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MEASURING TOP INCOMES AND LNEQUALITY IN THE MIDDLE EAST: DATA LIMITATIONS AND ILLUSTRATION WITH THE CASE OF EGYPT

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Working Paper No. 832

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Abstract

This paper discusses the data limitations associated with the measurement of top incomes and inequality in the Middle East, with special emphasis to the case of Egypt. It has been noted that high inequality might have contributed to the Arab spring revolt movement. Some studies have argued however that measured inequality in Middle East countries is not particularly large by international standards, and that popular discontent mostly reflects the perceived level of inequality, and the perceived (un)fairness of the distribution. In this paper we review the evidence and present new estimates. We come with two main conclusions. First, data sources at the national level are insufficient to derive reliable estimates of top income shares in a country like Egypt (or in other Middle East countries). One would need reliable fiscal sources in order to make a precise comparison with other emerging or developed countries. Unfortunately, such sources are lacking in most of the region. Next, and irrespective of these uncertainties on within-country inequalities, there is no doubt that income inequality is extremely large at the level of the Middle East taken as whole - simply because regional inequality in per capita GNP is particularly large. According to our benchmark estimates, the share of total Middle East income accruing to the top 10% income receivers is currently 55% (vs. 48% in the United States, 36% in Western Europe, and 54% in South Africa). Under plausible assumptions, the top 10% income share could be well over 60%, and the top 1% share might exceed 25% (vs. 20% in the United States, 11% in Western Europe, and 17% in South Africa). Popular discontent might reflect the fact that perceptions about inequality and the (un)fairness of the distribution are determined by regional (and/or global) inequality, and not only on national inequality.

JEL Classification: D3, O53

Keywords: Inequality, top incomes, Middle East, Egypt

ملخص

تناقش هذه الورقة محدودية البيانات المرتبطة بقياس أعلى الدخل وعدم المساواة في الشرق الأوسط ، مع التركيز بصفة خاصة على حالة مصر. وقد لوحظ أن عدم المساواة العالية قد ساهمت في ثورة الربيع العربي . وقد جادلت بعض الدراسات أن عدم المساواة التى تقاس في دول الشرق الأوسط ليست كبيرة وخاصة وفقا للمعايير الدولية ، و يعكس هذا الاستياء الشعبي في الغالب المستوى المتصور من عدم المساواة، و(قلة) عدالة التوزيع. في هذه الورقة نستعرض الأدلة و التقديرات الجديدة الحالية. نأتي باثنين من الاستنتاجات الرئيسية . الأول ، أن مصادر البيانات على المستوى الوطني غير كافية لاستخلاص تقديرات موثوقة لأسهم الدخل الأعلى في بلد مثل مصر (أو في بلدان الشرق الأوسط الأخرى). فإن المرء بحاجة إلى مصادر مالية يمكن الاعتماد عليها من أجل إجراء مقارنة دقيقة مع غيرها من الدول الناشئة أو المتقدمة. وللأسف ، هذه المصادر تعاني من نقص في معظم بلدان المنطقة . الثانى، و بغض النظر عن هذه الشكوك على عدم المساواة داخل البلد ، وليس هناك شك في أن عدم المساواة في الدخل كبير للغاية على مستوى الشرق الأوسط ككل - ببساطة لأن عدم المساواة الإقليمية في نصيب الفرد من الناتج القومي الإجمالي كبيرة على وجه الخصوص . وفقا لتقديرات معيارنا ، فإن حصة إجمالي الدخل الشرق الأوسط تعود إلى الأعلى 10 ٪ من متلقى الدخل حاليا 55 ٪ (مقابل 48 ٪ في الولايات المتحدة و 36 ٪ في أوروبا الغربية ، و 54 ٪ في جنوب أفريقيا) . وفي ظل افتراضات معقولة ، يمكن أن تصل نسبة الدخل 10 ٪ يكون أكثر من 60 ٪ ، و أعلى نسبة 1 ٪ قد تتجاوز 25 ٪ (مقابل 20 ٪ في الولايات المتحدة و 11 ٪ في أوروبا الغربية ، و 17 ٪ في جنوب أفريقيا) . فقد يعكس الاستياء الشعبي مدى تصور الشعب لوجود عدم المساواة و (قلة) عدالة التوزيع على المستوى الإقليمي (و / أو العالمي) ، ليس فقط على المستوى القومى.

