

THE INEQUALITY PUZZLE IN EGYPT: WHAT DO WE REALLY KNOW?

By Tamer ElGindi

The World Bank introduced its 2015 publication *Inequality, Uprisings, and Conflict in the Arab World* with the suggestion that the Middle East and North Africa represent a puzzle.¹ In comparison with other regions, the Middle East achieved remarkable progress on a wide variety of socioeconomic indicators, such as poverty rates, equality, access to education, and child and maternal mortality, as well as infrastructure services throughout the last several decades. Yet beginning in 2010 with the Tunisian revolution, the region witnessed massive social and political upheavals. Politicians, researchers, scholars, and pundits alike were taken by surprise. How could countries with moderate levels of income inequality be home to such uprisings? How could countries that the World Bank (WB) and the International Monetary Fund (IMF) had celebrated as successfully managing challenges of globalization fail so miserably? These questions raise another: what do we really know about *true* inequality levels?

This article builds on previous work that examined factors affecting inequality levels in the broader Middle East, here with a focus on Egypt. It

Tamer ElGindi is Assistant Professor of Political Science at the American University in Cairo.

reviews available evidence of inequality in Egypt in two main arenas. First, it explores numerous factors influencing inequality levels in Egypt during the developmentalist era, as evident under Gamal Abdel Nasser's welfare state, as well as the subsequent *infitah* and neoliberal eras, beginning with the presidency of Anwar al-Sadat and continuing through the reign of Husni Mubarak. Results indicate that a shrinking agricultural sector, along with ever-increasing food dependency, deteriorating educational quality, a rising proportion of youth in the population accompanied by high unemployment rates, and distorted government redistribution policies have all contributed to increasing inequality.

Second, the article discusses various methodological issues related to the assessment of inequality. It offers several explanations for how empirical data largely focused on consumption-based Gini coefficients underestimated actual inequality. The Gini coefficient is the most widely used indicator for income inequality. It ranges from a theoretical zero up to one hundred, with zero indicating perfect equality and one hundred indicating perfect inequality. Moreover, various monetary indices, such as land, wealth, and wages, and non-monetary indices, such as education and health, reveal an increasing level of inequality in Egypt. In addition, popular perceptions of inequality and popular dissatisfaction with general social well-being have risen.

Scholars and revolutionaries alike cited socioeconomic grievances as a major factor inspiring the uprisings. The Egyptian case has generated significant scholarly research, which has largely emphasized income inequality as a major factor inspiring revolution.² Scholarly analysis in the immediate aftermath of the 2011 revolution in Egypt differs from more recent research. Shortly after the 2011 revolution, the Egyptian Center for Economic Studies (ECES) suggested in a policy memorandum that social inequality was a major determinant of the outbreak of serious unrest.³ This assessment seemed to contradict the relatively low Gini coefficient in Egypt. Research since has shifted to *subjective* as opposed to *objective* measures. Consequently, various scholars proposed that what mattered more were popular perceptions of injustice and relative deprivation.⁴ Scholars have also identified rising wealth inequality, typically left out in analysis using consumption-based Gini coefficients, as another possible explanation for the "puzzle" that is the Middle East and North Africa.⁵

Beginning in the 1950s, Nasser initiated a developmentalist era replete with a far-reaching attempt to build a welfare state. In the 1970s, Sadat reversed many of these efforts and introduced the *infitah* and liberalization measures. This era culminated in the uprising of 1977, when the government backtracked, in part, on its withdrawal of subsidies. Mubarak's regime, however, would renew the neoliberal turn with the adoption of the structural adjustment programs (SAPs) that the WB and IMF advocated in the early 1990s. A last phase of neoliberalization took place under Prime Minister Ahmad Nazif, who formulated intensified liberalization measures between 2004 and the onset of the revolution in 2011.

To better understand inequality in Egypt, it is crucial to expand the analysis and include other monetary (land, wealth, and wages) and non-monetary indices (education and health). It is also imperative to integrate various subjective measures alongside this objective data. In this regard, this article adopts a political economy perspective with two aims. One is to analyze equalizing and unequalizing factors that took place in the developmentalist and subsequent *infitah* and neoliberal eras. Equalizing factors include agrarian land reforms, education diffusion, demographic transition, and the redistributive impact of government's budget. Unequalizing factors include liberalization laws. The second aim is to evaluate available evidence of inequality in Egypt. The failure to understand the uprisings in Egypt or the broader Middle East has three major explanations. First, Gini coefficients based on consumption typically underestimate inequality compared to measures based on income.⁶ Second, analyzing monetary and non-monetary inequality indices reveal increasing levels of inequality.⁷ Third, survey data compiled from Gallup reports, along with World Values Surveys (WVS), reveal the deterioration of living standards as well as perceptions of increasing inequalities in the years preceding 2011.

A Historical Overview of Inequality

Broadly speaking, the Middle East and North Africa lacks a proper, high-quality data set when it comes to inequality. In fact, there is little attention to inequality at all.⁸ For instance, inequality data virtually do not exist for the Arab Gulf countries.⁹ This neglect can be attributed to two major

factors: the lack of microdata compiled through household surveys and political considerations.¹⁰

Sami Bibi and Mustapha Nabli suggest that the Middle East exhibits “moderately high levels of inequality” as measured by household expenditures throughout the last three decades.¹¹ There are evident variations across countries. Tunisia and Morocco show high levels of inequality, while Egypt seems to show low levels of inequality. This result confirms the research of Richard Adams and John Page, which demonstrated the low prevalence of poverty and inequality rates in the Middle East.¹² The WB’s 2016 study *Taking On Inequality* is an impressive effort to compare and synthesize data on inequality internationally, but it fails to incorporate data on the Middle East and North Africa in several instances, due either to lack of coverage or poor data quality.¹³ Even in cases where data is available, the report emphasizes that poverty estimates severely underestimate poverty rates.

Studies on inequality have undergone various stages mirroring economic changes in Egypt. Sherine Al-Shawarby identifies three major strands of research on inequality in Egypt.¹⁴ The first covers the 1950s and 1960s, and focuses on Nasser’s land reforms. The second addresses the urban-rural divide as migration rates escalated in the 1980s. The third explores the relationship between growth, poverty, and inequality, given the emphasis on growth rates that prevailed after the early 1990s.

Studies before the onset of the 1952 revolution indicate that inequality in land ownership was rampant. Samir Radwan states that the Gini coefficient in 1896 was 0.696; it increased until reaching 0.758 on the eve of the 1952 revolution.¹⁵ Studies of the 1960s and 1970s, however, illustrate a downward trend in inequality levels, which scholars attributed to Nasser’s land reforms.¹⁶

There are no available estimates of Gini coefficients during the period from 1981-82 to 1990-91.¹⁷ But we can infer from various studies addressing rural-urban divides that inequality levels widened during that period.¹⁸ Maria Paciello arrived at a similar conclusion; she suggests that the decline in oil prices helped increase inequalities.¹⁹

The numbers from the final period, running from early 1990s until the late 2000s, indicate on average a declining trend. Hanaa Kheir-El-Din and Heba El-Laithy argued that income inequality generally improved between 1990-91 and 2004-05, with the Gini decreasing from 0.446 to 0.32.²⁰ Finally, the WB highlighted that the Gini coefficient improved (though slightly)

between 2004-05 and 2008-09, from 0.31 to 0.307.²¹ Some of these improvements may be due to declining inequality levels occurring in rural areas, which in turn improved the overall Gini figures. Urban areas, however, remain more unequal than their rural counterparts. More generally, Paciello attributes improvements in income distribution in the Middle East and North Africa to the availability of government jobs, strong social networks, and donations from religious and charitable organizations.²² Based on available data, it is clear that consumption-based Gini coefficients witnessed a declining trend from the early 1990s up to the second half of the 2000s.

Equalizing Factors in the Developmentalist Era

Egypt's sweeping Nasserist reforms in land, education, reproductive policy, and financial redistribution, in the early 1950s and throughout the 1960s, greatly influenced inequality levels. Prior to 1950, Egypt suffered from a lack of industry and deteriorating agricultural productivity. It relied heavily on the cotton sector, with cotton exports making up the bulk of government revenues.²³ Prior to the 1952 revolution, the number of Egyptian peasants who were landless or owned less than one acre was close to seventy-five percent.²⁴ On the eve of the 1952 revolution, landholdings and the private sector were concentrated in the hands of a small minority. The post-1952 period witnessed sweeping land and agrarian reforms, state planning in pursuit of nationalization and confiscation of private and foreign assets, import-substitution policies, and state-controlled programs for delivering education, health care, housing, and food subsidies.²⁵ Landholdings were restricted, initially to two hundred *feddans* (approximately two hundred acres), and later to one hundred *feddans*.²⁶ The government adopted progressive taxation and at one point the highest tax bracket reached a staggering ninety percent.²⁷ In Nasser's social contract, political repression and restrictions accompanied the state's effort to deliver basic services.²⁸ Nevertheless, there were dramatic improvements in socioeconomic indicators, including per capita GDP, poverty and infant mortality rates, life expectancy, and school enrollment levels, between the 1950s and 1970s.²⁹

Based on the standard argument of supply and demand, the more qualified and educated work force would eventually increase competition and bring about a decline in relative wages thereby decreasing the gap

between higher and lower wages.³⁰ Thus, it would be expected that higher investments in education would generate positive outcomes. Kevan Harris explains that between 1975-2010, the Middle East and North Africa enjoyed the fastest growth rate in average years of schooling compared to all other regions.³¹ The region as a whole invested on average five percent of GDP and twenty percent of government budgets in education throughout the last forty years, higher than almost any other region according to the WB geographical regions' classification.³²

Egypt's investments in the education sector increased significantly throughout the last several decades. Whereas public spending on education was 683 million Egyptian pounds (LE) in 1980-81, this figure jumped to LE 56.4 billion by 2011-12. The share of education as a percentage of total government expenditure, however, declined throughout the 2000s, as reflected in figure 1, revealing a different view than the nominal figures on total expenditure. It is also worth noting that a majority of spending (between seventy to seventy-five percent) goes to pre-university levels while the remainder (twenty-five to thirty percent) is allocated to the university level. Within the pre-university level, a higher proportion is devoted to secondary and tertiary education,

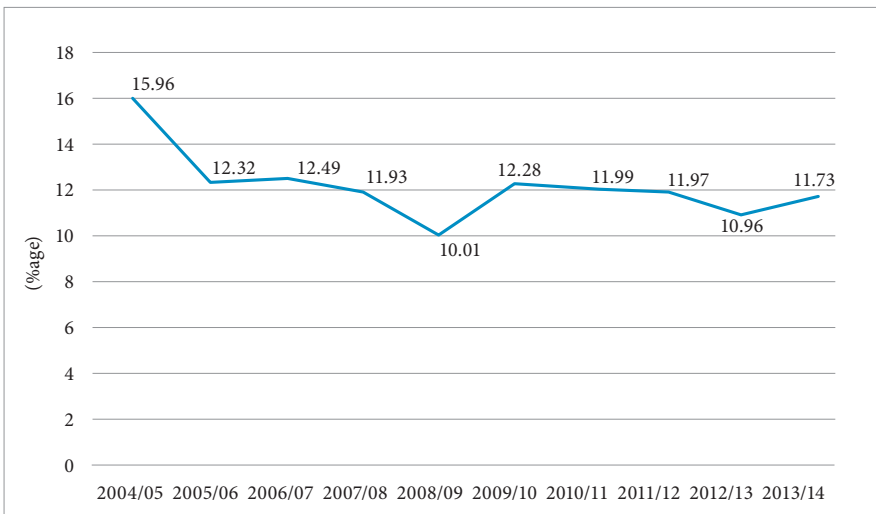


Figure 1: Education expenditure as a share of total government expenditure (2004-14)
 Source: *The State General Budget, Ministry of Finance (multiple issues)*

evidencing a government bias in favor of higher levels of education.³³ Literacy rates also witnessed remarkable improvement, increasing from thirty-eight percent in 1976 to seventy-five percent in 2015. Nonetheless, this figure is still much lower than those in Egypt's counterparts in East Asia and Latin America. Both regions have reached literacy levels exceeding ninety percent.

Notwithstanding these investments, Egypt suffers greatly in terms of the quality of its education system. While quality is difficult to measure, a recent WB report assessed three different indicators: test scores on international examinations, fields of study in higher education, and literacy rates.³⁴ In each category, Egypt lagged behind East Asian and Latin American countries. First, international tests (such as Trends in International Math and Science Study and Programme for International Student Assessment) measure students' abilities in language and math. Second, enrollment in university-level science and engineering is correlated with higher economic growth rates as technological innovation positively affects overall economic development. Finally, reducing illiteracy rates is a must for national economic growth. Table 1 summarizes the results for those three measures for countries in the Middle East and North Africa, East Asia, and Latin America. Lower achievements for Egypt (along with other countries in the Middle East and North Africa) reflect the deteriorating quality of education despite increasing investments therein.

The same WB report adds that the Middle East and North Africa generally suffers from gross inequalities in education.³⁵ Wealthier students and those who live in urban areas have better access to educational opportunities. Though Egypt, along with other Middle East countries, witnessed remarkable reductions in educational inequalities, the prevailing Gini indices for education are still much higher than those in East Asia and Latin America [Fig. 2].

