growth in the MENA region, 10 March. Available at https://theforum.erf.org.eg/2019/03/10/productive-jobs-rebasing-growth-mena-region/.

_____ (2019b). Transformation under radical uncertainty: the challenge for MENA, 10 March. Available at https://theforum.erf.org.eg/2019/03/10/transformation-radical-uncertainty-challenge-mena/.

Cornia, Giovanni Andrea, and Sampsa Kiiski (2001). Trends in income distribution in the post-World War II period: Evidence and interpretation. WIDER Discussion Papers, No. 2001/89. Helsinki: World Institute for Development Economics (UNU-WIDER).

Costa-i-Font, Joan, and Mario Gyori (2018). The Middle Eastern health inequality paradox and the gender obesity gap, 31 October. Available at https://blogs.lse.ac.uk/mec/2018/10/31/the-middle-eastern-health-inequality-paradox-and-the-gender-obesity-gap/.

Cunha, Flavio, and others (2006). Interpreting the evidence on life cycle skill formation. In *Handbook of the Economics of Education*, vol. 1, Eric A. Hanushek and Finis Welch, eds. North Holland: Elsevier.

Cumming, Oliver, and Sandy Cairncross (2016). Can water, sanitation and hygiene help eliminate stunting? Current evidence and policy implications. *Maternal and Child Nutrition*, vol. 12, No. S1 (May).

Dandan, Mwafaq M., and Ana Paula Pereira Marques (2017). Education, employment and gender gap in Mena region. *Asian Economic and Financial Review*, vol. 7, No. 6, 573.

Daoud, Adel, and others (2017). Impact of International Monetary Fund programs on child health. *Proceedings of the National Academy of Sciences of the United States of America*, vol. 114, No. 25.

Deaton, Angus (1989). *Saving in Developing Countries: Theory and Review*. Washington, D.C.: The World Bank.

De Onis, Mercedes, and Francesco Branca (2016). Childhood stunting: a global perspective. *Maternal and Child Nutrition*, vol. 12, No. S1 (May).

Devarajan, Shantayanan, and Elena Ianchovichina (2017). A Broken social contract, not high inequality, led to the Arab spring. *The Review of Income and Wealth*, vol. 64, No. S1.

Dewan, Manju (2008). Malnutrition in women. *Studies on Home and Community Science*, vol. 2, No. 1.

Duque, Valentina (2017). Early-life conditions and child development: Evidence from a violent conflict. *SSM-Population Health*, vol. 3 (December).

Ecker, Oliver, and others (2016). *Nutrition and Economic Development: Exploring Egypt's Exceptionalism and the Role of Food Subsidies*. Washington, D.C.: International Food Policy Research Institute.

Egypt, Ministry of Education (2007). *National Strategic Plan for Pre-University Education Reform in Egypt* (2007/08 – 2011/12). Cairo. Available at https://planipolis.iiep.unesco.org/sites/planipolis/files/ressources/egyptstrategicplanpre-universityeducation.pdf.

Ehmke, Ellen (2015). National experiences in building social protection floors: India's Mahatma Gandhi national rural employment guarantee scheme. Extension of Social Security (ESS) Paper, No. 49. Geneva: International Labour Organization.

El Enbaby, Hoda (2018). Evaluation finds successes for Egypt's first conditional cash transfer program, 2 November. Available at http://www.ifpri.org/blog/evaluation-finds-successes-egypts-first-conditional-cash-transfer-program.

El Enbaby, Hoda, and Rami Galal (2015). Inequality of opportunity in individuals' wages and households' assets in Egypt. ERF Working Paper Series, No. 942. Cairo: Economic Research Forum.

El-Haddad, Amirah (2019). Raising Egypt's minimum wage: the impact on inequality, 30 April. Available at https://theforum.erf.org.eg/2019/04/25/raising-egypts-minimum-wage-impact-inequality/.

El-Kogali, Safaa, and others (2016). Inequality of opportunity in early childhood development in Morocco over time. Policy Research Working Paper, No. 7670. Washington, D.C.: The World Bank.

Engebretsen, Ingunn Marie Stadskleiv, and others (2008). Determinants of infant growth in Eastern Uganda: a community-based cross-sectional study. *BMC Public Health*, vol. 8.

Erreygers, Guido (2009). Correcting the concentration index. *Journal of Health Economics*, vol. 28, No. 2.

European Commission (n.d.). The common agricultural policy at a glance. Available at https://ec.europa.eu/info/food-farming-fisheries/key-policies/common-agricultural-policy/cap-glance_en#evaluationofthecap. Accessed on 20 July 2019.

Evenson, Robert E, Barry M. Popkin, and Elizabeth King-Quizon (1979). Nutrition, Work, and Demographic Behavior in Rural Philippine Households: A Synopsis of Several Laguna Household Studies. Center Discussion Paper, No. 308.

Fargues, Philippe (2006). International migration in the Arab region: Trends and policies. In United Nations Expert Group Meeting on International Migration and Development in the Arab Region, Beirut 15-17 May 2006. UN/POP/EGM/2006/09.

Fink, Günther, Isabel Günther, and Kenneth Hill (2011). The effect of water and sanitation on child health: evidence from the demographic and health surveys 1986-2007. *International Journal of Epidemiology*, vol. 40, No. 5 (October).

Food Security Information Network (2017). *Global Report on Food Crises 2017*. Available at https://documents.wfp.org/stellent/groups/public/documents/ena/wfp291271.pdf?_ga=2.148970805.2053516579.1566196069-859958432.1550566984.

Forbes (2017). The World's Richest Arabs 2017, 5 April. Available at https://www.forbesmiddleeast.com/list/the-worlds-richest-arabs-2017.

Galor, Oded, and Joseph Zeira (1993). Income distribution and macroeconomics. *The Review of Economic Studies*, vol. 60, No. 1.

Gertler, Paul J., Sebastian W. Martinez, and Marta Rubio-Codina (2012). Investing cash transfers to raise long term living standards. *American Economic Journal: Applied Economics*, vol. 4, No. 1.

Gromada, Anna, Gwyther Rees, and Yekaterina Chzhen (n.d). More equal and less equal at the same time? Comparing children's educational inequalities in 37 countries and over time. Florence, Italy: UNICEF Office of Research – Innocenti.

Gronau, Reuben (1985). The allocation of goods within the household and estimation of adult equivalence scales: how to separate the men from the boys. Manuscript. Hebrew University.

Gurr, Ted Robert (1970). *Why Men Rebel*. Princeton: Princeton University Press.

Gylfason, Thorvaldur, and Gylfi Zoega (2003). Inequality and economic growth: Do natural resources matter? In *Inequality and Growth: Theory and Policy Implications*, Theo S. Eicher and Stephen J. Turnovsky, eds. Cambridge: Massachusetts Institute of Technology.