1. Introduction

This paper discusses the data limitations associated with the measurement of top incomes and inequality in the Middle East, with special emphasis to the case of Egypt.

The distribution of income and wealth is surely of today's most controversial issues at the global level. Access to reliable statistical data on inequality is an important precondition for an informed public debate to take place. The primary objective of this paper is to assess the problems associated with the measurement of inequality in the Middle East and to put them into a broader international perspective.

In addition, it has been noted by a number of commentators that high inequality might have contributed to the Arab spring revolt movement. Some studies, however, have argued that measured inequality in Middle East countries is not particularly high by international standards, and that popular discontent mostly reflects the perceived level of inequality, and the perceived (un)fairness of the distribution. In this paper we attempt to address this debate by reviewing the evidence and by presenting new inequality estimates.

We come with two main conclusions. First, the data sources that are currently available at the national level are insufficient to derive reliable estimates of top income shares in a country like Egypt (or in other Middle East countries, for that matter). In particular, household income and expenditure surveys that are generally used by economists and international organizations almost certainly underestimate the level of inequality, possibly by a very large margin. One would need reliable fiscal sources in order to make a precise comparison between the top decile or percentile income shares prevailing in Egypt (or other Middle East countries) and the top shares prevailing in other emerging or developed countries. Unfortunately, such sources are lacking in the region, so that no satisfactory comparison is possible at this stage. This is true both in low-income and high-income Middle East countries. While the lack of transparency on income and wealth is an important issue in many (if not most) areas of the world, it appears to be particularly extreme in the Middle East, and arguably raises in itself a problem of democratic accountability, quite independently from the actual level of inequality.

Next, and irrespective of these uncertainties on within-country inequalities, we demonstrate that income inequality is extremely high at the level of the Middle East taken as whole. This comes simply because regional inequality in per capita GNP is particularly high. We present a number of alternative estimates based on various plausible assumptions on within-country inequality. According to our benchmark estimates, the share of total Middle East income accruing to the top 10% income recipients is currently 55% (vs. 48% in the United States, 34% in Western Europe, and 52% in South Africa). The top 10% income share could be well over 60%, and the top 1% share might exceed 25% (vs. 20% in the United States, 9% in Western Europe, and 18% in South Africa). In each realistic scenario, we find that income inequality in the Middle East is substantially higher than in the US or Europe. It appears to be at least as large as in the most unequal emerging or developing regions (e.g. in Latin America or South Africa). In some scenarios, it is considerably higher than pretty much everywhere else in the world. Popular discontent about inequality in the Middle East might reflect the fact that perceptions about inequality and the (un)fairness of the distribution are determined by regional (and/or global) inequality, and not only on a national level.

The rest of this paper is organized as follows. In sections 2 and 3, we relate this paper to the existing literature on top incomes, Pareto laws and inequality measurement. In section 4, we present our data sources and methodology. Our main results on inequality in Egypt and the Middle East are described in section 5. Finally, section 6 concludes and discusses research perspectives. This paper is supplemented by an extensive data appendix. Appendix A

includes supplementary material on Pareto approximations. Appendix B describes our raw data sources. Appendix C includes our detailed estimation results.

2. Relation to Existing Literature: Top Incomes and Pareto Laws

This paper is closely related to the recent literature on the historical evolution of top income shares. By using income tax data together with national accounts, homogenous top income shares series covering most of the 20th century have been constructed for a growing number of countries. The resulting "World Top Incomes Database" (WTID) now includes twenty-nine countries while over forty countries are under study (see Atkinson and Piketty (2007, 2010) for detailed country studies; see Atkinson, Piketty and Saez (2011) and Alvaredo, Atkinson, Piketty and Saez (2013, 2014) for recent surveys and for the up-to-date database).