Currently, approximately twenty million Egyptian students are enrolled in school. Ninety percent of these are enrolled in public schools. Class density is high in primary education and tends to decrease later due to high dropout rates.³⁶ The decrease in enrollment in later years signifies that students are not being taught the required skills to continue their education.³⁷ In fact, education systems in Arab countries are geared toward rote learning rather than critical thinking and problem solving.³⁸ Thus, graduates are not competitive in the labor market, adding to already high levels of unemployment and increasing informal economic activities.

| Country | Average Test Score of TIMSS and PISA | | Distribution of University Students by Field of Study | | | | | | Illiteracy Rates | |
|----------------|--------------------------------------|--------------------------------|---|--------------------------|-----------------|-------------|--|--------------|------------------|-------------|
| | Test Taken | Approximate average test score | Year | Education and Humanities | Social Sciences | Medicine | Scientific, Technical and Eng-ineering | Others | in 1980 | in 2003 |
| Bahrain | TIMSS 2003 | 401 | 2002 | 10 | 50 | 7 | 21 | 12 | 28.8 | 13.5 |
| Egypt | TIMSS 2003 | 406 | 1995 | 35 | 41.2 | 7.4 | 10.2 | 6.1 | 60.7 | 28.6 |
| Iran | TIMSS 95/99/03 | 420 | 2003 | 17.6 | 27.5 | 7.3 | 38.2 | 9.3 | 50.3 | 23 |
| Jordan | TIMSS 99/03 | 426 | 2002 | 30 | 26 | 10 | 30 | 4 | 30.8 | 9.7 |
| Lebanon | TIMSS 2003 | 433 | 2003 | 21.2 | 38.8 | 8.5 | 25.7 | 5.8 | - | - |
| Morocco | TIMSS 99/03 | 362 | 2003 | 27.6 | 47.8 | 3.9 | 18.3 | 2.3 | 71.4 | 47.7 |
| Saudi Arabia | TIMSS 2003 | 332 | 2003 | 60.7 | 15.1 | 4.6 | 13.6 | 6.1 | 49.2 | 20.7 |
| Tunisia | TIMSS 99/03, PISA 03 | 420 | 2002 | 22 | 27 | 7 | 31 | 13 | 55.1 | 25.7 |
| Mean | | 400 | | 28.0 | 34.2 | 7.0 | 23.5 | 7.3 | 49.5 | 24.1 |
| China | | | 1994 | 22.8 | 9.4 | 8.9 | 46.8 | 12.1 | 32.9 | 9.1 |
| Indonesia | TIMSS 00/03; PISA 2000/03 | 409 | 1995 | 21.3 | 54.9 | 2.1 | 15.1 | 6.7 | 31 | 9.6 |
| Korea, Rep. of | TIMSS 95/99/03, PISA 2000/03 | 574 | 2002 | 23.4 | 20.4 | 7.3 | 41.1 | 7.9 | - | - |
| Malaysia | TIMSS 99/03 | 514 | 2002 | 20 | 27 | 4 | 40 | 11.2 | 28.8 | 11.3 |
| Philippines | TIMSS 99/03 | 362 | 2002 | 20 | 31 | 9 | 24 | 16 | 12.2 | 7.4 |
| Thailand | TIMSS 95/99, PISA 2000/03 | 478 | 1995 | 12.2 | 59.7 | 5.9 | 17.6 | 4.7 | 12.5 | 7.4 |
| Mean | | 467 | | 20.0 | 33.7 | 6.2 | 30.8 | 9.8 | 23.5 | 9.0 |
| Argentina | PISA 2000 | 430 | 2002 | 10 | 35 | 10 | 14 | 31 | 5.6 | 2.8 |
| Brazil | PISA 2000/03 | 398 | 1994 | 20.5 | 44 | 9.3 | 20.1 | 6.1 | 24 | 11.4 |
| Chile | TIMSS 99/03, PISA 2000 | 404 | 2002 | 20 | 35 | 9 | 32 | 5 | 8.6 | 4.3 |
| Mexico | PISA 2000/03 | 429 | 2002 | 15 | 42 | 8 | 32 | 4.3 | 18.7 | 9.1 |
| Peru | PISA 2000 | 358 | 1991 | 13 | 42.1 | 11.4 | 24.3 | 9.2 | 20.6 | 12.3 |
| Mean | | 404 | | 15.7 | 39.62 | 9.54 | 24.48 | 11.12 | 15.5 | 8.0 |

Table 1: Various quality indicators for education for a selected number of countries
 Source: World Bank (2008)

| | 1970 | 1975 | 1980 | 1985 | 1990 | 1995 | 2000 |
|-----------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Algeria | 0.816 | 0.767 | 0.707 | 0.655 | 0.606 | 0.562 | 0.518 |
| Bahrain | 0.724 | 0.665 | 0.631 | 0.603 | 0.514 | 0.481 | 0.443 |
| Djibouti | — | — | — | — | — | — | — |
| Egypt, Arab Rep. of | — | 0.846 | 0.788 | 0.668 | 0.619 | 0.562 | 0.518 |
| Iran, Islamic Rep. of | 0.838 | 0.783 | 0.727 | 0.677 | 0.616 | 0.556 | 0.517 |
| Iraq | 0.852 | 0.807 | 0.732 | 0.744 | 0.677 | 0.622 | 0.605 |
| Jordan | 0.655 | 0.614 | 0.613 | 0.548 | 0.504 | 0.468 | 0.443 |
| Kuwait | 0.662 | 0.712 | 0.631 | 0.574 | 0.544 | 0.533 | 0.521 |
| Lebanon | — | — | — | — | — | — | — |
| Libya | — | 0.717 | — | 0.631 | — | — | — |
| Morocco | — | — | — | — | — | — | — |
| Oman | — | — | — | — | — | — | — |
| Qatar | — | — | — | — | — | — | — |
| Saudi Arabia | — | — | — | — | — | — | — |
| Syrian Arab Rep. | 0.713 | 0.674 | 0.617 | 0.562 | 0.518 | 0.481 | 0.458 |
| Tunisia | 0.818 | 0.758 | 0.693 | 0.670 | 0.616 | 0.571 | 0.538 |
| United Arab Emirates | — | 0.764 | — | — | — | — | — |
| West Bank and Gaza | — | — | — | — | — | — | — |
| Yemen, Rep. of | — | 0.991 | 0.957 | 0.910 | 0.846 | — | — |
| Mean | 0.760 | 0.758 | 0.710 | 0.658 | 0.606 | 0.537 | 0.507 |
| China | — | 0.552 | 0.507 | 0.493 | 0.419 | 0.401 | 0.383 |
| Korea, Rep. of | 0.510 | 0.389 | 0.333 | 0.281 | 0.210 | 0.198 | 0.192 |
| Malaysia | 0.547 | 0.514 | 0.471 | 0.454 | 0.420 | 0.392 | 0.379 |
| Philippines | 0.432 | 0.357 | 0.340 | 0.332 | 0.291 | 0.275 | 0.255 |
| Thailand | 0.425 | 0.433 | 0.371 | 0.400 | 0.404 | 0.398 | 0.391 |
| Indonesia | 0.586 | 0.581 | 0.505 | 0.438 | 0.581 | 0.536 | 0.502 |
| Mean | 0.500 | 0.471 | 0.421 | 0.400 | 0.388 | 0.367 | 0.350 |
| Argentina | 0.311 | 0.325 | 0.294 | 0.317 | 0.272 | 0.270 | 0.267 |
| Brazil | 0.540 | 0.465 | 0.484 | 0.482 | 0.437 | 0.434 | 0.429 |
| Chile | 0.383 | 0.387 | 0.370 | 0.367 | 0.368 | 0.374 | 0.372 |
| Colombia | 0.509 | 0.459 | 0.472 | 0.473 | 0.485 | 0.489 | 0.481 |
| Mexico | 0.511 | 0.498 | 0.497 | 0.469 | 0.384 | 0.373 | 0.358 |
| Peru | 0.492 | 0.490 | 0.414 | 0.424 | 0.418 | 0.359 | 0.361 |
| Uruguay | 0.392 | 0.348 | 0.357 | 0.335 | 0.343 | 0.346 | 0.346 |
| Mean | 0.448 | 0.425 | 0.413 | 0.410 | 0.387 | 0.378 | 0.373 |

Figure 2: Gini coefficients of the distribution of education, 1970-2000

Source: World Bank (2008)

Population growth rates and inequality are linked. Population growth affects the labor supply by increasing the pool of labor, especially at the bottom of the earnings scale.³⁹ Increasing the number of young workers tends to depress the relative wages of unskilled employees.⁴⁰

The broader Middle East and North Africa, and Egypt in particular, witnessed remarkable improvements in child mortality and life expectancy from the 1960s to the present. These improvements, as well as high fertility rates in the earlier years, led to increases in population growth rates. As the WB put it, “[t]he current ‘youth bulge’ is due to high fertility rates in the past.”⁴¹ In fact, Harris explains that the baby boom of the 1970s and 1980s led to an increasing number of youth entering the labor market around 2010.⁴² At that time, the numbers of youth (those fifteen to twenty-nine years old) were four to six times those approaching retirement. In the 1970s, the proportion of youth in the Middle East and North Africa was similar to other developing regions. By 2005, however, it had increased to 0.30. This figure was higher than those in Europe and North America (0.21), and other developing regions, such as Asia (0.26), Latin America (0.27), and sub-Saharan Africa (0.28).⁴³ Typically, a large educated youth population generates positive results on growth. But due to high unemployment rates, along with deteriorating educational quality, the Arab world has been unable to reap any benefits from this demographic expansion.⁴⁴

One of the most striking features of the labor market in the Arab world, and Egypt specifically, is the high unemployment rate among highly educated youth. Generally speaking, unemployment rates in the Middle East and North Africa, and Egypt in particular, are higher than any other region worldwide [Fig. 3]. A high percentage of those unemployed are those with high education levels. Thus, for instance, Ahmed Galal indicates that in 1998 the unemployment rate among the educated in Egypt was 9.6 percent, compared to only 1.8 percent among illiterates.⁴⁵ Ragui Assaad confirms this finding by demonstrating that university graduates in Egypt were the only educated group to witness an increase in unemployment between 1998 and 2006.⁴⁶ Youth unemployment continues to rise steadily.⁴⁷

Historically, the public sector has been able to offer generous non-wage benefits to its employees. This feature, coupled with a distorted wage structure, translated into unrealistic wage expectations, which exacerbated unemployment.⁴⁸ This situation led to high reservation wages, especially for

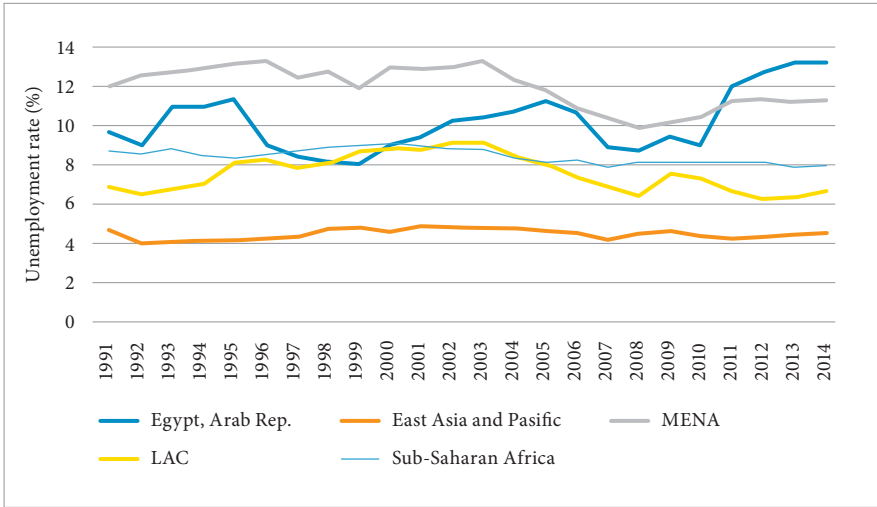


Figure 3: Unemployment, total (percent of total labor force)
 Source: World Bank Development Indicators

those youth whose parents could afford to help them wait for a desirable job. Labor economists define reservation wages as the lowest wage a worker will accept. In addition, the focus on degree acquisition, as opposed to enhancing productive skills, led to a mismatch between graduates' abilities and labor market needs, further increasing unemployment.⁴⁹

On the eve of the 2011 revolution, of the two and a half million unemployed people in Egypt, approximately one million were between twenty and twenty-four years old.⁵⁰ This large number of unemployed youth helped ignite the revolution.

Redistributive Impact of Government's Budget

The redistributive impact of the government's budget on inequality is quite substantial. Anthony Atkinson analyzed the causes behind increases in income inequality in the countries of the Organization for Economic Co-operation and Development (OECD) and highlighted the importance of both taxes and transfers to government budgets.⁵¹ Further, Arthur Alderson and François Nielsen attributed increasing inequality levels to reductions

in governments' welfare services associated with the rise of neoliberalism and the onset of the Reagan and Thatcher regimes in the early 1980s.⁵² With government expenditures decreasing due to reductions in tariff revenues, and the slashing of taxation, governments cut their expenditures on social services such as education, health, housing, and infrastructure. Many developing countries, in their effort to repay debts incurred through SAPs, had to cut their social expenditures and sell off public assets.

The underlying problems in the Egyptian economy, however, have more to do with *how* the budget is allocated than with cuts in social expenditures. In fact, the Egyptian government has been increasing its expenditures for various social items in absolute terms. Moreover, the share of some items as a percentage of total expenditures has remained almost the same or, in some cases, slightly increased.