Harsanyi, John C. (1955). Cardinal welfare, individualistic ethics, and interpersonal comparisons of utility. *Journal of Political Economy*, vol. 63, No. 4 (August).

Hashemi, Ali, and Vito Intini (2015). Inequality of opportunity in education in the Arab region. E/ESCWA/OES/2015/WP.3. Beirut: Economic and social Commission for Western Asia.

Hassine, Nadia Belhaj (2012). Inequality of opportunity in Egypt. *World Bank Economic Review*, vol. 26, No. 2.

_____ (2014). Economic inequality in the Arab region. Policy Research Working Paper, No. 6911. Washington, D.C.: The World Bank.

Heckman, James J. (2017). *Giving Kids a Fair Chance*. Cambridge: The MIT Press.

Heckman, James J., and Stefano Mosso (2014). The economics of human development and social mobility. *Annual Reviews of Economics*, vol. 6, No. 1.

Hellerstein, Judith K., David Neumark, and Kenneth R. Troske (1999). Wages, productivity, and worker characteristics: Evidence from plant-level production functions and wage equations. *Journal of Labor Economics*, vol. 17, No. 3.

Hlasny, Vladimir, and Vito Intini (2015). Opportunities for early childhood development in Arab countries: Profile and evolution of inequality and its sources. Beirut: Economic and Social Commission for Western Asia.

Hoel, Arne (2013). Maintaining momentum on education reform in Morocco, 11 September. Available at https://www.worldbank.org/en/news/feature/2013/09/11/maintaining-momentum-on-education-reform-in-morocco.

Hoope-Bender, Petra ten, and others (2014). Improvement of maternal and newborn health through midwifery. *The Lancet*, vol. 384, No. 9949. Lerberghe, and others, 2014.

Human Rights Watch (2018). Mauritania: administrative obstacles keep kids from school, 29 March. Available at https://www.hrw.org/news/2018/03/29/mauritania-administrative-obstacles-keep-kids-school.

ICF International (2012). *Demographic and Health Survey Interviewer's Manual*. Calverton, Maryland.

International Food Policy Research Institute (2016). *Global Nutrition Report: From Promise to Impact Ending Malnutrition by 2030*. Washington, D.C.

International Labour Organization (2009). Building adequate social protection systems and protecting people in the Arab region. Thematic Paper, Arab Employment Forum, Beirut, Lebanon, 19-21 October 2009.

_____ (2015). *Global Wage Report 2014/15: Wages and Income Inequality*. Geneva.

_____ (2016). Mahatma Gandhi national rural employment guarantee scheme, September. Available at http://www.social-protection.org/gimi/RessourcePDF.action?ressource.ressourceId=53846.

_____ (2017). *World Social Protection Report 2017-2019: Universal social protection to achieve the Sustainable Development Goals*. Geneva.

_____ (2018a). *ILO Global Estimates on International Migrant Workers: Results and Methodology*, 2nd edition. Geneva.

_____ (2018b). *Women and Men in the Informal Economy: A Statistical Picture*. 3rd edition. Geneva.

_____ (2018c). ILOSTAT Database. Available at https://ilostat.ilo.org/. Accessed on 2 April 2019.

International Labour Organization, and United Nations Development Programme (2012). *Rethinking Economic Growth: Towards Productive and Inclusive Arab Societies*. Beirut: International Labour Organization.

International Monetary Fund (2013). *Energy Subsidy Reform: Lessons and Implications*. Washington, D.C.

_____ (2017). *World Economic Outlook: Gaining Momentum?* Washington, D.C.

_____ (2019). *World Economic Outlook: Growth Slowdown, Precarious Recovery*. Washington, D.C.

Inter-Parliamentary Union (2019). Women in National Parliaments. Situation as of first April 2019. Available at http://archive.ipu.org/wmn-e/world.htm. Accessed on 20 July 2019.

Iqbal, Farrukh, and Youssouf Kiendrebeogo (2014). The reduction of child mortality in the Middle East and North Africa: A Success story. World Bank Policy Research Working Paper, No. 7023. Washington, D.C.: World Bank.

Iqbal, Zubair (2012). The economic determinants of Arab democratization. Middle East Institute, 13 March. Available at https://www.mei.edu/publications/economic-determinants-arab-democratization.

Jensen, Michael C., and Kevin J. Murphy (1990). Performance pay and top-management incentives. *Journal of Political Economy*, vol. 98, No. 2.

Jewell, Andrew, and others (2015). Fair taxation in the Middle East and Northern Africa. IMF Staff Discussion Paper, SDN/15/16. Washington, D.C: International Monetary Fund.

Justino, Patricia (2011). Violent conflict and human capital accumulation. IDS Working Paper, vol. 2011, No. 379. Brighton: Institute of Development Studies.

Kabeer, Naila, Caio Piza, and Linnet Taylor (2012). *What are the Economic Impacts of Conditional Cash Transfer Programmes? A Systematic Review of the Evidence*. Technical Report. London: EPPI-centre, Social Science Research Unit, Institute of Education, University of London.

Kakwani, Nanak, and Hyun H. Son (2005). Poverty analysis for policy use: poverty profiles and mapping. In *Handbook of Poverty Statistics: Concepts, Methods and Policy Use*. New York: United Nations Statistics Division.

Kalecki, Michał (1955). The problem of financing of economic development. *Indian Economic Review*, vol. 2, No. 3 (February).

_____ (1971a). Class struggle and the distribution of national income. *Kyklos*, vol. 24, No. 1.

_____ (1971b). *Selected Essays on the Dynamics of the Capitalist Economy 1933-1970*. Cambridge: Cambridge University Press

Kanbur, Ravi (2002). Income distribution and development. In *Handbook of Income Distribution*, vol. 1, Anthony B. Atkinson and François Bourguignon, eds. Elsevier.

_____ (2013). Economic inequality and economic development: lessons and implications of global experiences for the Arab world. Doha: Arab Center for Research and Policy Studies. Available at https://www.dohainstitute.org/en/lists/ACRPS-PDFDocumentLibrary/Economic_Inequality_and_Economic_Development_Lessons_and_Implications_of_Global_Experiences_for_the_Arab_World.pdf.

Kannan, K. P. (2005). Linking guarantee to human development. *Economic and Political Weekly*, vol. 40, No. 42 (October).

Kardam, Nuket (2005). Gender and institutions: Creating an enabling environment. UNDAW Expert Group Meeting Enhancing Participation of Women in Development Through an Enabling Environment for Achieving Gender Equality and the Advancement of Women. EGM/WPD-EE/2005/EP.9.

Keefer, Philip, and Stephen Knack (2002). Polarization, politics and property rights: Links between inequality and growth. *Public choice*, vol. 111, No. 1-2.