One key advantage of administrative income tax data over household surveys is that fiscal data is available on an annual basis (rather than a few isolated years) and over much longer time periods. In addition, administrative income tax data - despite all their limitations - tend to be more reliable than self-reported survey data, especially at the top of the distribution. Of course, income tax data suffer from their own deficiencies, and they should be viewed as a complement - rather than a substitute - to survey data. In countries where tax evasion is pervasive, the top income levels reported in fiscal declarations should certainly be considered as a lower bound for the true economic levels. However our experience from using such data is that even in countries where tax administration is usually regarded as far from perfect (e.g. in Latin America) this absolute lower bound is generally much higher than the top income levels reported in household surveys (which are often ridiculously low).

One way to see this - and to understand how tax data can be used to correct survey data at the top of the distribution - is to analyze the Pareto coefficients that characterize the top of the income distribution. The Pareto law is usually considered as a good approximation of the top segment - say, the top 10% - of the observed income distribution. In its simplest form, the Pareto law applies with a constant coefficient to the top μ% of the distribution (typically with μ=10%) and is is given by the following equation:

$$1\text{-}F(y) = \mu\,(y_\mu/y)^a$$

Where 1-F(y) is the distribution function (i.e. the fraction of the population with income above y), y_μ is the income threshold that one needs to pass in order to belong to the top μ%, and a is the Pareto coefficient.[1]

The characteristic property of the Pareto law is that the ratio b(y) between the average income above y and y does not depend on the income threshold y. That is:

$$b(y) = E(z|z\geq y)/y = b = a/(a-1)$$

Intuitively, the constant b=a/(a-1), which can viewed as the "inverted Pareto coefficient", measures the fatness of the upper tail of the income distribution. For instance, a coefficient b=2 means that the average income above 100 000€ is equal to 200 000€, the average income above 1 million € is equal to 2 millions €, and so on. In case b=3, the average income above 100 000€ is equal to 300 000€, the average income above 1 million € is equal to 3 millions €, and so on. This typically corresponds to a society with higher top income shares. The "inverted Pareto coefficient" b=a/(a-1) generally moves in the same direction as inequality and is arguably more intuitive than the standard Pareto coefficient a=b/(b-1) (which runs counter to inequality).

Pareto laws provide a very useful statistical approximation technique to study the top parts of income distributions. In particular, income tax data - which is often available in the form of

[1] Alternatively, the density function can be written as: $f(y) = a\mu\, y_\mu^a/y^{1+a}$.

tabulations reporting the numbers of taxpayers and the amounts of income for a certain number of tax brackets - can easily be used to estimate the (inverted) Pareto coefficients within the top 10% or the top 1%.

There are two important caveats to have in mind, however. First, although the general Pareto shape does provide a relatively good fit for the top parts of observed distributions in pretty much every country and time period for which we have data, it is important to note that the Pareto coefficients do vary widely over time and across countries (see Atkinson, Piketty and Saez (2011)). In the nearly 30 countries that are currently available in the WTID, we find that the (inverted) Pareto coefficients b typically go from 1.5 to 3. A coefficient close to 1.5 corresponds to very egalitarian societies (such as Scandinavian countries in the 1980s), while a coefficient close to 3 corresponds to the most inegalitarian countries (such as European countries in the early 20th century, or the United States today). The coefficients that we observe for poor and emerging economies for which we currently have adequate income tax data generally fall in the 2-to-3 range.[2] In order to estimate the correct inequality level of a given country, it is critical to know the level of the coefficient b. This will play an important role in the estimates that we present below.

Next, it is also important to note that, for a given country and year, the (inverted) Pareto coefficient b(y) is not exactly constant, even in the upper part of the distribution. For any given distribution function 1-F(y), one can always define the "empirical" inverted Pareto coefficient $b(y) = E(z|z \geq y)/y$. One can also express this empirical coefficient b(p) as a function of the percentile p at which it is computed. With observed distributions, one finds that b(p) is only approximately constant within the top 10% of the distribution, and generally rises quite substantially between p=0.1 and p=0.01 (i.e. between the level of the top 10% and the level of the top 1%).[3] This can entail important consequences for the computation of top decile and percentile income shares, so it is critical to be careful about this.