Broadly speaking, Egypt saw substantial increases in both revenues and expenditures throughout the last decade, with more severe increases in expenditures, which widened the cash deficit [Fig. 4]. Within the category of revenues, taxes represent the main source, with a share close to sixty to

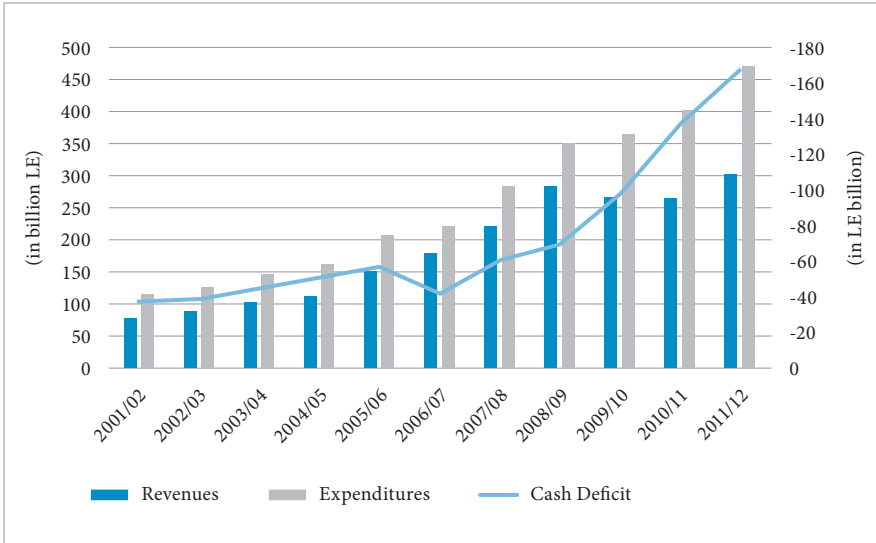


Figure 4: Development in revenues, expenditure, and cash deficit, 2001-12
 Source: Ministry of Finance (multiple issues)

seventy percent, while other sources make up twenty-six to thirty-seven percent and grants represent two to three percent. On the expenditures side, subsidies, grants, and social benefits represent the largest share, ranging from thirty to thirty-five percent, while wages and compensation range from twenty to twenty-six percent, interest payments make up around twenty percent, and other expenses around ten percent [Table 2].

As indicated earlier, taxes represent the lion's share of revenues with an average share of sixty-five percent from 2001-02 to 2011-12. Within the category of tax proceeds, general taxes represented close to half of the total (forty-nine percent) in 2009-10, while sales tax (thirty-four percent), customs (ten percent), taxes on property (five percent), and other tax revenues (seven percent) made up the rest. These relative shares tend to hold for the years from 2004-05 to 2011-12. Since around eighty-five percent of the total revenues are concentrated within general taxes and sales taxes, it is important to explore the major components of these particular revenues and their impact on inequality. In addition, taxes on property, despite their minimal share, have an impact on inequality.

General taxes, representing forty-nine percent of tax revenues, are taxes collected mainly from the following institutions and sources, in order of importance: the Egyptian General Petroleum Company (EGPC), the Suez Canal, corporate profits, payroll taxes, and the Central Bank of Egypt (CBE). Collectively, the income from these five sources constitutes eighty-five percent of total general taxes. The EGPC and the Suez Canal together contributed around fifty-five percent of general taxes throughout the 2000s. Since both entities are fully government-owned, their revenues are, in a sense, disguised rent. Therefore, I focus on corporate profits and payroll taxes. It is important to keep in mind taxes' potential role in mitigating inequality by being either progressive (higher tax rates for people who earn or own more) or regressive (putting a disproportionate pressure on poorer segments of society and those at the bottom of the earnings scale).

Taxation in Egypt shifted dramatically when the neoliberal government took office in 2004. A new law in 2005 slashed the number of tax brackets from twenty-three to four and capped all taxes at twenty percent.⁵³ Corporate taxes remained at forty percent from 1997 to 2005. In 2005, corporate taxes were reduced by half to twenty percent, with only one bracket, rather than the previous four, covering all corporate activity.

| Year | 2001-02 | 2002-03 | 2003-04 | 2004-05 | 2005-06 | 2006-07 | 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 |
|--|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Revenues (in LE billion) | 78.32 | 89.15 | 101.88 | 110.86 | 151.27 | 180.22 | 221.40 | 282.51 | 268.11 | 265.30 | 303.62 |
| 1-Taxes | 50.80 | 55.74 | 67.15 | 75.76 | 97.78 | 114.33 | 137.20 | 163.22 | 170.49 | 192.10 | 207.41 |
| Share (% of total revenues) | 65 | 63 | 66 | 68 | 65 | 63 | 62 | 58 | 64 | 72 | 68 |
| 2-Grants | 4.27 | 3.29 | 5.05 | 2.85 | 2.38 | 3.89 | 1.46 | 7.98 | 4.33 | 2.30 | 10.10 |
| Share (% of total revenues) | 5 | 4 | 5 | 3 | 2 | 2 | 1 | 3 | 2 | 1 | 3 |
| 3-Other Revenues | 23.25 | 30.12 | 29.68 | 32.25 | 51.11 | 62.00 | 82.75 | 111.30 | 93.29 | 70.90 | 86.11 |
| Share (% of total revenues) | 30 | 34 | 29 | 29 | 34 | 34 | 37 | 39 | 35 | 27 | 28 |
| | | | | | | | | | | | |
| Expenditures (in LE billion) | 115.54 | 127.32 | 145.99 | 161.61 | 207.81 | 222.03 | 282.29 | 351.50 | 365.99 | 401.90 | 470.99 |
| 1-Wages & compensation | 30.52 | 33.82 | 37.27 | 41.46 | 46.72 | 52.15 | 62.84 | 76.28 | 85.37 | 96.30 | 122.82 |
| Share (% of total expenditures) | 26 | 27 | 26 | 26 | 22 | 23 | 22 | 22 | 23 | 24 | 26 |
| 2-Purchase of goods and services | 8.65 | 8.48 | 9.34 | 12.61 | 14.43 | 17.03 | 18.47 | 43.59 | 28.06 | 26.10 | 26.83 |
| Share (% of total expenditures) | 7 | 7 | 6 | 8 | 7 | 8 | 7 | 12 | 8 | 6 | 6 |
| 3-Interest | 21.75 | 25.85 | 30.70 | 32.78 | 36.82 | 47.70 | 50.53 | 52.73 | 72.33 | 85.10 | 104.44 |
| Share (% of total expenditures) | 19 | 20 | 21 | 20 | 18 | 21 | 18 | 15 | 20 | 21 | 22 |
| 4-Subsidies, Grants, and Social Benefits | 18.05 | 20.61 | 24.75 | 29.71 | 68.90 | 58.44 | 92.37 | 126.89 | 102.97 | 123.10 | 150.19 |
| Share (% of total expenditures) | 16 | 16 | 17 | 18 | 33 | 26 | 33 | 36 | 28 | 31 | 32 |
| 5-Other Expenses | 16.80 | 18.31 | 21.08 | 21.69 | 19.74 | 21.21 | 23.89 | 27.07 | 28.90 | 31.40 | 30.80 |
| Share (% of total expenditures) | 15 | 14 | 14 | 13 | 9 | 10 | 8 | 8 | 8 | 8 | 7 |

Table 2: Breakdown of revenues and expenditures (2001-02-2011-12)

Source: Author's calculation based on Ministry of Finance, State's General Budget (multiple issues)

Further, from 1997 to 2005 personal income tax for the uppermost bracket reached as high as sixty-five percent and payroll taxes were thirty-two percent. In 2005, the government cut and capped both at twenty percent. Table 3 illustrates the evolution of the top tax brackets' rates and the number of brackets from 1997 to 2015.

| Year | Corporate Income (upper bracket rate) | Personal Income tax (upper bracket rate) | Payroll Tax (upper bracket rate) | No. of brackets (corporate income) | No. of brackets (personal income) |
|------|---------------------------------------|--|----------------------------------|------------------------------------|-----------------------------------|
| 1997 | 40 | 65 | 32 | 4 | 23 |
| 2005 | 20 | 20 | 20 | 1 | 4 |
| 2011 | 25 | 25 | 25 | 5 | 5 |
| 2012 | 25 | 25 | 25 | 5 | 5 |
| 2013 | 25 | 25 | 25 | 5 | 5 |
| 2015 | 22.5 | 22.5 | 22.5 | 5 | 5 |

Table 3: Evolution of top tax brackets and number of brackets (1997-2015)

Source: Diab (2016)

The reduction in the number of tax brackets meant that people with widely divergent incomes were being taxed at the same rate. People earning as little as LE 40,001 were treated the same as those earning up to ten million. As for corporate taxation, the system favored large companies. In theory, Osama Diab explains, small sole proprietorships, that is, those enterprises with operations earning less than two million Egyptian pounds, were paying an effective tax rate of twenty-eight percent of profits.⁵⁴ Large businesses, with operations exceeding one billion Egyptian pounds, paid only 3.5 percent of their profits as taxes. In practice, however, both household businesses and sole proprietorships are largely informal and thus do not pay taxes. Joint stock companies depict a similar, but less acute pattern. Small joint stock companies (with operations less than one million Egyptian pounds) pay an effective tax rate of 9.8 percent of profits, while larger companies (with a business volume of over one billion Egyptian pounds) pay only 5.7 percent. Despite paying a lesser effective tax rate, large companies contribute more than small and medium enterprises to total taxation.

Similar to general taxes, sales taxes represent a regressive taxation system that shifts the burden onto poorer segments of society. Sales taxes are those levied on various domestic goods and services at a fixed rate. Therefore, they constitute a larger share of the expenditures of the poor. Many basic goods in Egypt are exempt from sales taxes, thereby reducing the burden on the poor to some extent. Interestingly, sales taxes increased as a percentage of total tax revenues, putting more pressure on poor people since these consumption taxes are flat and apply equally to everyone. Figure 5 illustrates the evolution of sales tax as a percentage of total tax revenues in Egypt over the last twenty years. The upward trend in sales tax reflects the increasing burden borne by poorer people.

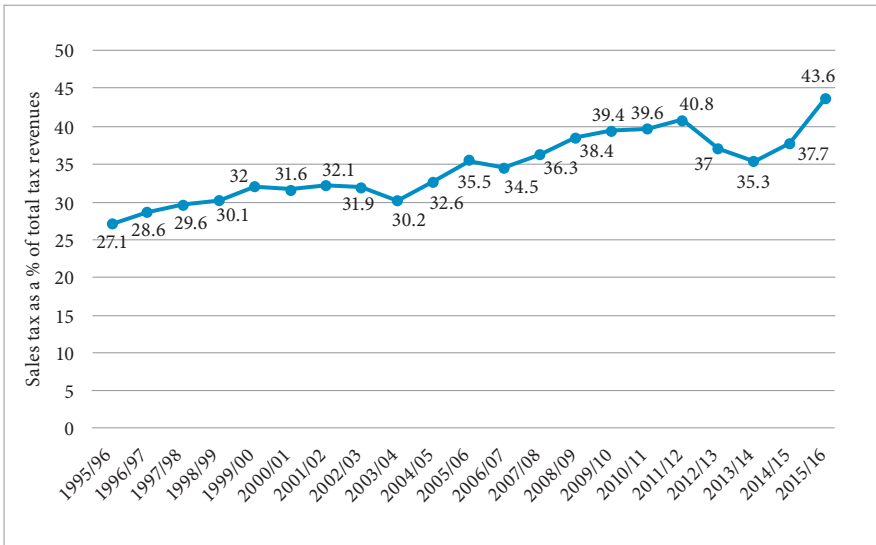


Figure 5: Evolution of sales tax as a percentage of total tax revenues

Source: Diab (2016)

Taxes on property include recurrent taxes on property, taxes on financial and capital transactions, and taxes and fees on cars. Each are manifestations of wealth. Taxing these items in a progressive fashion would definitely help reduce wealth disparities. A closer look, however, reveals that

the share of taxes on property as a percentage of total taxes remains modest, hovering between five and seven percent from 2004-05 to 2013-14.⁵⁵ Thus, their limited share of total taxes has increased inequality.

The government’s annual state budget includes the following expenditures, ordered from largest to smallest in shares of total expenditures: subsidies, grants, and social benefits (around thirty to thirty five percent); wages and compensation (around twenty-five percent); interest (around twenty percent); other expenses (around nine percent); and purchases of goods and services (around seven to twelve percent). As figure 6 shows, all components increased throughout the period from 2001-02 to 2011-12. The first three items, however, witnessed substantial increases, particularly subsidies, grants, and social benefits. Beginning in 2005-06, petroleum subsidies were added to this component of the government’s annual budget—previously, they had been on the accounts of the EGPC.