Khadr, Zeinab (2009). Monitoring socioeconomic inequity in maternal health indicators in Egypt: 1995-2005. *International Journal for Equity in Health*, vol. 8, No. 1.

Khaled, Mohamad A., and others (2018). A framework for testing the equality between the health concentration curve and the 45-degree line. *Health Economics*, vol. 27, No. 5.

Khaled, Mohamad A., Paul Makdissi, and Myra Yazbeck (2018). Income-related health transfers principles and orderings of joint distributions of income and health. *Journal of Health Economics*, vol. 57 (January).

Khawaja, Marwan, and others (2008). Disparities in child health in the Arab region during the 1990s. *International Journal for Equity in Health*, vol. 7, Article. 24.

Kjellsson, Gustav, Ulf-G Gerdtham, and Dennis Petrie (2015). Lies, damned lies, and health inequality measurements: Understanding the value judgments. *Epidemiology*, vol. 26, No. 5.

Klasen, Stephan, and Francesca Lamanna (2009). The impact of gender inequality in education and employment on economic growth: new evidence for a panel of countries. *Feminist Economics*, vol. 15, No. 3.

Klasen, Stephan, and Janneke Pieters (2013). What explains the stagnation of female labour force participation in urban India? IZA Discussion Paper, No. 7597. Bonn: Forschungsinstitut zur Zukunft der Arbeit Institute for the Study of Labor.

Konow, James, and others (2016). Equity versus equality. Working Paper (December 2016). Available at https://www.researchgate.net/publication/311302304_Equity_versus_Equality.

Krafft, Caroline (2015). The determinants of child health disparities in Jordan. ERF Working Paper Series, No. 950. Cairo: Economic Research Forum.

Krafft, Caroline, and Halimat Alawode (2018). Inequality of opportunity in higher education in the Middle East and North Africa. *International Journal of Educational Development*, vol. 62 (September).

Krafft, Caroline, and others (2017). Estimating poverty and inequality in the absence of consumption data: an application to the Middle East and North Africa. Economic Research Forum Working Paper Series, No. 1100. Cairo: Economic Research Forum.

Krafft, Caroline, and Safaa El-Kogali (2014). Inequalities in early childhood development in the Middle East and North Africa. ERF Working Paper Series, No. 856. Cairo: Economic Research Forum.

Krishnan, Nandini, and others (2016). *Uneven Odds, Unequal Outcomes: Inequality of Opportunity in the Middle East and North Africa*. Washington, D.C.: The World Bank.

Knudsen, Eric I., and others (2006). Economic, neurobiological, and behavioral perspectives on building America's future workforce. *National Academy of Sciences*, vol. 103, No. 27.

Kumar, Manmohan S., and Jaejoon Woo (2010). Public debt and growth. IMF Working Paper, WP/10/174. Washington, D.C.: International Monetary Fund.

Kuznets, Simon (1955). Economic growth and income inequality. *The American Economic Review*, vol. 45, No. 1 (March).

El-Laithy, Hiba, Micheal Lokshin, and Arup Banerji (2003). Poverty and economic growth in Egypt, 1995-2000. Policy Research Working Paper, No. 3068. Washington, D.C.: The World Bank.

Langhi, Zahraa (2018). Gender inequality in deprivation in conflict torn Libya, May.

Lefranc, Arnaud, Nicolas Pistolesi, and Alain Trannoy (2009). Equality of opportunity and luck: Definitions and testable conditions, with an application to income in France. *Journal of Public Economics*, vol. 93, No. 11-12 (December).

Leon, Gianmarco (2012). Civil conflict and human capital accumulation the long-term effects of political violence in perú. *Journal of Human Resources*, vol. 47, No. 4.

Lerberghe, WimVan, and others (2014). Country experience with strengthening of health systems and deployment of midwives in countries with high maternal mortality. *The Lancet*, vol. 384, No. 9949.

Li, Tianshu, and Sheetal Sekhri (2013). The Unintended Consequences of Employment Based Safety Net Programs. Charlottesville, VA: University of Virginia. Available at http://people.virginia.edu/~ss5mj/unintendedeffects_safetynets.pdf.

Lochner, Lance, and Enrico Moretti (2004). The effect of education on crime: evidence from prison inmates, arrests and self-reports. *American Economic Review*, vol. 94, No. 1.

Lucas, Robert E. (1988). On the mechanics of economic development. *Journal of Monetary Economics*, vol. 22, No. 1.

Makdissi, Paul, and Myra Yazbeck (2014). Measuring socioeconomic health inequalities in presence of multiple categorical information. *Journal of Health Economics*, vol. 34 (March).

Malit, Froilan, and George Naufal (2016). Asymmetric information under the Kafala sponsorship system: Impacts on foreign domestic workers' income and employment status in the GCC countries. *International Migration*, vol. 54, No. 5.

Mangin, Sephorah (2014). Unemployment and the labour share. Monash Economics Working Papers, No. 28-15. Wellington, Australia: Monash University.

Marglin, Stephen A. (1984a). Growth, distribution, and inflation: a centennial synthesis. *Cambridge Journal of Economics*, vol. 8, No. 2 (June).

_____ (1984b). *Growth, Distribution and Prices*. Cambridge: Harvard University Press.

Merisotis, Jamie P. (1998). Who benefits from higher education? an American perspective. *International Higher Education*, No. 2 (Summer).

Meyer, Robinson (2019). A centuries-old idea could revolutionize climate policy. *The Atlantic*, 19 February. Available at https://www.theatlantic.com/science/archive/2019/02/green-new-deal-economic-principles/582943/.

Mincer, Jacob (1974). Schooling, experience, and earnings. Human Behavior and Social Institutions, No. 2.

Molinas, Jose R., and others (2010). *Do Our Children Have a Chance? The 2010 Human Opportunity Report for Latin America and the Caribbean*. Washington, D.C.: World Bank.

Mullis, Ina V.S., and others (2016). *TIMSS 2015 International Results in Mathematics*. Boston: TIMSS & PIRLS International Study Center.

Nabli; Mustapha Kamel, and Nadereh Chamlou (2004). *Gender and Development in the Middle East and North Africa: Women in the Public Sphere*. MENA Development Report. Washington, D.C.: World Bank.

Nassar, Joanna, Dawn Chatty, and Ibrahim Awad (2018). The Refugee Crisis in the Arab World. Carnegie Endowment for International Peace. Available at https://carnegieendowment.org/2018/10/18/refugee-crises-in-arab-world-pub-77522.

Neal, Sarah, Nicole Stone, and Roger Ingham (2016). The impact of armed conflict on adolescent transitions: a systematic review of quantitative research on age of sexual debut, first marriage and first birth in young women under the age of 20 years. *BMC Public Health*, vol. 16, No. 1.