3. Relation to Existing Literature: Inequality Measurement in Egypt and the Middle East

Our paper is also closely related to existing work on inequality in Egypt and the Middle East. There exists a well-established tradition of using household surveys in order to measure the evolution of income and consumption inequality in Egypt (see e.g. Wahba (1996, 2009), Said (2007)). There has been renewed interest in inequality measurement in the region following the Arab Spring movement (see e.g. Ncube and Anyanwu (2012)). A number of recent papers, however, have suggested that inequalities in countries like Egypt - or more generally in Middle East countries - are not particularly high by international standards, and that the source of dissatisfaction must be found elsewhere (see in particular Halsny and Verne (2013); see also World Bank (2012)).

In this paper, we question the validity of this view. Of course, we agree that there are potentially many sources of dissatisfaction other than the value of the Gini coefficient or the top decile income share. Generally speaking, popular discontent about inequality has probably more to do with the perceived fairness or unfairness of the inequality generating processes than with the inequality level per se. However we disagree about the claim that income inequalities in Egypt or the Middle East are quantitatively small by international standards.

More precisely, we make two points. First, we argue that the data sources that are currently available at the national level are insufficient to derive reliable estimates of top income shares

[2] See Appendix A, figures A1 to A4, where we report the evolution of Pareto coefficients for a number of developed and developing countries over the past century.

[3] See Appendix A, figures A5 to A6.

in a country like Egypt (or in other Middle East countries, for that matter). Next, and irrespective of these uncertainties on within-country inequalities, we argue that income inequality is extremely large at the level of the Middle East taken as whole.

Regarding the first point, our main argument is that it is currently impossible to properly estimate the level of the Pareto coefficient (and hence of top income shares) in Middle East countries. For instance, Halsny and Verne (2013) use household income surveys for Egypt between 1999 and 2010, and find relatively small Gini coefficients (below 0.35). They then argue that the inverted Pareto coefficient b is about 1.5-1.7, and is in line with other countries.[4] The problem is that they compare the Egyptian b to coefficients that also come from household surveys, which are always artificially small. If we compare their 1.5-1.7 coefficient to the more reliable inverted Pareto coefficients estimated using tax data, then the Egyptian b coefficient is actually extremely small by international and historical standards. Of course, it is possible that Egypt is currently as egalitarian as the most egalitarian countries in history (such as Scandinavian countries in the 1980s). However this does not seem overly plausible - and in any case this should be demonstrated rather than assumed. The problem is that household surveys almost systematically lead to excessively low b coefficients.[5] Also, the coefficients b(p) that one can estimate using household surveys are often highly volatile: whether one estimates them at the level of top 10% or top 1%, one often obtains radically different results (while the patterns derived from more reliable tax data are typically much smoother). This typically comes from fact that surveys often suffer from various truncations and top coding problems at the top (with top coding, or self censored top incomes, b naturally becomes very close to 1 at the very top). Naturally, surveys have other merits and include detailed socio-demographic information that one could never obtain using tax data. However for the study of the top decile - and also for the study of the total inequality level of a country, given the importance of the income share going to the top decile, typically between one third and one half – we feel that it is preferable to supplement surveys with other sources and methods.

4. Data Sources and Methodology

The methodology that we follow in this paper can be described as follows. We use data on the distribution of the population and average income in the Middle East region using available national accounts. We then make assumptions on the within-country inequality of income, using available household survey estimates for the bottom 90% of the distribution, and on the basis of plausible hypothesis for the Pareto coefficients that characterize the top 10% of the distribution. We should make clear that these are highly exploratory methods and estimates, which we plan to refine in the near future. However, some of the conclusions - in particular the fact the distribution of income in the Middle East taken as a whole is highly unequal by international and historical standards - appear to be robust.