The Egyptian subsidy system began in 1945, when the government allocated LE two million from its annual budget for subsidies.⁵⁶ Governments

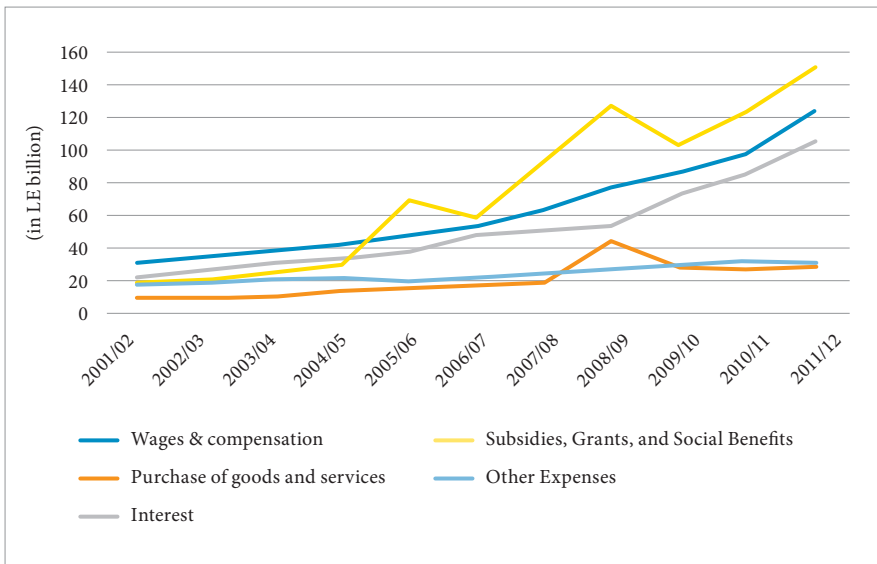


Figure 6: Evolution of various components of the state’s annual expenditures
Source: Ministry of Finance State’s General Budget (multiple issues)

use subsidies to cushion the blow to Egyptians’ purchasing power caused by the difference between local and international prices. Theoretically speaking, subsidies were meant to assist low-income groups by enhancing their real incomes and enabling them to buy products at cheaper than market prices. This assistance, in turn, should help reduce inequality by empowering low-income groups. But the subsidy system in Egypt is distorted, to say the least. In fact, a WB report said that the current system is feeble and costly, and allows for market distortions that assist the rich rather than the poor.⁵⁷ The government, however, has continued to dedicate large portions of its budget to subsidies, as figure 7 demonstrates.

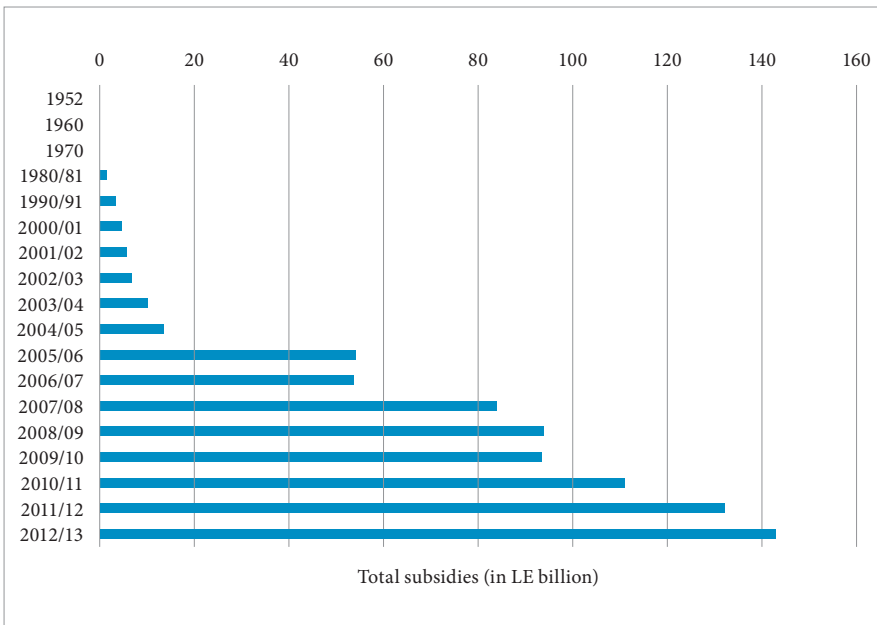


Figure 7: Change in subsidy values, 1952-2013
 Sources: Ministry of Finance, Ministry of Planning, Central Agency for Public Mobilization and Statistics, and IDSC (2012)

The government distributes subsidies upon a wide array of items, including supply commodities (food), petroleum products, and electricity, and also uses subsidies to boost exports, aid farmers, and promote the

development of Upper Egypt, among other things. Supply commodities and petroleum products are the main items, however, constituting around ninety percent of total subsidies as of fiscal year 2012-13. Therefore, I restrict the analysis here to these two important items. With increases in both energy and food prices throughout the 2000s, especially during the second half of the decade, governments had to dedicate larger portions of budgets to maintain subsidy levels. This imperative created fiscal imbalances and persistent pressure on the government budget.⁵⁸

Petroleum subsidies represent the lion's share of government expenditure at sixty to almost seventy-three percent in 2011-12. Within petroleum products spending, close to forty percent is allocated to solar (a petroleum product that is used in truck transportation and does not refer to solar energy), twenty-five to thirty percent to butane (potane gas), and thirty percent to gasoline. The rest is divided as illustrated in table 4. These figures force a rethinking of subsidy distribution. Untargeted energy subsidies help the corporate sector and not the consumer. There is a clear bias toward energy-intensive industries that benefit from relatively cheap energy prices.⁵⁹ Cement companies are a case in a point. The cabinet of neoliberal

| Year | 2007/08 | 2008/09 | 2009/10 | 2010/11 | 2011/12 |
|---------------------|-------------|-------------|-------------|-------------|-------------|
| Kerosene | 0.60% | 0.40% | 0.30% | 0.50% | 0.30% |
| Natural Gas | 15.80% | 7.10% | 12.50% | 10.20% | 10.50% |
| Benzene (Gasoline) | 12.10% | 10.40% | 14% | 14.80% | 13.20% |
| Mazot | 10.60% | 6.40% | 12.50% | 11.90% | 13.90% |
| Butane (Potane Gas) | 20.20% | 16.90% | 22% | 19.60% | 14% |
| Solar | 40.70% | 58.80% | 38.70% | 43% | 48.10% |
| Total | 100% | 100% | 100% | 100% | 100% |

Table 4: Classification of petroleum subsidies
Source: Ministry of Finance, State's General Budget (multiple issues)

ministers that took office in 2004 was eager to entice foreign investors with lucrative deals. Cheap energy prices were a cornerstone of these efforts. The Egyptian government privatized several cement companies by selling them to foreign investors during that period. Today, eleven of the twelve cement

companies in Egypt are foreign-owned.⁶⁰ The president of the Industrial Development Agency (IDA) declared that only forty factories in the fields of cement, iron and steel, fertilizers, aluminum, and petrochemicals would receive around seventy-five percent of the subsidized natural gas and sixty-five percent of the subsidized electricity allocated to all industrial activities. These industries contribute only twenty percent of total industrial activity and generate seven percent of total industrial employment.⁶¹ Moreover, relatively cheap energy prices have meant that both households and firms are guilty of excessive use, which in turn contributes to pollution and environmental damage.⁶²

Most of the energy subsidies are captured by the transport (41.9 percent), industry (thirty percent), and electricity (7.4 percent) sectors (these three sectors collectively make around eighty percent), while households constitute less than twenty percent of total energy consumption.⁶³ Households, however, receive up to forty percent of total electricity production in Egypt. With the exception of kerosene, energy subsidies are largely regressive, benefiting the rich far more than the poor.⁶⁴ Gasoline subsidies, in particular, are regressive and unjust. The richest twenty percent of the population receive around ninety-three percent of the total gasoline subsidy. The poorest forty percent receive less than one percent of the total gasoline subsidy.⁶⁵ Natural gas is another example. Maria Vagliasindi explains that natural gas is largely used for electricity generation, while the household sector directly consumes only around three percent.⁶⁶ Collectively, these examples demonstrate a clear bias toward industry, particularly in energy-intensive fields, as opposed to needy households. Figure 8 shows how the richest quintile captures thirty-four percent of electricity and energy subsidies, compared to the poorest quintiles' thirteen percent.

The second largest component of subsidy expenditures is food subsidies. The government first increased prices for food items in January 1977, leading to a two-day uprising that left 160 dead and thousands injured. Since then, the government has been very reluctant to embark on aggressive measures that could generate similar blowback. Bread and flour subsidies are available to everyone; these items can be purchased at any quantity, depending on availability. Other subsidized food items, such as sugar, rice, and cooking oil, are sold in specific quantities and available only to ration card holders.⁶⁷

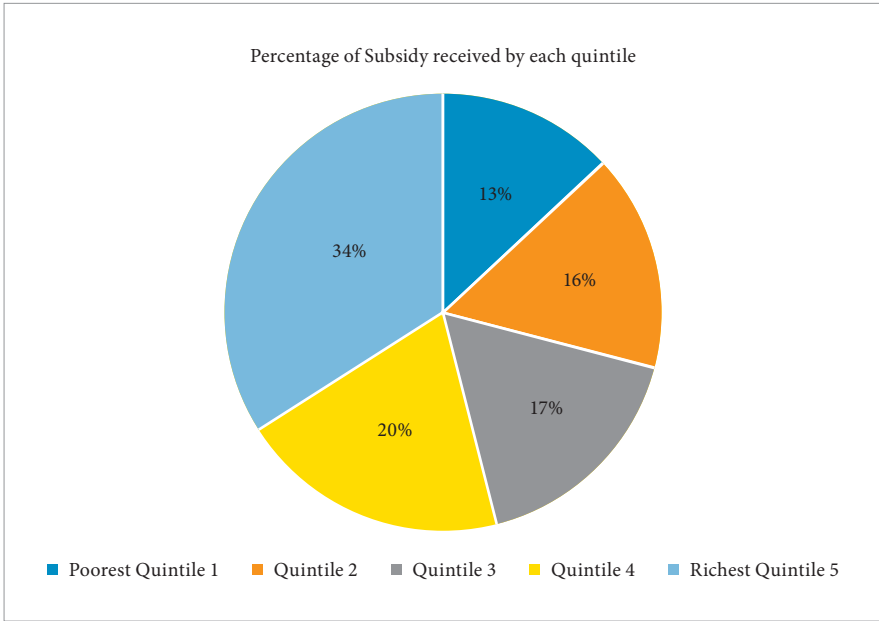


Figure 8: Distribution of four petroleum product subsidies (LPG, gasoline, kerosene, and natural gas)
 Source: World Bank (2005)

Since the Bread Intifada of 1977, the Egyptian government took various steps to reduce the fiscal burden of subsidizing food products. In the past, ration cards could be applied to twenty products, including frozen meat, chicken, and fish. By 1996-97 only four items were left on the card.⁶⁸ After 1989, the government stopped registering newborn children on the ration card rolls and purged the names of those deceased or abroad.⁶⁹ In 2013, Egypt introduced a smart card program that aimed to rationalize subsidized goods electronically. More recently, in its aim to exclude ten percent of the seventy-one million currently enrolled beneficiaries, the government gave ration card holders two months' notice to update their personal information by either completing a printed form available at grocery stores throughout the country or filling out a comparable form at the Ministry of Supply website.

Despite these efforts, the subsidies program is riddled with problems. Food subsidies continue to be costly and rarely reach the poor and vulner-

able households they are aimed at. When they do reach these households, subsidies are a minimal contribution incapable of alleviating poverty.⁷⁰ As figure 9 shows, it is again the wealthiest quintile of Egyptians who receive the largest share of food subsidies. One major cause of the unjust distribution of food subsidies is non-enforcement of eligibility criteria. A WB report reveals that around two-thirds of ration card holders do not meet the government's eligibility criteria.⁷¹ The same report identifies Egypt as one among several developing countries where leakage rates exceed eighty percent.⁷² These rates far exceed those in countries such as Serbia (twenty-two percent), Chile (thirty-five percent), Mexico (forty-one percent), and Kazakhstan (forty-four percent). Figure 9 shows that the wealthiest two quintiles receive forty-six percent of subsidies as compared to the thirty-five percent that goes to the poorest two quintiles. Thus, the subsidy system is costly and ineffective, and it creates market distortions. Universal subsidies, including both energy and food subsidies, are inefficient and misallocate resources, further benefiting the rich rather than the needy.⁷³

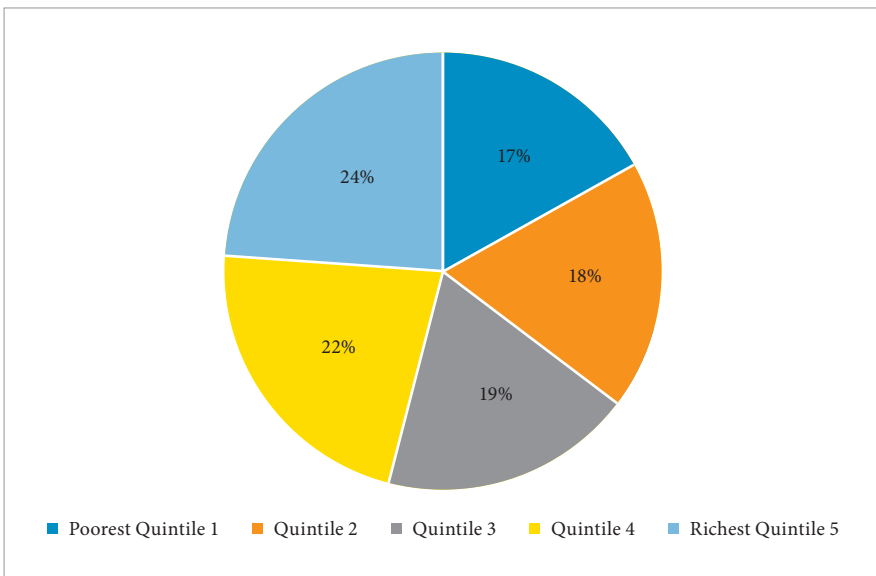


Figure 9: Distribution of food subsidy value by expenditure quintiles
Source: WB (2005)

Various scholars have critiqued the structural adjustment policies that the IMF and WB have advocated since the late 1980s on several grounds. For instance, many developing countries, including Egypt, utilized these conditional loans to prioritize debt repayments before essential expenditures. This priority meant cutting social expenditures, weakening states, and impoverishing middle classes.⁷⁴ Today, as has been the case for many years, interest payments on loans make up almost one fifth of annual expenditures in the Egyptian budget. The interest payments drain the budget and leave less money for social expenditures.