Nour, Nawal M. (2006). Health consequences of child marriage in Africa. *Emerging Infectious Diseases*, vol. 12, No. 11.

Nozick, Robert (1974). *Anarchy, State and Utopia*. Oxford: Blackwell.

O'Donnell, Owen, and others (2008). *Analyzing Health Equity Using Household Survey Data: A Guide to Techniques and Their Implementation*. Washington, D.C.: World Bank.

Ollivaud, Patrice, Yvan Guillemette, and David Turner (2016). Links between weak investment and the slowdown in productivity and potential output growth across the OECD. OECD Economics Department Working Papers, No. 1304. Paris: Organisation for Economic Co-operation and Development.

Organisation for Economic Co-operation and Development (2012). *Closing the Gender Gap*. Paris.

_____ (2014). Gender inequality and entrepreneurship: A statistical portrait of the MENA region. In *Women in Business 2014: Accelerating Entrepreneurship in the Middle East and North Africa Region*. Paris.

Osmani, Siddiq, and Amartya Sen (2003). The hidden penalties of gender inequality: fetal origins of ill-health. *Economics & Human Biology*, vol. 1, No. 1 (January).

Oxfam (2019). Public good or private wealth? Oxfam Briefing Paper, January. Oxford.

Paes de Barros, Ricardo, and others (2009). *Measuring Inequality of Opportunities in Latin America and the Caribbean*. Washington, D.C.: World Bank.

Page, John (2007). Boom, bust, and the poor: Poverty dynamics in the Middle East and North Africa, 1970-1999. *The Quarterly Review of Economics and Finance*, vol. 46, No. 5 (February).

Papola, Trilok S. (2005). A universal programme is feasible. *Economic and Political Weekly*, vol. 40, No. 7 (January).

Peragine, Vito, and others (2015). Inequality of opportunity for educational achievements in Arab Region: Evidence from PISA 2006-2009-2012. E/ESCWA/EDID/2015/WP.7. Beirut: Economic and Social Commission for Western Asia.

Perry, Guillermo E., and others (2007). *Informality: Exit and Exclusion*. Washington, D.C.: World Bank.

Piketty, Thomas (2014). *Capital in the Twenty-first Century*. Cambridge, MA: Harvard University Press.

Pillai, Vijayan K., and Jeyle Ortiz-Rodriguez (2015). Child malnutrition and gender preference in India: the role of culture. *iMedPub Journals*, vol. 9, No. 6:8.

Qirbi, Naseeb, and Sharif A. Ismail (2017). Health system functionality in a low-income country in the midst of conflict. The case of Yemen. *Health Policy and Planning*, vol. 32, No. 6.

Raj, Anita, Lotus McDougal, and Jay G. Silverman (2015). Gendered effects of siblings on child malnutrition in South Asia: cross-sectional analysis of demographic and health surveys from Bangladesh, India, and Nepal. *Maternal and Child Health Journal*, vol. 19, No. 1.

Ramadan, Racha, Vladimir Hlasny, and Vito Intini (2018). Inter-group expenditure gaps in the Arab region and their determinants: application to Egypt, Jordan, the State of Palestine and Tunisia. *The Review of Income and Wealth*, vol. 64, No. S1.

Ranjan, Rajiv (2015). Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA): A Critical appraisal of its performance since its inception, *IMJ*, vol. 8, No. 2 (July-December). Available at http://www.iimidr.ac.in/wp-content/uploads/Vol8-2-MGNR.pdf.

Rashad, Ahmed Shoukry, and Mesbah Fathy Sharaf (2015). Catastrophic economic consequences of healthcare payments: effects on poverty estimates in Egypt, Jordan, and the State of Palestine. *Economies*, vol. 3, No. 4.

_____ (2016). Regional inequalities in child malnutrition in Egypt, Jordan, and Yemen. A Blinder-Oaxaca decomposition analysis. *Health Economics Review*, vol. 6, No. 1.

Ravallion, Martin (2014). Income inequality in the developing world. *Science*, vol. 344, No. 6186.

Rawls, John (1971). *A Theory of Justice*. Cambridge MA: Harvard University Press.

Robeyns, Ingrid (2003). Sen's capability approach and gender inequality: selecting relevant capabilities. *Feminist Economics*, vol. 9, No. 2-3.

Robinson, Sherman (1976). A note on the U hypothesis relating income inequality and economic development. *The American Economic Review*, vol. 66, No. 3 (June).

Robles, Pablo Suarez (2012). *Gender Disparities in Africa's Labour Markets: An Analysis of Survey Data from Ethiopia and Tanzania*. Université Paris-Est.

Roe, Mark J., and Jordan Siegel (2011). Political instability: Effects on financial development, roots in the severity of economic inequality. *Journal of Comparative Economics*, vol. 39, No. 3.

Roemer, John E. (1993). A Pragmatic theory of responsibility for the egalitarian planner. *Philosophy and Public Affairs*, vol. 22, No. 2 (Spring).

_____ (1998). *Equality of Opportunity*. Cambridge, MA: Harvard University Press.

Roemer, John E., and others (2003). To what extent do fiscal regimes equalize opportunities for income acquisition among citizens? *Journal of Public Economics*, vol. 87.

Romer, Paul M. (1986). Increasing returns and long-run growth. *Journal of Political Economy*, vol. 94, No. 5.

_____ (1990). Human capital and growth: Theory and evidence. *Carnegie-Rochester Conference Series on Public Policy*, vol. 32 (Spring).

Roth, Hanna, André Bongestabs, and Zina Nimeh (2016). Impacts of conditional cash transfers: The socio-economic impact of social security. Geneva: International Social Security Association.

Rutstein, Shea O., and Kiersten Johnson (2004). *The DHS Wealth Index*. DHS Comparative Reports, No. 6. Calverton, Maryland: ORC Macro.

Sachs, Jeffrey D, and Andrew M. Warner (1995). Natural resource abundance and economic growth. NBER Working Paper No. 5398. Cambridge, MA: National Bureau of Economic Research.

Salehi-Isfahani, Djavad (2013). Rethinking human development in the Middle East and North Africa: The missing dimensions. *Journal of Human Development and Capabilities*, vol. 13, No. 3.

Salehi-Isfahani, Djavad, Nadia Belhaj Hassine, and Ragui Assaad (2014). Equality of opportunity in educational achievement in the Middle East and North Africa. *The Journal of Economic Inequality*, vol. 12, No. 4.

Sarangi, Niranjan (2015). Economic Growth, employment and poverty in developing economies: a focus on Arab region. E/ESCWA/OES/2015/WP.4. Beirut: Economic and Social Commission for Western Asia.