Basic descriptive statistics about population and income in the Middle East in 2012 are reported on Table 1. Although all simulations are done separately at the country level, it is useful to divide the region into four blocs: (i) Egypt; (ii) Iran; (iii) Irak-Syria-Jordan-Lebanon-Yemen; and (iv) oil coutries (UAE-Qatar-Kuwait-Saudi Arabia-Oman-Barhain). As of 2012, Egypt represents about 27% of total Middle-East population (81 millions out of 294 millions), and 9% of the region's gross national income (256 billions US$ out of 2,718 billions US$). Iran makes 26% of the population and 18% of GNI. The bloc Irak-Syria-other makes 30% of population and 13% GNI. Oil countries make 16% of the population but 59% of GNI. Within this group, UAE-Qatar-Kuwait make less than 5% of the total population in the Middle East, but 29% of GNI.

[4] See their figure 10, p.28.

[5] See e.g. the position of China in figure A4 (appendix A).

As a first approximation, the regional distribution of population and income has been relatively stable since 1990 (see Figures 1, 2 and 3). There are a number of significant changes, however (see Figures 4 and 5 and Tables 2 and 3). The population shares of Egypt and Iran have declined, while those of Irak-Syria-other and oil countries have increased. The share of oil countries in Middle East GNI has increased, particularly in the early 1990s (from less than 50% to almost 60%). However, over 1990-2012 their share in population has increased more than their share in GNI, so that the relative average income of oil countries has declined slightly. In particular, the population share of UAE-Qatar-Kuweit has almost doubled (from 2.4% to 4.9%), while their share in GNI rose from 18.9% to 28.8%. As a consequence, per capita GNI dropped from 797% of Middle East average in 1990 to 585% of Middle East average in 2012. It should be noted, however, that this fast population growth has been largely due to the rise of foreign workers; excluding those workers, average income in UAE-Qatar-Kuwait has probably increased substantially (we return to this point later on).

Note that the GNI/GDP ratios appear to be relatively low in oil countries. Given the large foreign reserves, one might have expected larger inflows of foreign capital income. This is an issue that would deserve further attention in the future. Existing estimates of cross-border capital income flows and cross-border unilateral transfers (particularly remittances) in the region are notoriously imperfect, however.

Our assumptions on within-country inequality are summarized in Tables 4-5. For the bottom 90% of each country's distribution, we assume a log-normal distribution, and we choose the variance parameter sigma in order to reproduce the Gini coefficients reported on Table 4. In our benchmark estimates, we use the Gini coefficients coming from household surveys for the countries for which such surveys are available, and we assume middle-of-the-range coefficients for countries for which surveys are not available (in particular oil countries). Details are given in the data appendix. In the low-inequality scenario we assume very low Gini coefficients for oil countries (as low as countries like Egypt). This should be viewed as an absolute lower bound. In the high-inequality scenario we assume high Gini coefficients for oil countries.

For the top 10% of the distribution, we consider a large number of variants that we summarize in Table 5. In our benchmark estimate, we take an inverted Pareto coefficient b equal to 2. This is roughly what we currently have in most European countries, and this is much less than what we have in the United States or in a number of high-inequality developing countries. In our low-inequality scenario, we take b=1.8. It is difficult to imagine that the true coefficient can be below 1.8. In the high inequality variant, we take b=2.2. This is still much lower than today's United States, South Africa or Latin America. For simplicity we assume a fixed coefficient within the top decile. We plan to improve this in the future.

5. Inequality in Egypt and the Middle East: Estimation Results

Our main results are summarized in Table 6 and in Figures 6, 7 and 8 (comparison with Europe and the United States), and Figures 9, 10 and 11 (comparison with emerging and developing countries).

According to our benchmark estimates, the share of total Middle East income accruing to the top 10% income recipients is currently 55% (vs. 48% in the United States, 36% in Western Europe, and 54% in South Africa).

In our high-inequality scenario, which, as noted above should not be viewed as an upper bound, the top 10% income share reaches 61%, and the top 1% share exceeds 25% (vs. 20% in the United States, 11% in Western Europe, and 17% in South Africa).

In every variant, we find that income inequality in the Middle East is substantially higher than in the US or Europe. It appears to be at least as large as in the most unequal emerging or

developing regions (e.g. in Latin America or South Africa). The detailed simulation results for the twenty-one scenarios are presented in the appendix.