Yet the Egyptian government has not scaled back its social expenditures. Increases in international energy and food prices, along with the ongoing cash deficit in the annual budget, have meant that the government has been forced to borrow, both from internal and external sources, to finance such deficits. Interest on both internal and external debts has mushroomed throughout the last decade, placing still more pressure on the annual budget, and locking up huge sums of money that are better saved for social expenditures and the overall welfare of Egyptians [Fig. 10].

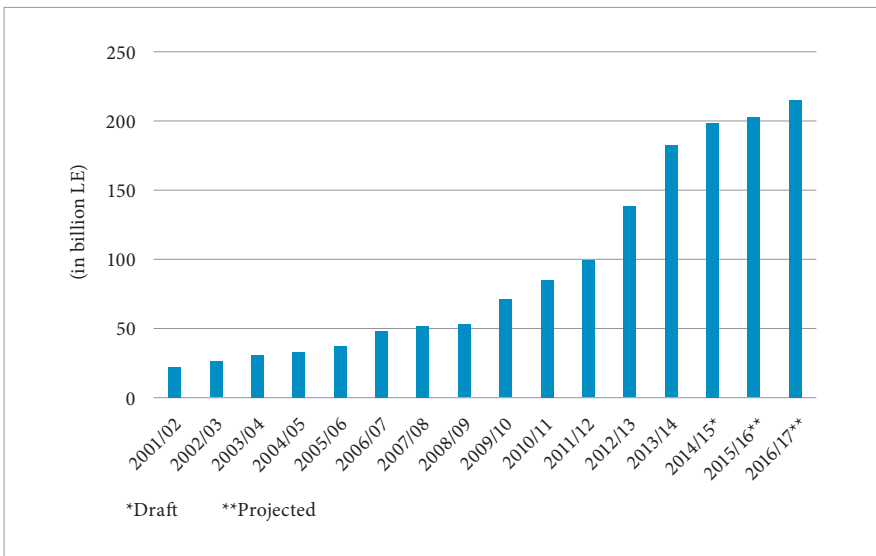


Figure 10: Interest on domestic and external loans (2001-02-2016-17)
 Source: Central Bank of Egypt Annual Report (multiple issues)

The number of people employed by the public sector in Egypt has increased substantially throughout the last several decades. The government has been able to maintain these large numbers despite periods of economic stagnation in the 1980s and 1990s. According to Assaad, employment in the public sector doubled from sixteen percent in 1960 to thirty-two percent by 1981.⁷⁵ Throughout the 1990s and up to 2004, employment in the public sector was around twenty-nine percent of total employment.⁷⁶ Harris adds that salaries in the Egyptian public sector have increased in the 2000s compared to the 1980s.⁷⁷

Currently, the government employs around 5.3 million people, in addition to 0.6 million working in economic authorities, making the total figure around six million people. With an average family size of four, this policy choice means that public-sector wages secure the livelihoods of around twenty-four million people (roughly one fourth of the Egyptian population). The category of public-sector wages is subdivided into components such as wages and salaries, rewards, cash benefits, and insurance benefits. Significant increases in salaries illustrate the government's concern and willingness to secure livable incomes for its employees and for a great portion of the population. Nonetheless, these initiatives neglect informal employment.

Unequalizing Factors of the *Infitah* and Neoliberal Eras

Anwar al-Sadat's infamous *infitah* or open-door policies sought to reverse many of Nasser's policies. Sadat returned land to several large landowners and aimed to revitalize the private sector to compensate for the state's retreat from different sectors.⁷⁸ These liberalization reforms, in particular the liberalization of the agricultural sector, would have a broad impact on inequality and food dependency.

Infitah policies aimed to increase the role of market forces, encourage the private sector, revamp the public sector, and revitalize national contributions to international markets.⁷⁹ Benefiting from high oil prices throughout the 1970s and the early 1980s, Egypt's annual GDP achieved remarkable growth. The annual average GDP growth rate between 1966-75 was 3.4 percent, and from 1976-85 it was 8.3 percent, before declining to 3.8 percent between 1986-95.⁸⁰ Despite benefiting from large cash inflows during the 1970s and the early 1980s, due to high oil prices, significant workers' remit-

tances, and Suez Canal revenues, by 1981 Egypt's external debt had swollen to thirty billion, a sixfold increase from five billion in 1970.⁸¹

Husni Mubarak continued his predecessor's economic reforms and privatization, as well as maintaining close ties with the United States.⁸² But low oil prices throughout the second half of the 1980s meant stagnating economic growth rates accompanied by a decrease in government revenues, a reduction in workers' remittances, and an alarming public debt.⁸³ This convergence of factors led Mubarak to secure external aid. In exchange for Egypt's involvement in the 1991 Gulf war, Egypt was forgiven 13.7 billion dollars' worth of external debt owed to the United States and Arab donors.⁸⁴ Further, the advancement of the so-called Washington consensus meant that states eager to receive assistance had to abide by IMF and WB rules. In return for receiving loans from these institutions, governments were forced to sign SAP agreements.⁸⁵ Egypt signed an agreement with the IMF and the WB in 1991. The main reforms had to do with "getting the prices right,"⁸⁶ that is, allowing markets to set prices and removing any distortions due to state price controls and subsidies.⁸⁷ These reforms also entailed pursuing more aggressive privatization efforts. Indeed, the IMF praised Egypt's government, which privatized one-third of its public sector in two years (1996-97).⁸⁸ This era was the second neoliberal reform era in Egypt under the guidance (or pressures) of international agencies. A third phase followed with the Nazif cabinet that took office in 2004.

The newly appointed cabinet of ministers in 2004 was keen on demonstrating itself to be a neoliberal government that would cut red tape, encourage private investment, promote foreign investment, boost Egypt's exports, and slash taxes for businesses. Indeed, Egypt witnessed some remarkable improvements in annual growth rates—registering rates of 4.5 percent, 6.8 percent, 7.1 percent, and 7.2 percent in the years 2005, 2006, 2007, and 2008. But increasing levels of unemployment, especially among youth, challenged the narrative that this rate of growth was an indicator of economic progress.⁸⁹

Agriculture Liberalization and Food Dependency

Scholars and commentators have argued that the agriculture sector enjoys a rather homogenous wage structure. But decline in the agricultural sector and

movement toward manufacturing and services typically means an increase in wage inequality between these sectors. How has the agricultural sector in Egypt fared in the last several decades? And how did developments in agriculture affect inequality levels?

Nasser undertook transformative reforms in the agricultural sector by capping large landholdings and redistributing lands to small farmers. As a result, reductions in inequality levels were tangible throughout the 1970s. But despite the fact that economic liberalization in the agricultural sector did not take place until the mid-1980s, the 1970s and 1980s witnessed broad government neglect. As a result, the country's import bill began to expand enormously. Indeed, by 1974, Egypt became the third largest importer of grain.⁹⁰ Today, Egypt stands as the world's largest importer of wheat, with almost eight million tons of imports annually. US loans, international borrowing, and a staggering external debt support this increasing import bill.⁹¹

There are broad historical foundations for agricultural decline. Indeed, agricultural productivity has decreased exponentially since the end of the nineteenth century.⁹² This decline is largely due to limitations on cultivable land. Most of Egypt's agricultural land (exactly eighty-five percent) is confined to what is commonly known as the old lands (the Nile Valley and Delta), while only a smaller part is located in newly reclaimed lands (around fifteen percent).⁹³ Decline in productivity could also be due to decreasing marginal returns in terms of workers' productivity—a result of productivity per *feddan* increasing because of technological innovations in irrigation and pest control.⁹⁴

It was not until 1987 that the government, with the assistance of the United States Agency for International Development (USAID), began undertaking aggressive liberalizing measures in agriculture. State intervention and the introduction of market reforms and export-led growth models, especially in horticultural commodities, had negative influence.⁹⁵ Despite some improvements in agricultural exports during the early 2000s, "exports remain poor, patchy, and problematic."⁹⁶

The agricultural sector witnessed a large decline as a percentage of GDP in comparison to manufacturing and services [Fig. 11]. In its mid-1960s heyday, agriculture accounted for almost thirty percent of GDP. Today it is twelve percent. Wages in the agricultural sector have also declined or at best stagnated in the last two decades. Real wages in agriculture declined

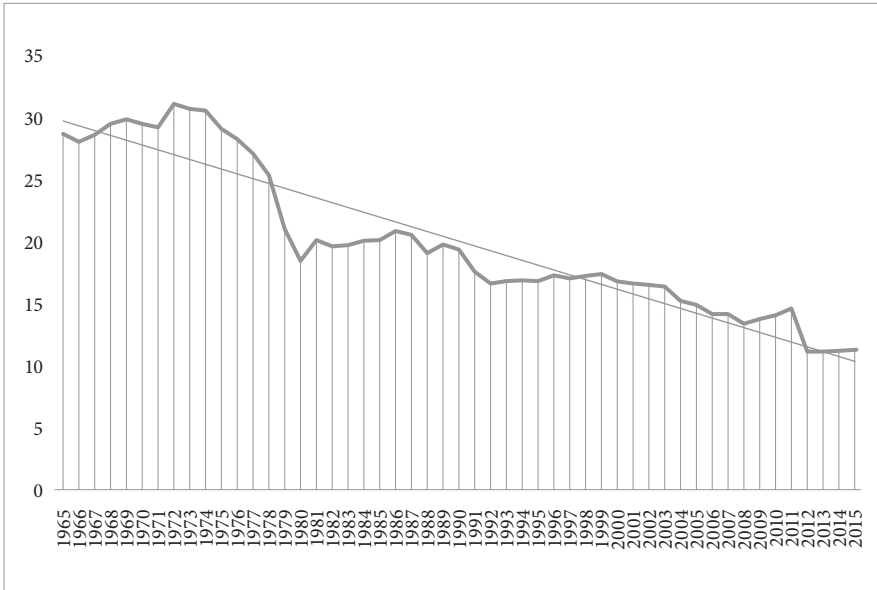


Figure 11: Agriculture as a percentage of GDP, value added (1965-2015)
 Source: World Bank Development Indicators

between 1985-86 and 1994-95 by thirty percent.⁹⁷ Moreover, real wages in agriculture remained almost stagnant between 2000 and 2009.⁹⁸ Decline in real wages in agriculture meant that the sector as a whole was in crisis and unable to curb growing wage inequalities vis-à-vis the industrial sector, as Kuznets argued in the 1960s.

The results of government efforts to promote agricultural exports through market liberalization and other neoliberal measures were not that significant. Looking at vegetables as a share of total exports, we can see that these goods represented 7.11 percent of exports in 1994 and 7.91 percent in 2008, with the exception of the odd years in between where it reached eight and nine percent. The more significant increases are observable only after 2008, and the share reached 13.69 percent in 2015. The same pattern applies to food products. The share of food products in Egypt's basket of exports remained modest, ranging from 1.28 percent in 1994 to two percent in 2008. As with vegetable exports, after 2008 the share steadily improved,

reaching 5.97 percent in 2015. In general, both vegetables and food products have witnessed increasing, albeit sporadic, annual growth rates [Fig. 12]. On average, while shares remain limited, growth rates for agricultural products throughout the period from 1994 to 2015 surpassed the growth rates for fuels and textiles and clothing.