Sarangi, Niranjan, and Johannes von Bonin (2017). Fiscal policy on public social spending and human development in Arab countries. E/ESCWA/EDID/2017/Technical paper.13. Beirut: Economic and Social Commission for Western Asia.

Save the Children (2015). *Annual Report 2015: Reaching Every Last Child*. London. Available at https://www.savethechildren.org.uk/content/dam/global/reports/annual-report-2015.pdf.

Schultz, Theodore W. (1961). Investment in human capital. *The American Economic Review*, vol. 51, No. 1 (March).

Sen, Amartya K. (1980). Equality of what? In *The Tanner Lectures on Human Values*, Sterling M. McMurrin, eds. vol. 1. Cambridge: Cambridge University Press.

_____ (1984). Rights and capabilities. In *Resources, Values and Development*. Cambridge, MA: Harvard University Press.

_____ (1985a). *Commodities and Capabilities*. Amsterdam: North-Holland.

_____ (1985b). Well-being, agency and freedom: The Dewey lectures 1984. *The Journal of Philosophy*, vol. 82, No. 4 (April).

_____ (1987). *The Standard of Living*. Cambridge: Cambridge University Press.

_____ (1992). *Inequality Re-examined*. Oxford: Clarendon Press.

_____ (1999). *Development as Freedom*. New York: Knopf.

_____ (2008). The idea of justice. *Journal of Human Development*, vol. 9, No. 3.

_____ (2009). Capability: reach and limit. In *Debating Global Society. Reach and Limit of the Capability Approach*, Enrica Chiappero Martinetti, ed. Milan: Fondazione Giangiacomo Feltrinelli.

Senauer, Benjamin, Marito Garcia, and Elizabeth Jacinto (1988). Determinants of the intrahousehold allocation of food in the rural Philippines. *American Journal of Agricultural Economics*, vol. 70, No. 1.

Shah, Nasra M. (2008). Recent labor immigration policies in the oil-rich Gulf: How effective are they likely to be? ILO Asian Regional Programme on Governance of Labour Migration Working Paper, No. 3. Bangkok: International Labour Organization.

Smits, Jeroen, and Janine Huisman (2012). Determinants of educational participation and gender differences in education in six Arab countries. NiCE Working Paper, No. 12-102 (April). The Netherlands: Nijmegen Center for Economics.

Soares, Fábio Veras, Rafael Perez Ribas, and Guerreiro Osório (2010). Evaluating the impact of Brazil's Bolsa familia: cash transfer programs in comparative perspective. *Latin American Research Review*, vol. 45, No. 2.

Spinesi, Luca (2009). Rent-seeking bureaucracies, inequality, and growth. *Journal of Development Economics*, vol. 90, No. 2.

State of Palestine, Central Bureau of Statistics (2015). *Palestinian Multiple Indicator Cluster Survey 2014*, MICS5. Ramallah.

Stiglitz, Joseph E. (2012). *The Price of Inequality: How Today's Divided Society Endangers our Future*, 1st edition. New York: W. W. Norton & Company.

_____ (2015). The origins of inequality, and policies to contain it. *National Tax Journal*, vol. 68 No. 2.

Taylor, Lance (1983). *Structuralist Macroeconomics: Applicable Models for the Third World*. New York: Basic Books.

_____ (1988). *Varieties of Stabilization Experience*. Oxford: Clarendon Press.

_____ (1990). *Socially Relevant Policy Analysis: Computable General Equilibrium Models for the Developing World*. Cambridge, MA: MIT Press.

_____ (1991). *Income Distribution, Inflation and Growth: Lectures on Structuralist Macroeconomic Theory*. Cambridge, MA: MIT Press.

Thiollet, Helene (2011). Migration as diplomacy: Labour migrants, refugees, and Arab regional politics in the oil-rich countries. *International Labour and Working-Class History*, No. 79 (Spring).

Thompson, Ross A., and Charles A. Nelson (2001). Developmental science and the media: Early brain development. *American Psychologist*, vol. 56, No. 1.

UN Inter-agency Group for Child Mortality Estimation (2017). Child Mortality Estimates: Global and regional under-five, infant and neonatal mortality rates and deaths. Available at https://childmortality.org/files_v21/download/IGME%20report%202017%20child%20mortality%20final.pdf.

_____ (2019). Estimates: global and regional estimates of mortality among children under age 5 by UNICEF regions. Available at https://childmortality.org/files_v22/download/un%20igme%20child%20mortality%20report%202018.pdf. Accessed on 14 September 2019.

United Nations Children's Fund (2014a). Global Initiative on Out-of-School children. New York.

_____ (2014b). *The State of the World's Children 2014 in Numbers: Every Child Counts*. New York.

_____ (2017). *Child Poverty in Iraq: An Analysis of Child Poverty Trends and Policy Recommendations for the National Poverty Reduction Strategy 2017-2021*. Baghdad: United Nations Children's Fund and Ministry of Planning.

_____ (2018). Malnutrition rates remain alarming: stunting is declining too slowly while wasting still impacts the lives of far too many young children. Available https://data.unicef.org/topic/nutrition/malnutrition/#. Accessed on 20 June 2019.

United Nations Children's Fund, and United Nations Educational, Scientific and Cultural Organization (2015). *Regional Report on Out-of-School Children 2014*. UNICEF MENA Regional Office.

United Nations Children's Fund, World Health Organization, and World Bank Group (2018). *Levels and Trends in Child Malnutrition: Key findings of the 2018 Edition of the Joint Child Malnutrition Estimates*. Washington, D.C.

United Nations Development Programme (2002). *Arab Human Development Report 2002: Creating Opportunities for Future Generations*. New York. Available at http://hdr.undp.org/sites/default/files/rbas_ahdr2002_en.pdf.

_____ (2005a). *Arab Human Development Report 2004: Towards Freedom in the Arab World*. New York. Available at http://hdr.undp.org/en/content/arab-human-development-report-2004.

_____ (2005b). *Macroeconomic Policies for poverty Reduction: The Case of Syria*. New York.

_____ (2006). *Macroeconomic Policies for Growth, Employment and Poverty Reduction in Yemen*. Beirut.

_____ (2008). *Poverty, Growth and Income Distribution in Lebanon*. Beirut.

_____ (2010). *Human Development Report 2010: The Real Wealth of Nations: Pathways to Human Development*. New York.

_____ (2011). *Arab Development Challenges Report: Towards the Developmental State in the Arab Region*. Cairo: Regional Centre for Arab States.

_____ (2013). *Humanity Divided: Confronting Inequality in Developing Countries*. New York.

_____ (2018). *Human Development Indices and Indicators: 2018 Statistical Update*. New York.

United Nations Development Programme, and others (2018). *Gender Justice and the Law: Assessment of Laws Affecting Gender Equality in the Arab States Region*. New York: United Nations Development Programme. Available at https://www.unescwa.org/sites/www.unescwa.org/files/events/files/regional_overview_-_english_0.pdf.

United Nations Development Programme, and Oxford Poverty and Human Development Initiative (2018). *Global Multidimensional Poverty Index 2018: The Most Detailed Picture to Date of the World's Poorest People*. Oxford: University of Oxford.

United Nations Department of Economic and Social Affairs, Population Division (2019). World Population Prospects 2019. Available at https://population.un.org/wpp/Download/Standard/Population/. Accessed on 15 April 2019.

United Nations Department of Economic and Social Affairs, Statistics Division (UNSD) (2017). National Accounts Database, economic activity, at constant 2010 prices, US Dollars. Available at https://unstats.un.org/unsd/snaama/Basic. Accessed on 10 August 2019.

_____ (2018). Goal 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture. Available at: https://unstats.un.org/sdgs/report/2016/goal-02/. Accessed on 23 May 2018.

United Nations Economic and Social Commission for Western Asia (2012). *Addressing Barriers to Women's Economic Participation in the Arab Region*. E/ESCWA/ECW/2012/1. Beirut.

_____ (2014a). *Arab Integration: A 21st Century Development Imperative*. E/ESCWA/OES/2013/3.

_____ (2014b). *Arab Middle Class: Measurement and Role in Driving Change*. E/ESCWA/EDGD/2014/2. Beirut.

_____ (2015). *Arab Development Outlook: Vision 2030*. E/ESCWA/EDID/2015/3. Beirut.

_____ (2016). Evolution of opportunities for early childhood development in Arab Countries. Technical Paper. E/ESCWA/EDID/2016/Technical Paper.1. Beirut.

_____ (2017). *Women's Political Representation in the Arab Region*. E/ESCWA/ECW/2017/3. Beirut.

_____ (2018a). *The Impact of Conflict on Human Development from Childhood to Adulthood Evidence for the Arab Region*. Trends and Impacts Issue No. 5. E/ESCWA/ECRI/2017/2. Beirut.

_____ (2018b). *Rethinking Fiscal Policy for the Arab Region*. E/ESCWA/EDID/2017/4. Beirut.

_____ (2018c). *Social Development Report 2: Inequality, Autonomy and Change in the Arab Region*. E/ESCWA/SDD/2017/6. Beirut.

_____ (2019a). The Challenges for Development in Current Conflict Settings: The Impact of Conflict on Early Marriage and Adolescent Fertility. Forthcoming.

_____ (2019b). Social expenditure monitor for Arab States. Executive Committee, Sixth meeting, Marrakech, Morocco, 15-16 June 2019. E/ESCWA/EC.6/2019/8.

_____ (2019c). Multidimensional poverty in the Arab region: regional and national reduction efforts. Executive Committee, Sixth meeting, Marrakech, Morocco, 15-16 June 2019. E/ESCWA/EC.6/2019/9.

United Nations Economic and Social Commission for Western Asia, and International Labour Organization (2019). *Arab Employment Survey: Employment Creation, Productivity and Inclusiveness in the Arab World. Beirut*. Forthcoming.

United Nations Economic and Social Commission for Western Asia, and others (2017). *Arab Multidimensional Poverty Report*. E/ESCWA/EDID/2017/2. Beirut: Economic and Social Commission for Western Asia.

United Nations Economic and Social Commission for Western Asia, and University of St. Andrews (2016). *Syria at War: Five Years On*. E/ESCWA/EDID/2016/2. Beirut.

United Nations Educational, Scientific and Cultural Organization (n.d.). Net attendance rate, quality standards. Available at http://uis.unesco.org/en/glossary-term/net-attendance-rate.

_____ (2013). Regional fact sheet: Education in the Arab states, January 2013. Available at https://en.unesco.org/gem-report/sites/gem-report/files/219170e.pdf.

_____ (2014). *Sustainable Development Begins with Education: How Education Can Contribute to the Proposed Post-2015 Goals*. Paris.

United Nations Educational, Scientific and Cultural Organization, Institute of Development Studies, and International Social Science Council (2016). *World Social Science Report 2016: Challenging Inequalities; Pathways to a Just World*. Paris: United Nations Educational, Scientific and Cultural Organization.

United Nations Inter-Agency Group for Child Mortality Estimates (UN IGME) (2017). *Levels and Trends in Child Mortality Report 2017*. New York: United Nations Children's Fund.

United Nations Office for the Coordination of Humanitarian Affairs (2018). Humanitarian Response Plan: January – December 2018. Available at https://reliefweb.int/sites/reliefweb.int/files/resources/2018_2018_hrp_syria.pdf.

_____ (2019a). Humanitarian Needs Overview: Syrian Arab Republic. Available at https://reliefweb.int/sites/reliefweb.int/files/resources/2019_Syr_HNO_Full.pdf.

_____ (2019b). 2019 Humanitarian Needs Overview: Yemen. Available at https://reliefweb.int/sites/reliefweb.int/files/resources/2019_Yemen_HNO_FINAL.pdf.

_____ (2019c). 2019 Humanitarian Needs Overview: Iraq. Available at https://reliefweb.int/report/iraq/iraq-humanitarian-needs-overview-2019-november-2018.

_____ (2019d). 2019 Humanitarian Needs Overview: Libya. Available at https://reliefweb.int/report/libya/2019-libya-humanitarian-needs-overview-october-2018.

Valente, Christine (2011). Children of the revolution: Fetal and child health amidst violent civil conflict. Health, Econometrics and Data Group Working Papers, No. 11/12. University of York.

Vallières, Frédérique, and others (2013). Head of household education level as a factor influencing whether delivery takes place in the presence of a skilled birth attendant in Busia, Uganda: a cross-sectional household study. *BMC Pregnancy and Childbirth*, vol. 13, No. 4.

Van de Poel, Ellen, Owen O'Donnell, and Eddy Van Doorslaer (2007). Are urban children really healthier? Evidence from 47 developing countries. *Social Science and Medicine*, vol. 65, No. 10.

Verme, Paolo, and others (2014). *Inside Inequality in the Arab Republic of Egypt. Facts and Perceptions across People, Time, and Space*. Washington, D.C.: World Bank.

Verme, Paolo, and Vladimir Hlasny (2014). Reviewing the facts on top incomes and inequality in Egypt. *World Bank Blogs*. Available at http://blogs.worldbank.org/developmenttalk/reviewing-facts-top-incomes-and-inequality-egypt.

_____ (2016). Top incomes and the measurement of inequality in Egypt. *The World Bank Economic Review*, vol. 32, No. 2.

Wagstaff, Adam (2002). Inequality aversion, health inequalities and health achievement. *Journal of Health Economics*, vol. 21, No. 4.