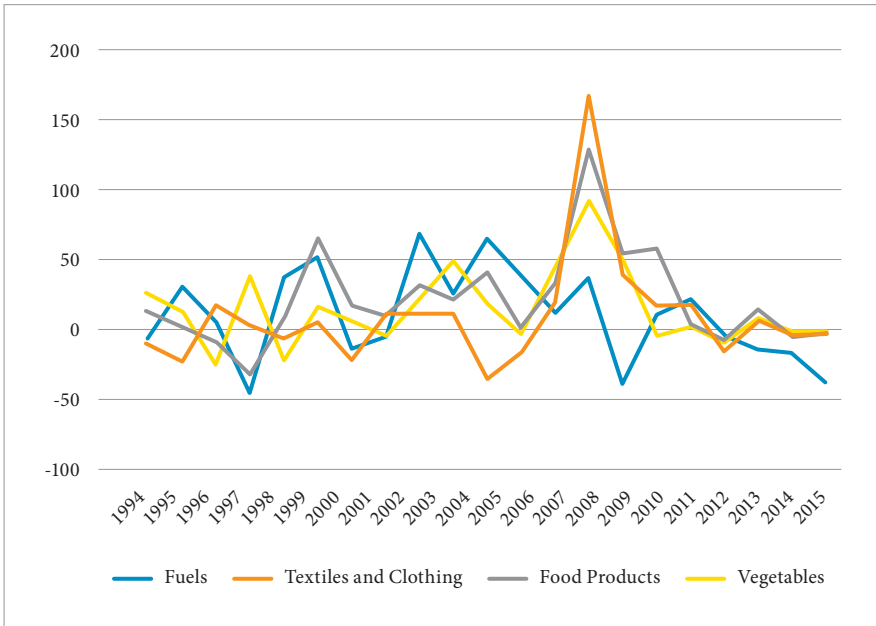


Figure 12: Annual rate of growth for selected export products (1994-2015)
 Source: Author's calculation based on World Integrated Trade Solution
 (WITS) World Bank (<http://wits.worldbank.org>)

The modest increases in agricultural productivity were accompanied by government efforts to direct the export sector to high-monetary value, low-nutrition foodstuffs for export markets.⁹⁹ Thus, Egypt's dependence on food imports steadily increased. Historically, Egypt's agricultural sector used to record a trade surplus. In 1970, the trade surplus for agricultural products reached 300 million dollars. By 1977, however, the trade deficit increased to 800 million dollars. By 1980-81, the rate had jumped to 2.5 billion dollars.¹⁰⁰

Throughout the 2000s and up to 2014-15, Egypt ran large trade deficits in cereals and foodstuffs. These deficits reached a climax during the second half of the 2000s, topping out at almost ten billion dollars in 2011-12. Broadly speaking, Egypt imports between fifteen to twenty percent of its agricultural products. The reliance on food imports means that people are vulnerable to volatile, and usually increasing, food prices. This continuing disequilibrium increased food dependency in Egypt and caused riots and protests as food prices skyrocketed in 2008.¹⁰¹

With prices for some commodities steeply rising in 2008 and early 2011, analysts went so far as to describe the Arab uprisings as a “culmination of food-related protests.”¹⁰² The concern with food price hikes was clear in 2008, where answers to one of the WVS questions showed seventy percent of respondents in Egypt (up from eighteen percent in 2001) choosing “fighting rising prices” as more important than maintaining order, giving the people more say in their own governance, and protecting freedom of speech. Continuous food crises pushed millions of Egyptians into poverty and hunger. This deterioration in the agricultural sector, along with increased mechanization during the Sadat era, resulted in “relative depeasantization” in Egypt. The process forced generations out of the countryside and into cities, leading to larger urban populations, as well as heightened rural and urban poverty.¹⁰³

Inequality Measurement Issues

As indicated earlier, inequality measures are replete with deficiencies that can render them inaccurate. It is crucial to address these shortcomings while integrating subjective alongside conventionally used objective measures. There are serious concerns about the comparability of household surveys across time. Data on income distribution in Egypt since the early 1990s are mainly based on Household Income, Expenditure, and Consumption Surveys (HIECS) published by the Central Agency for Public Mobilization and Statistics (CAPMAS). There were nine surveys conducted in the period from 1959 to 2009.¹⁰⁴ There are inter-temporal differences between different surveys, however, which makes comparison among them unreliable. Surveys also suffer from both unit non-response, when a household decides not to participate, and item non-response, when participating households provide inaccurate information.¹⁰⁵

Consumption-based surveys underestimate inequality relative to income-based surveys.¹⁰⁶ The poor tend to consume more as a percentage of income than the rich do.¹⁰⁷ In addition, indirect taxes levied on consumption, common to most countries in the Middle East and North Africa, tend to affect the poor disproportionately.¹⁰⁸ The WB offers an illuminating example for several Eastern European and Central Asian countries, where both indices are available, and through comparison concludes that “consumption-based Gini indexes are considerably lower than income-based Gini indexes” [Fig. 13].¹⁰⁹ One way to check the accuracy of survey results for consumption-based Gini indexes is to validate these results using microdata for households, or tax records. Unfortunately, access to the former is almost impossible in Arab countries, and the latter is lacking entirely.¹¹⁰

Moreover, the IMF highlights that some of these surveys, whether based on income or consumption, do not provide a nationally representa-

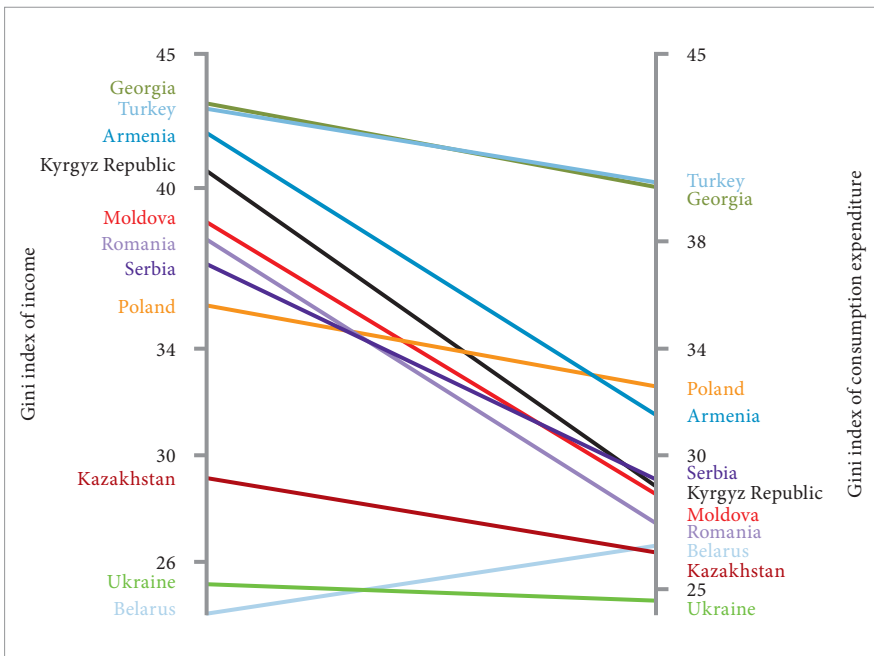


Figure 13: Levels of income and consumption, Gini indexes, 2013
 Source: World Bank (2016)

tive picture, and exclude various segments of the population.¹¹¹ In addition, Milanovic argues that people at the upper end of the distribution sometimes refuse to be interviewed or understate their incomes, and therefore surveys do not fully capture the wealth of the richest segments of society.¹¹²

Therefore, it is crucial to capture the top tail of the distribution, that is the wealthy, since underrepresentation leads to underestimating inequality measures.¹¹³ In an attempt to overcome the absence of such vital data, Vladimir Hlasny and Paolo Verme used various statistical techniques to correct for measurement issues such as item and unit non-response, and outliers for the case of Egypt.¹¹⁴ Their results indicate that, after corrections, the Gini index increases by just over one percent. This marginal increase limits the utility of flagrant income equality as an explanation for uprisings. Facundo Alvaredo and Thomas Piketty, however, explain that studies such as Hlasny and Verme are inaccurate because they mistakenly compare inverted Pareto coefficients to coefficients from similar household surveys rather than to Pareto coefficients from tax data that tends to be more reliable.¹¹⁵ As a result, they estimate that the top decile income share in Egypt can range from thirty-three to thirty-five percent, which is high compared to other developing countries. Their results are further confirmed by the WB, which compares the Gini index in Brazil to the share of the top one percent between 2006 and 2012 [Fig. 14].¹¹⁶ The figure clearly shows two contradicting results: whereas the Gini index declines throughout the period, the share of the top one percent increases. This finding suggests that Gini indices might miss significant information at the top tail of the income distribution.

Bibi and Nabli identify two additional measurement issues related to household expenditure surveys.¹¹⁷ First, survey takers must not only collect consumption surveys carefully, but also aggregate different components and imputations after collection.¹¹⁸ Imputations, they argue, are typically conducted by interviewers in the field, whom the WB does not consider the most reliable agents, according to its Living Standards Measurement Study Handbook. Moreover, these imputations do not integrate agricultural modules, which could lead to underestimates, especially in countries with large agricultural sectors such as Egypt. Second, most countries in the Middle East and North Africa offer subsidized goods that are not accounted for in inequality estimates. All these factors combined qualify official inequality data, which on the whole underestimate actual levels of inequality.

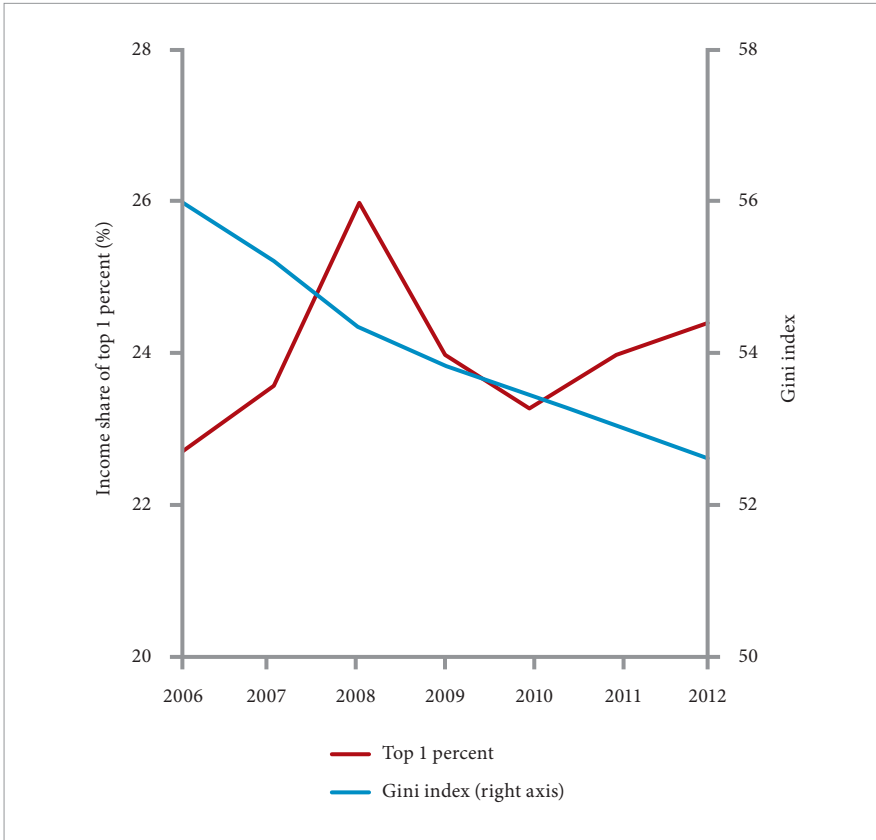


Figure 14: Comparison of top incomes and the Gini index, Brazil, 2006-12
 Source: World Bank (2016)

Other monetary and non-monetary inequality indices provide a different picture. Generally speaking, Arab countries display a highly unequal distribution of land, with Gini indices in Iraq reaching seventy-three. In Egypt, the Gini index on land inequality between 1986-1990, while not as unequal as in Iraq, still hit a high of fifty-five.¹¹⁹ Another monetary inequality index is wealth inequality. There is a dearth of reliable data on wealth on a global scale.¹²⁰ Of course, wealth is a broader term than income, and its definition encompasses other items, such as bank accounts, mutual funds, and financial investments less any debt.¹²¹

Inequality is not the story of developing countries alone. It is a global phenomenon. Fifty percent of the global population owns less than one percent of total wealth.¹²² The richest ten percent owns eighty-seven percent of total wealth, with the richest one percent owning forty-eight percent. In Egypt, the top decile owns more than seventy percent of the country's total wealth. To make matters worse, the share of the top decile has been *rapidly rising* during the period when income inequality, ostensibly, has been declining.¹²³

Recently, scholars have acknowledged the difficulty of obtaining data on wealth in the Middle East and North Africa,¹²⁴ and have tried to devise methods to overcome the problem. Some scholars have used the sale prices of houses as a proxy for estimating top incomes,¹²⁵ others have used data on billionaires published by Forbes,¹²⁶ and still others have utilized data available from the Bank of International Settlements (BIS) on bank deposits in tax-haven countries to assess wealth inequality.¹²⁷ Broadly speaking, the results show an *unnoticed* income (wealth) concentration not reflected in household surveys, which tend to have a downward bias. This finding, in turn, shows the importance of incorporating other ways of assessing inequalities and acknowledging the shortcomings of widely used measures.

As with wealth, data on wages and earnings in the Middle East and North Africa is scarce and understudied. One rare study by the United Nations Industrial Development Organization (UNIDO) utilizes data from firms and indicates that wage inequality in the Middle East and North Africa is higher than in any other developing region.¹²⁸ Egypt is one of the few countries in the region that conducts nationally representative labor surveys. Survey results show that wage inequality increased between 1998 and 2006 with a widening wage disparity between high, medium, and low-skilled workers.¹²⁹ This evidence confirms earlier analysis showing how wages in the agricultural sector (and similar low-paying jobs) remained stagnant or declined over the years, leading to higher overall wage inequalities.

Non-monetary inequality indices also provide interesting results. Inequality in education or health has a broad impact on poverty and economic inequality.¹³⁰ Again, there is a shortage of data for Arab countries. But the few studies that have attempted to assess these inequalities have provided some core indications.

Despite improvements in school enrollment throughout the Arab world, education Gini coefficients for Arab countries are among the highest globally, surpassing those in Latin America and East Asia. The 2000 Gini education index in Egypt stood at 51.8 while it reached 60.5 in Iraq.¹³¹ Further, Djavad Salehi-Isfahani, Nadia Belhaj Hassine, and Ragui Assaad conclude that high levels of inequality of opportunity related to educational achievement persisted even when compared to Latin American countries.¹³² Nadia Belhaj Hassine shows that education, along with regional disparities, urban-rural inequality, and family type, help to explain the majority of inequality in Egypt in the years 2000, 2005, and 2009.¹³³ She concludes that inequality in educational achievement contributes to overall welfare inequality in Egypt. Inequality in health outcomes is also high in Egypt in spite of substantial improvements in infant mortality rates and life expectancy over time.¹³⁴ In short, surveys showing improvements in the last two decades neglect the substantial evidence of monetary and non-monetary inequality that paint a starkly different picture.

Subjective data obtained from numerous surveys also reveal a disturbing reality in the Arab world and in Egypt. The WB acknowledges that the region was able to achieve the Millennium Development Goals related to poverty reduction and access to infrastructure services.¹³⁵ At the same time these countries demonstrated deteriorating levels in the quality of public services, declining trust in governance, and diminishing law and order. Macroeconomic indicators that are not reflected in daily life ultimately led to a huge gap between actual outcomes and popular expectations [Fig. 15].

In Egypt, data from income and expenditure surveys reveal a decline in the standard of living between 2000 and 2009.¹³⁶ This period witnessed excessive increases in both food and energy prices that led to a sense of insecurity across the social spectrum. As stated above, results from WVS in 2008 show that “fighting rising prices” was Egyptians’ major concern in 2008. Arab Barometer surveys—a collective effort between Arab scholars and professors at leading US universities—also indicate that the desire for better economic conditions, as well as to fight corruption and promote social and economic justice, were three significant causes of the 2011 revolution.¹³⁷ Gallup reports additionally show a decline in the number of people “thriving” according to the Cantril Self-Anchoring Scale and

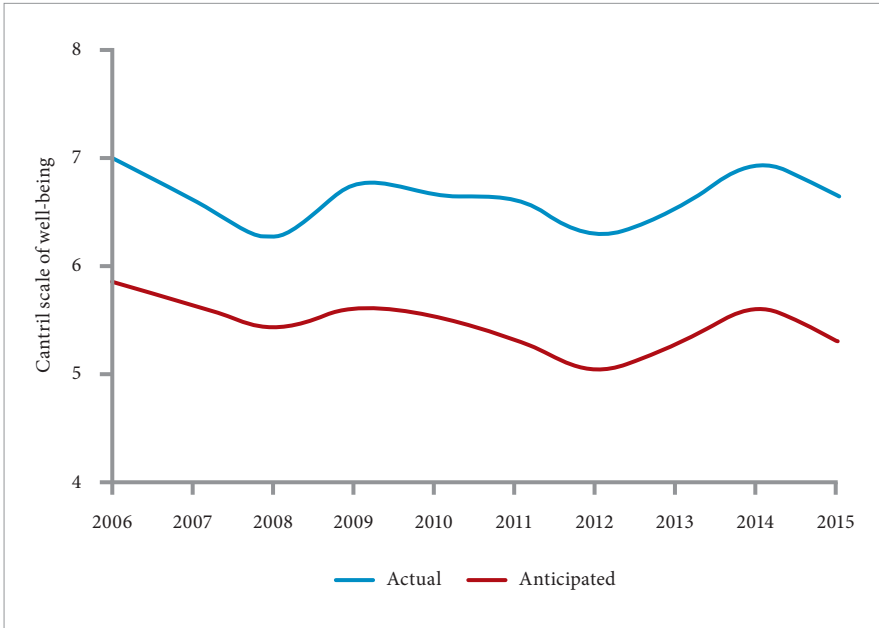


Figure 15: Actual vs. anticipated feelings of well-being, Middle East and North Africa
 Source: World Bank (2016)

simultaneous improvements in GDP per capita prior to the uprisings in 2011 [Fig. 16].

Perceptions of inequality are significant here. The WVS asks people whether incomes should be more equal or whether differences in incomes act as incentives. Earlier surveys (in 2001) show a much larger percentage of people thinking that greater income differences work as incentives for people to excel and work harder while only a very small minority thought that income should be made more equal. More recent results (in 2008 and 2012) showed a total reversal in perceptions with a majority of people wanting incomes to be more equal and a smaller minority thinking that inequalities work as incentives. This change in attitudes demonstrates feelings of injustice and the relative deprivation encountered by many. Relative deprivation is especially stark when people start to compare themselves with their international—rather than local—counterparts.¹³⁸

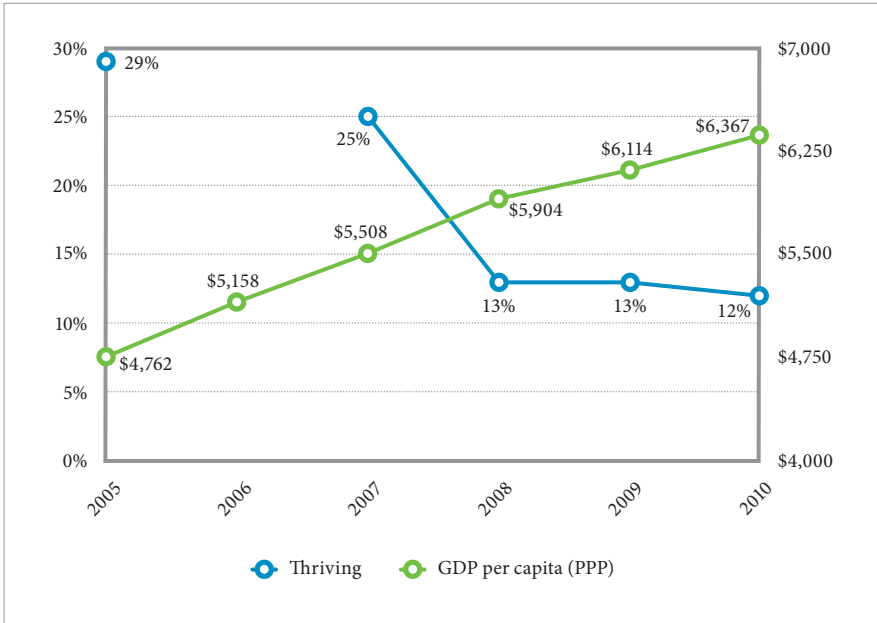


Figure 16: Recent trends in percentage "thriving" and GDP per capita (PPP) in Egypt
 Source: Clifton and Morales (2011)

In sum, consumption-based Gini data do not fully capture actual inequality levels. Several monetary and non-monetary indices for the Arab region in general, and Egypt in specific, suggest that inequality is significantly higher than what conventional measures propose. Gallup reports, the Arab Barometer, and WVS reveal that life satisfaction deteriorated and perceptions of inequality increased in the years preceding the 2011 revolution.

Conclusion

Despite vast improvements in various socioeconomic indicators over the last several decades, Egypt, along with other countries in the Middle East and North Africa, has witnessed upheaval, violence, and instability. As this article has shown, a shrinking agricultural sector, along with an ever-increasing food dependency, has negatively affected real wages and condemned large

numbers of Egyptians to poverty. Notwithstanding increases in enrollment rates at various levels of education, the quality of education has also deteriorated. With the public sector oversaturated and the youth population ballooning, unemployment soared. Moreover, taxes and subsidy systems were largely distorted and favored the wealthy.

Consumption-based Gini indices, typically estimated and administered by international institutions such as the WB and the IMF, did not reflect actually existing inequalities. Land, wealth, and wage inequality all confirm that Egypt suffers from gross inequalities that are not reflected in consumption-based Gini coefficients. This high level of inequality holds true for non-monetary indices such as education and health. Last but not least, survey data compiled from different sources all confirm that there was an evident deterioration in the quality of life for Egyptians and an increase in feelings of dissatisfaction and frustration throughout the last decade. The vast macroeconomic improvements never “trickled down.”

Unlike in other developing countries, the Egyptian government has not rolled back its social expenditures. In fact, the government has increased its spending and broadened its social safety net. The issue, however, is with how the money is spent rather than how much of it is allotted. As illustrated in this article’s discussions of the energy and food subsidy systems, the government increased its nominal expenditures to compensate for rising international prices. Nonetheless, both systems remained distorted and incapable of targeting needy people, instead benefiting the wealthiest quintiles.

It is equally, if not more, important to include subjective data reflected through national surveys. These types of data tend to capture significant elements corresponding to people’s feelings and (dis)satisfaction with their financial situation, public services, and life in general that is typically left out in regular objective data.

Objective measures can be deeply misleading. The usual assessments of income inequality through consumption-based Gini indices have a downward bias that tends to constrain analysis. Though scholars have widely critiqued the Gini coefficient on various grounds, most scholarly research continues to use it. The persistence of the Gini index in analysis can be attributed in part to data limitations. But there is another crucial aspect that this article tried to highlight: the need to assess inequality in a comprehensive manner

by including other monetary and non-monetary indicators. In addition, subjective measures offer new dimensions by integrating qualitative data not quite captured in most objective estimates. A shift toward such a holistic view should assist both researchers looking into the causes of inequality and policymakers seeking to ameliorate it.

ENDNOTES

- 1 Elena Ianchovichina, Lili Mottaghi, and Shantayanan Devarajan, "Inequality, Uprisings, and Conflict in the Arab World," Middle East and North Africa Economic Monitor (Washington, DC: World Bank, 2015), 11.
- 2 Vladimir Hlasny and Paolo Verme, "Top Incomes and the Measurement of Inequality in Egypt," Policy Research Working Paper 6557 (Washington, DC: World Bank, 2013); Zina Nimeh, "Economic Growth and Inequality in the Middle East: An Explanation of the Arab Spring?" Instituto Per Gli Studi Di Politica Internazionale Analysis 105 (April 2012); and Mthuli Ncube and John C. Anyanwu, "Inequality and Arab Spring Revolutions in North Africa and the Middle East," Africa Economic Brief (African Development Bank, 2012).
- 3 Egyptian Center for Economic Studies Policy Viewpoint (May 2011), 7.
- 4 Branko Milanovic, "Inequality and its Discontents: Why So Many People Feel Left Behind," *Foreign Affairs*, 16 March 2011; Kevan Harris, "Did Inequality Breed the Arab Uprisings? Social Inequality in the Middle East from a World Perspective," in *The Arab Revolution of 2011: A Comparative Perspective*, ed. Said Amir Arjomand (Albany: State University of New York Press, 2015), 87-111; and Ragui Assaad, Caroline Krafft, John Romer, and Djavad Salehi-Isfahani, "Inequality of Opportunity in Wages and Consumption in Egypt," *Review of Income and Wealth* (2017), 1-29.
- 5 Ianchovichina et al., "Inequality, Uprisings."
- 6 Branko Milanovic, "Global Inequality Recalculated and Updated: The Effect of New PPP Estimates on Global Inequality and 2005 Estimates," *Journal of Economic Inequality* 10, no. 1 (2010), 1-18.
- 7 Francisco H. G. Ferreira and Martin Ravallion, "Global Poverty and Inequality: A Review of the Evidence," Policy Research Working Paper 4623 (Washington, DC: World Bank, 2008); and Sami Bibi and Mustapha K. Nabli, "Equity and Inequality in the Arab Region," Policy Research Report 33 (Cairo: Economic Research Forum, 2010).
- 8 Bibi and Nabli, "Equity and Inequality in the Arab Region."
- 9 Probably the most comprehensive study trying to compile data for all Arab countries was undertaken by Bibi and Nabli.
- 10 Bibi and Nabli, "Equity and Inequality in the Arab Region."
- 11 *Ibid.*, v.
- 12 Richard H. Adams, Jr. and John Page, "Poverty, Inequality, and Growth in Selected Middle East and North Africa Countries, 1980-2000," *World Development* 31, no. 12 (2003), 2027-48.
- 13 World Bank, "Poverty and Shared Prosperity 2016: Taking on Inequality" (Washington, DC: World Bank, 2016).
- 14 Sherine Al-Shawarby, "The Measurement of Inequality in the Arab Republic of Egypt: A Historical Survey," in *Inside Inequality in the Arab Republic of Egypt: Facts and Perceptions Across People, Time, and Space*, eds. Paolo Verme et al. (Washington, DC: World Bank, 2014), 13-35.
- 15 Samir Radwan, *Agrarian Reform and Rural Poverty: Egypt 1952-1975* (Geneva: International Labour Office, 1977).
- 16 Mohaya Zaytoun, "Income Distribution in Egyptian Agriculture and its Main Determinants," in *The Political Economy of Income Distribution in Egypt*, eds. Gouda Abdel Khalek and Robert Tignor (New York: Holmes and Meiser, 1982); and Bent Hansen, *The Political Economy of Poverty, Equity, and Growth: Egypt and Turkey* (Oxford: Oxford University Press, 1991).
- 17 Al-Shawarby, "The Measurement of Inequality in the Arab Republic of Egypt."
- 18 Karima Korayem, "Poverty and Income Distribution in Egypt," (Third World Forum, Middle East Office, 1994).