_____ (2005). The bounds of the concentration index when the variable of interest is binary, with an application to immunization inequality. *Health Economics*, vol. 14, No. 4.

Wamani, Henry, and others (2007). Boys are more stunted than girls in sub-Saharan Africa: a meta-analysis of 16 demographic and health surveys. *BMC Pediatrics*, vol. 7, article. 17.

Woetzel, Jonathan, and others (2015). *The Power of Parity: How Advancing Women's Equality can add $12 trillion to Global Growth*. Mckinsey Global Institute.

Wolla, Scott A. (2014). The economics of immigration: a story of substitutes and complements. Page One Economics Newsletter (May).

World Bank (2005a). Making Egyptian education spending more effective. Egypt Public Expenditure Review, Policy Note, No. 2 (July). Washington, D.C.

_____ (2005b). *World Development Report 2006: Equity and Development*. Washington, D.C.: World Bank; New York: Oxford University Press.

_____ (2007). *Arab Republic of Egypt: Poverty Assessment Update*, vols. 1-2. Washington, D.C.

_____ (2011). *World Development Report 2011: Conflict, Security, and Development*. Washington, D.C.

_____ (2015a). *Inequality, Uprisings, and Conflict in the Arab World*. Washington, D.C.

_____ (2015b). Middle-class frustration fueled the Arab spring, 21 October. Available at https://www.worldbank.org/en/news/feature/2015/10/21/middle-class-frustration-that-fueled-the-arab-spring.

_____ (2016). *Poverty and Shared Prosperity 2016: Taking on Inequality*. Washington, D.C.

_____ (2017). Educating girls, ending child marriage, 24 August. Available at https://www.worldbank.org/en/news/immersive-story/2017/08/22/educating-girls-ending-child-marriage.

_____ (2018a). *Expectations and Aspirations: A New Framework for Education in the Middle East and North Africa*. Washington, D.C.

_____ (2018b). *Toward Water Security for Palestinians: West Bank and Gaza Water Supply, Sanitation, and Hygiene Poverty Diagnostic*. Washington, D.C.

_____ (2019). World Development Indicators Database. Available at http://datatopics.worldbank.org/world-development-indicators/. Accessed on 9 September 2019.

World Bank, Water and Sanitation Program (2011). *Water Supply and Sanitation in Mauritania: Turning Finance into Services for 2015 and Beyond*. An AMCOW Country Status Overview. Kenya.

World Economic Forum (2018). *The Global Gender Gap Report 2018*. Geneva.

World Health Organization (2017). *Nutrition in the WHO African Region*. Brazzaville: WHO Regional Office for Africa.

_____ (2018). Children: reducing mortality, key facts, 19 September. Available at: http://www.who.int/en/news-room/fact-sheets/detail/children-reducing-mortality.

World Health Organization Regional Office for the Eastern Mediterranean (WHO EMRO) (2011). *Regional Strategy on Nutrition 2010-2019*. Available at https://apps.who.int/iris/bitstream/handle/10665/116694/dsa1230.pdf?sequence=1&isAllowed=y.

World Health Organization, and United Nations Children's Fund (WHO/UNICEF) (2015). *Progress on Sanitation and Drinking Water: 2015 Update and MDG Assessment*. Available at https://data.unicef.org/wp-content/uploads/2015/12/Progress-on-Sanitation-and-Drinking-Water_234.pdf.

_____ (2017). *Progress on Drinking Water, Sanitation and Hygiene: 2017 Update and SDG Baseline*. Available at https://www.un.org/africarenewal/documents/progress-drinking-water-sanitation-and-hygiene-2017-updates-and-sdg-baselines.

_____ (2018). *JMP Methodology: 2017 Update and SDG Baselines*. Available at https://washdata.org/sites/default/files/documents/reports/2018-04/JMP-2017-update-methodology.pdf.

Zak, Paul J., and Stephen Knack (2001). Trust and growth. *The Economic Journal*, vol. 111, No. 470.

Zepeda, Eduardo, and others (2013). *Employing India: Guaranteeing Jobs for the Rural Poor*. Washington, D.C.: Carnegie Endowment for International Peace. Available at https://www.un.org/en/development/desa/policy/publications/seminars/india_rural_employment.pdf.

Endnotes

Chapter 1

1. If population is constant, the sum or average of utilities leads to the same rule of decision.
2. Note that in some sections, especially in chapter 5, the analysis relies on outside sources to include other Arab countries. These are Lebanon, classified as belonging to the high human-development group; the Syrian Arab Republic, classified as belonging to the low human-development group; and the Gulf countries of Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates, all classified as belonging to the very high human-development group.

Chapter 2

3. Note that the definition of Northern Africa and Western Asia differs substantially from our sample of 12 Arab countries that will be analysed later.
4. See ESCWA (2018a) for research on countries in conflict (Iraq, Yemen, Syrian Arab Republic, Libya); Amara and Jemmali (2017) for research on Tunisia; Rashad and Sharaf (2016) for research on Egypt, Jordan, and Yemen; Krafft (2015) for research on Jordan; Assaad and others (2012) for research on Egypt, Jordan, Morocco and Turkey.
5. Due to data constraints, analysis of access to improved water and sanitation does not cover the Sudan and Comoros, and analysis of access to improved sanitation excludes Jordan and Iraq.
6. See the technical annex for details of this definition.
7. The three main limitations of the CI are listed below:

   (a) The CI may produce different rankings of countries depending on whether the variable measures inequality in terms of health or ill health (Clarke and others, 2002). However, it is disputed whether this “mirror-property” is a desirable property of a socioeconomic health index (see Kjellsson, Gerdtham and Petrie, 2015; and Bosmans, 2016);

   (b) The limits of the CI for binary variables are not necessarily -1 and 1 but depend on the mean health in the population (Wagstaff, 2005);

   (c) If the variable is categorical, both the value and the ranking depend on the scale of the health variable (Erreygers, 2009) and may be arbitrary.

   If the overall prevalence is near 0 per cent or 100 per cent, the amount of variation across categories, such as wealth quintiles or regions is necessarily low, but if the overall prevalence is near 50 per cent, the amount of potential variation across categories can be very large. Corrections to the concentration index that take the mean of the outcome into account were first proposed by Wagstaff (2005) and Erreygers (2009). A correction is important because it allows for comparisons between countries with very different levels of the outcomes. Wagstaff (2005) and Erreygers (2009) proposed two modified versions of the concentration index to account for the limitations mentioned above. The modified index proposed by Erreygers (CI-E) corrected for the deficiency that the value of the index is not invariant to permissible transformations of ratio-scaled and cardinal variables. The index proposed by Wagstaff (CI-W) corrects for the deficiency that the range of the CI depends on the mean of the bounded variable and suggests rescaling the standard concentration index to ensure that the index lies between -1 and 1. Our analysis uses the modified index proposed by Wagstaff (2005) to account for equity in health outcomes. The CI-W was estimated using the *conindex* command of STATA.
8. This figure is higher than the previously mentioned figure, as the SDG definition of North Africa and Western Asia (NAWA) differs substantially from our sample of Arab countries. Our sample includes two additional countries, Comoros and Mauritania, which are classified as LDCs. Further, high income countries, such as the Gulf Cooperation Council (GCC) countries, are not considered in our analysis.
9. See OCHA (2019d) for Libya or Qirbi and Ismail (2017) for Yemen.