- 19 Maria Christina Paciello, "Income Distribution in the Middle East and North Africa, 1960-2000," in *Flat World, Big Gaps: Economic Liberalization, Globalization, Poverty and Inequality*, eds. Jomo Kwame Sundaram and Jacques Baudot (New York: Zed Books, 2007).
- 20 Hanaa Kheir-El-Din and Heba El-Laithy, "An Assessment of Growth, Distribution, and Poverty in Egypt: 1990/91-2004/05," Working Paper 115 (Cairo: Egyptian Center for Economic Studies, 2006).
- 21 World Bank, *Arab Republic of Egypt: Poverty in Egypt 2008-09*, (Washington, DC: World Bank, 2011).
- 22 Paciello, "Income Distribution."
- 23 Roger Owen and Sevket Pamuk, *A History of Middle East Economies in the Twentieth Century* (Cambridge, MA: Harvard University Press, 1998).
- 24 Tarik Yousef, "Development, Growth and Policy Reform in the Middle East and North Africa since 1950," *Journal of Economic Perspectives* 18, no. 3 (2004), 91-116; and Kevan Harris, "Making and Unmaking of the Greater Middle East," *New Left Review* 101 (2016), 5-34.
- 25 Yousef, "Development, Growth, and Policy Reform"; Harris, "Did Inequality Breed the Arab Uprisings"; and Al-Shawarby, "The Measurement of Inequality in the Arab Republic of Egypt."
- 26 Malcolm H. Kerr, "The Emergence of a Socialist Ideology in Egypt," *Middle East Journal* 16, no. 2 (1962), 127-144.
- 27 Ibid.
- 28 Ray Bush, "Poverty and Neo-Liberal Bias in the Middle East and North Africa," *Development and Change* 35, no. 4 (2004), 673-695; and Yousef, "Development, Growth and Policy Reform."
- 29 Yousef, "Development, Growth and Policy Reform."
- 30 Jacques Lecallion, Felix Paukert, Christian Morrisson, and Dimitri Germidis, *Income Distribution and Economic Development: An Analytical Survey* (Geneva: International Labour Office, 1984).
- 31 Harris, "Making and Unmaking of the Greater Middle East."
- 32 World Bank, "The Road Not Traveled: Education Reform in the Middle East and North Africa" (Washington, DC: World Bank, 2008).
- 33 Ibid.
- 34 Ibid.
- 35 Ibid.
- 36 Information and Decision Support Center, *The Situation of Education: Facts and Opinions* (Cairo, 2013).
- 37 Sarah El Nashar, "Education Reform in Egypt," unpublished manuscript, 2012.
- 38 M. El-Erian, Thomas Hellbing, and John Page, "Education, Human Capital Development, and Growth in the Arab Countries," paper presented at the Joint Arab Monetary Fund-Arab Fund for Economic and Social Development Seminar on Human Resource Development and Economic Growth, Abu Dhabi, 1998; and M. J. Ridha, "Charting the Future of Education and Change in the Arab Countries: A Platform for the Twenty-First Century," paper presented at the Joint Arab Monetary Fund-Arab Fund for Economic and Social Development Seminar on Human Resource Development and Economic Growth, Abu Dhabi, 1998.
- 39 Jeffrey G. Williamson, *Inequality, Poverty, and History* (Cambridge, MA: Basil Blackwell, 1991).
- 40 Montek Ahluwalia used cross-national data to suggest a positive correlation between population growth and increases in inequality. See "Income Distribution and Development: Some Stylized Facts," *American Economic Review* 66, no. 4 (1976), 128-35.
- 41 World Bank, "The Road Not Traveled."

- 42 Harris, "Making and Unmaking of the Greater Middle East."
- 43 Djavad Salehi-Isfahani, "Human Development in the Middle East and North Africa," UNDP Human Development Research Paper, 2010/26.
- 44 Navtej Dhillon and Tarik Yousef, eds., *Generation in Waiting: The Unfulfilled Promise of Young People in the Middle East* (Brookings Institution Press, 2011).
- 45 Ahmed Galal, "Social Expenditure and the Poor in Egypt," The Egyptian Center for Economic Studies Working Paper No. 80 (Cairo: The Egyptian Center for Economic Studies, 2003).
- 46 Ragui Assaad, ed., *The Egyptian Labor Market Revisited* (Cairo: American University in Cairo Press, 2009).
- 47 World Bank, "The Road Not Traveled."
- 48 Ibid.
- 49 Salehi-Isfahani, "Human Development."
- 50 Andrey V. Korotayev and Julia V. Zinkina, "Egyptian Revolution: A Demographic Structural Analysis," *Entelequia* 13 (Spring 2011), 139–70.
- 51 Anthony B. Atkinson, "Increased Income Inequality in OECD Countries and the Redistributive Impact of the Government Budget," Working Paper 202 (Helsinki: UNU World Institute for Development Economics and Research, 2000).
- 52 Arthur S. Alderson, and François Nielsen, "Globalization and the Great U-Turn: Income Inequality Trends in 16 OECD Countries," *American Journal of Sociology* 107, no. 5 (2002), 1244–99.
- 53 Osama Diab, "Egypt's Widening Wealth Gap," *Mada Masr*, 23 May 2016.
- 54 Ibid.
- 55 Analytical Statement of the State's General Budget for FY 2013/2014. Cairo, Egypt: Ministry of Finance, 42.
- 56 Information and Decision Support Center, *The Subsidy System in Egypt: Facts and Opinions* (Cairo, 2012), 9.
- 57 World Bank, "Egypt—Toward A More Effective Social Policy: Subsidies and Social Safety Net," (Washington, DC: World Bank, 2005), i.
- 58 Ianchovichina et al., "Inequality, Uprisings."
- 59 Amr Adly, *Energy Subsidies in Egypt's Annual Budget as an Example of Social Injustice* (Cairo: Egyptian Initiative for Personal Rights, 2012).
- 60 Ibid, 9.
- 61 Ibid, 9.
- 62 World Bank, "Egypt—Toward A More Effective Social Policy."
- 63 Ibid.
- 64 Ibid.
- 65 Ibid.
- 66 Maria Vagliasindi, "Implementing Energy Subsidy Reforms: Evidence from Developing Countries" (Washington, DC: World Bank, 2012).
- 67 World Bank, "Egypt—Toward A More Effective Social Policy."
- 68 Richard H. Adams, Jr., "The Distributional Impact of the Egyptian Food Subsidy System," Policy Research Working Paper 2322 (Washington, DC: World Bank, 2000).
- 69 Ibid.
- 70 World Bank, "Egypt—Toward A More Effective Social Policy."
- 71 Ibid.
- 72 The leakage rate refers to the rate of subsidy that goes to the non-eligible, i.e., that benefits the middlemen or the rich as opposed to the needy segments of society.
- 73 Kheir-El-Din and El-Laithy, "An Assessment of Growth."

- 74 Saskia Sassen, *Expulsions: Brutality and Complexity in the Global Economy* (Cambridge, MA: Belknap Press of Harvard University Press, 2014).
- 75 Ragui Assaad, "The Effects of Public Sector Hiring and Compensation Policies on the Egyptian Labor Market," *World Bank Economic Review* 11, no. 1 (1997), 85-118.
- 76 World Bank, "The Road Not Traveled."
- 77 Harris, "Making and Unmaking of the Greater Middle East."
- 78 Ray Bush, "Politics, Power, and Poverty: Twenty Years of Agricultural Reform and Market Liberalisation in Egypt," *Third World Quarterly* 28, no. 8 (2007), 1599-1615; and Harris, "Making and Unmaking of the Greater Middle East."
- 79 Rex Brynen, Pete W. Moore, Bassel F. Salloukh, and Marie-Joelle Zahar, *Beyond the Arab Spring: Authoritarianism and Democratization in the Arab World* (Boulder, CO: Lynne Rienner Publishers, 2012)
- 80 World Bank Development Indicators.
- 81 Bush, "Politics, Power and Poverty."
- 82 Brynen et al., *Beyond the Arab Spring*.
- 83 Yousef, "Development, Growth, and Policy Reform."
- 84 John Williamson and Mohsin Khan, "Debt Relief for Egypt" (Washington, DC: Peterson Institute for International Economics, 2011).
- 85 Brynen et al., *Beyond the Arab Spring*.
- 86 Karen Pfeifer, "How Tunisia, Morocco, Jordan, and Even Egypt Became IMF 'Success Stories' in the 1990s," *Middle East Report* 210 (1999), 23-7.
- 87 Brynen et al., *Beyond the Arab Spring*, 220.
- 88 Pfeifer, "How Tunisia, Morocco, Jordan, and Even Egypt Became IMF 'Success Stories' in the 1990s."
- 89 Richard Javad Heydarian, *How Capitalism Failed the Arab World* (London: Zed Books, 2014).
- 90 Bush, "Politics, Power and Poverty."
- 91 Ibid.
- 92 Owen and Pamuk, *A History of Middle East Economies in the Twentieth Century*.
- 93 Kerr, "The Emergence of a Socialist Ideology in Egypt"; and Hanaa Kheir-El-Din and Heba El-Laithy, "Agricultural Productivity Growth, Employment, and Poverty in Egypt," Working Paper 129 (Cairo: Egyptian Center for Economic Studies, 2008).
- 94 Bush, "Politics, Power, and Poverty."
- 95 Ibid.
- 96 Ibid., 1605.
- 97 Richard H. Adams, Jr., "Evaluating the Process of Development in Egypt, 1980-97," *International Journal of Middle East Studies* 32, no. 2 (2000), 255-75.
- 98 Omneia Helmy, "Skill Demand Polarization in Egypt," Working Paper 168 (Cairo: Egyptian Center for Economic Studies, 2012).
- 99 Bush, "Politics, Power, and Poverty."
- 100 Ibid.
- 101 Heydarian, *How Capitalism Failed*.
- 102 Ibid., 91.
- 103 Harris, "Making and Unmaking of the Greater Middle East," 18; and Adams, "Evaluating the Process of Development in Egypt."
- 104 Al-Shawarby, "The Measurement of Inequality in the Arab Republic of Egypt"
- 105 Bibi and Nabli, "Equity and Inequality in the Arab Region"
- 106 Pete W. Moore, "The Bread Revolutions of 2011: Teaching Political Economies of the Middle East," *PS: Political Science and Politics* 46, no. 2 (2013), 1-5; Bibi and Nabli, "Equity

- and Inequality in the Arab Region”; Harris, “Did Inequality Breed the Arab Uprisings”; Ianchovichina et al. “Inequality, Uprisings, and Conflict in the Arab World”; and World Bank, “Poverty and Shared Prosperity 2016.”
- 107 Milanovic, “Global Inequality Recalculated.”
- 108 Harris, “Did Inequality Breed the Arab Uprisings?”
- 109 World Bank, “Poverty and Shared Prosperity 2016.”
- 110 Bibi and Nabli, “Equity and Inequality in the Arab Region.”
- 111 International Monetary Fund, *Globalization and Inequality: World Economic Outlook* (Washington, DC: International Monetary Fund, 2007).
- 112 Branko Milanovic, “More or Less,” *Finance and Development* 48, no. 3 (2011), 6–11.
- 113 Anthony Atkinson, Thomas Piketty, and Emanuel Saez, “Top Incomes in the Long Run of History,” *Journal of Economic Literature* 49, no. 1 (2011), 3–71.
- 114 Hlasny and Verme, “Top Incomes.”
- 115 Pareto coefficients measure the breadth of income (or wealth) distribution. Facundo Alvaredo and Thomas Piketty, “Measuring Top Incomes and Inequality in the Middle East,” unpublished manuscript, 20 April 2015.
- 116 World Bank, “Poverty and Shared Prosperity 2016.”
- 117 Bibi and Nabli, “Equity and Inequality in the Arab Region.”
- 118 Imputations are statistical methods used to overcome missing data (item non-response) that are typical in survey questions related to sensitive issues such as income or wealth.
- 119 Bibi and Nabli, “Equity and Inequality in the Arab Region.”
- 120 Thomas Piketty, *Capital in the Twenty-First Century* (Cambridge, MA: Harvard University Press, 2014).
- 121 Ibid.
- 122 Credit Suisse, *Global Wealth Report 2014* (Zurich: Research Institute, 2014).
- 123 It is worth noting that the data for Egypt included in this report is considered to be of low quality. Nonetheless it offers us some indication of the general trend.
- 124 Ianchovichina et al., “Inequality, Uprisings.”
- 125 R. Van der Weide, C. Lakner, and E. Ianchovichina, “How Unequal is Growth in the Arab Countries?” (2015).
- 126 Ianchovichina et al., “Inequality, Uprisings.”
- 127 N. Johannesen, “Economic Inequality in the MENA Countries: Evidence from Cross-Border Deposits,” 2015.
- 128 United Nations Industrial Development Organization Data Base (New York, 2002).
- 129 Mona Said, “Wages and Inequality in the Egyptian Labor Market in an Era of Financial Crisis and Revolution,” Working Paper 912 (Giza, Egypt: Economic Research Forum, 2015); and Helmy, “Skill Demand.”
- 130 Ferreira and Ravallion, “Global Poverty and Inequality.”
- 131 Similarly, Boutayeb and Helmert find stark inequalities in both education and health across North African countries despite improvements over the last decades. Abdessalam Boutayeb and Uwe Helmert, “Social Inequalities, Regional Disparities and Health Inequity in North African Countries,” *International Journal for Equity in Health* 10, no. 23 (2011), 1–9.
- 132 Djavad Salehi-Isfahani, Nadia Belhaj Hassine, and Ragui Assaad, “Equality of Opportunity in Educational Achievement in the Middle East and North Africa,” *Journal of Economic Inequality* 12, no. 4 (2014), 489–515.
- 133 Nadia Belhaj Hassine, “Economic Inequality in the Arab Region,” *World Development* 66 (2015), 532–56.
- 134 Bibi and Nabli, “Equity and Inequality in the Arab Region.”

- 135 World Bank, "Poverty and Shared Prosperity 2016."
- 136 Paolo Verme, "Facts and Perceptions of Inequality," in *Inside Inequality in the Arab Republic of Egypt: Facts and Perceptions Across People, Time, and Space*, eds. Paolo Verme et al. (Washington, DC: World Bank, 2014).
- 137 World Bank, "Poverty and Shared Prosperity 2016."
- 138 Branko Milanovic, "Global Income Inequality: What It Is and Why It Matters," Policy Research Working Paper 3865 (Washington, DC: World Bank, 2006), 26.