10. The method used can be briefly summarised as follows. The first step consists in short listing the variables that are candidates for explaining the deprivation present in household datasets across the two time points. Given a large set of explanatory factors (socio-demographic characteristics of household head, characteristics of household), which matter most in explaining the pattern observed in deprivation? The answer is obtained first normatively by looking at the earlier analysis of inequalities in outcomes. The relevance of each socioeconomic variable is then tested using standard tools, such as the Kolmogorov-Smirnov test and the Pearson's chi-squared test. The second step consists in estimating a logistic regression model: the dependent variable is the deprivation outcome (e.g., 1 if deprived; 0 otherwise), and the explanatory variables are those identified in step 1 (e.g., age of the household head, household size, type of area of residence, etc.). The explanatory variables considered are household head characteristics (age, sex, and education) and household characteristics (wealth, type of area of residence, and size).
11. To estimate the D-index, we first estimate the likelihood of health outcomes using probit models. Based on the estimated coefficients, we compute the predicted probability of observing the outcome and the population mean for each outcome. We then estimate the D-index using the IOP module in STATA®. We also conduct the Shapley decomposition to determine the contribution of each circumstantial factor to inequality of opportunity.

Chapter 3

12. Mean years of schooling figures are from UNDP, 2018.
13. Also, many of the surveys, especially those that date back to the 2000s, did not include questions on early child education, which precluded conducting comparable analysis.
14. See the technical annex for details.
15. The questions in the household surveys for Jordan and Morocco did not allow the construction of the adjusted net attendance rate at both time points. The same applies for the baseline surveys for Yemen, Comoros, Tunisia, and the State of Palestine.
16. Our analysis does not consider Koranic schools and madrasahs, commonly found in Mauritania, as part of the formal education system.
17. Having achieved at least 6 years of education equals completing primary education in most countries.
18. See technical annex for age range and primary-graduation age for each country.
19. Having achieved at least 12 years of education is used as a proxy for completing secondary education.
20. Note that for Libya, Tunisia and Yemen, only the most recent average years of education are reported due to data unavailability for the baseline year. For Morocco average years of education could not be computed also due to data issues.
21. The method used can be briefly summarised as follows. The first step consists of short listing the variables that are candidates for explaining the deprivation present in household datasets for the two time points. Given a large set of explanatory factors (socio-demographic characteristics of household head, characteristics of household), which matter most in explaining the pattern observed in deprivation? The answer is obtained first normatively by looking at the earlier analysis of inequalities of outcomes. The relevance of each socioeconomic variable is then tested using standard tools, such as the Kolmogorov-Smirnov test and the Pearson's chi-squared test. The second step consists of estimating a logistic regression model: the dependent variable is the deprivation outcome (e.g., 1 if deprived; 0 otherwise), and the explanatory variables are those identified in step 1 (e.g., age of household head, household size, region of residence, etc.). The explanatory variables considered are household head characteristics (age, sex, and education) and household characteristics (wealth, region of residence, and size).
22. To estimate the D-index, we first estimate likelihood of educational outcomes using probit and ordered probit regression models. Based on the estimated coefficients, we compute the predicted probability of observing the educational outcome and the population mean for each educational outcome. We then estimate the D-index using the hoi module in STATA®. We also conduct the Shapley decomposition to determine the contribution of each circumstantial factor to inequality of opportunity.
23. The remaining three indicators are: probability of completing primary schooling conditional on having attended school, probability of completing secondary schooling conditional on primary-schooling completion and probability of attending above secondary conditional on secondary completion.

Chapter 4

24. At a 95 per cent confidence level.
25. In other words, half of the countries of the Arab region have been recently afflicted by conflict, according to the UCDP definition.
26. Early childhood development research has identified critical and sensitive periods for investments in skills, these terminology draws heavily on the work on human skill formation developed by James Heckman. Different capacities are malleable at different stages of the life cycle (see Thompson and Nelson, 2001; Knudsen and others, 2006; and the body of evidence summarised in Cunha and others, 2006). A substantial body of evidence from numerous disciplines shows the persistence of early life disadvantage in shaping later life outcomes (Heckman and Mosso, 2014).
27. Measuring inequality of opportunity may have limitations. Gromada, Rees and Chzhen (n.d.) point out that inequality of opportunity may be sensitive to measures used. They also argue that inequality of opportunity measures can lead to misleading judgments in temporal comparisons, if there is an increase in the role of some uncaptured circumstances variables (e.g., a policy change). As mentioned in their paper, *"An increase in the role of the unmeasured circumstances that are not related to the measured predictors would lead to an increase in the overall variance in the outcome but a decrease in the share of the variance explained by the measured circumstances. This would mean that inequality of outcome would increase over the same period that inequality of opportunity decreases. For example, if regional differences are introduced into educational policy within a country, and there are only weak variations in socio-economic circumstances between these regions, then the overall variance in academic achievement may increase and the inequality of opportunity measure may decrease".* The authors argue that inequality of outcomes measures are more robust, especially in terms of comparisons across time and countries.
28. Nine Arab countries, are Egypt, Iraq, Jordan, Lebanon, Oman, Sudan, Syrian Arab Republic, Tunisia, and Yemen.

Chapter 5

29. See UNDP (2005b) for the Syrian Arab Republic; UNDP (2006, and 2008) for Yemen; and World Bank (2007) for Egypt.
30. See empirical evidences in Kakwani and Son 2005.
31. The impact of indirect tax may depend on the type of goods. Indirect tax may be progressive in when targeting goods consumed in high proportion by those at the top of the distribution.
32. See also Alesina and Perotti, 1996; Roe and Siegel, 2011.
33. Based on Abu-Ismail and Nehme, 2019.
34. Note that lack of historical data largely precludes conducting solid projections. While these figures must be treated with caution, they still provide insights into trends in natural resource rents per capita.

Chapter 6

35. See for example Chang, 2009.
36. This includes Algeria, Libya, Mauritania, Morocco and Tunisia.
37. This includes Egypt, Jordan, Lebanon, the Sudan and the Syrian Arab Republic.