The Western Europe average was computed as an average of Germany, France, UK and Sweden. In the future we plan to include more detailed estimates including Eastern Europe. Preliminary computations suggest that this will substantially increase top decile and percentile shares as well as Gini coefficients, but that the inequality levels will still be much below Middle East levels (in spite of a much higher population).

We also present simulation results regarding the evolution of top decile and percentile income shares in the Middle East over the 1990-2012 period (see Figures 12,13 and 14,15). We find that the top decile and percentile income shares in the Middle East have been approximately constant over the past two decades, with an increase at the beginning of the period that was reversed at the end. In other words, the Middle East has always been a relatively high-inequality place as compared to other regions, and as a first approximation this did not change very much between 1990 and 2012. It should be noted, however, that these estimates rely on a very strong assumption, namely fixed within-country inequality throughout the period. In other words, all what we are measuring - by construction - is the impact of the change in the distribution of population and average income between countries. In particular, the inequality decline at the end of the period simply comes from the fact that the relative average income of rich oil countries has declined to some extent, due to the very large rise in their population. However it could well be that inequality has increased within these countries, e.g. due to the fact that population growth largely comes from the rise of foreign workers, who presumably receive a relatively small share of gross national income. We plan to better take this into account in future versions of these estimates. It is possible that the corrected top decile and percentile income shares will then rise in the Middle East over the 1990-2012 period.

6. Concluding Comments and Research Perspectives

In this paper, we have presented exploratory and preliminary estimates of income inequality in the Middle East taken as a whole. These estimates should be refined in the future. Several directions of research seem to be particularly worthwhile.

First, as we repeatedly stressed, the correct way to estimate Pareto coefficients and top income shares in the Middle East would be to use income tax data (or other administrative sources of data such as inheritance tax or wealth tax data). This would be the only way to make proper comparisons with other countries. Unfortunately it is unclear at this stage whether such data exists - or is likely to exist in the near future - in the region.

In the meantime, we feel that one can learn much by improving and refining the simple simulation techniques that were presented in this paper. In the absence of adequate fiscal data, an alternative way to estimate Pareto coefficients at the very top is to use data on wealth rankings published by magazines and financial institutions (sometime using private banking data). Wealth rankings typically deliver relatively large inverted Pareto coefficients - around 2.5-3.5. These could be used to simulate distributions with varying coefficients b(p) within the top decile and percentile of the distribution. One difficulty is that wealth rankings are not highly developed in the Middle East, and often refer to family or sovereign fortunes that are difficult to attribute to a specific number of individuals.

Another complementary way to supplement household surveys – particularly in oil countries - would be to use data on foreign workers and wages paid to foreign workers. This should allow us to better estimate the level and evolution of income inequality within oil countries and the entire region.

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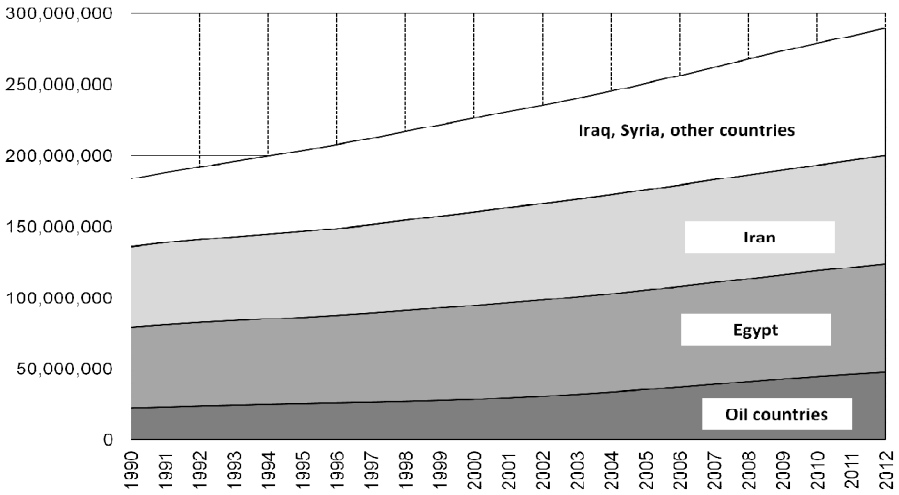
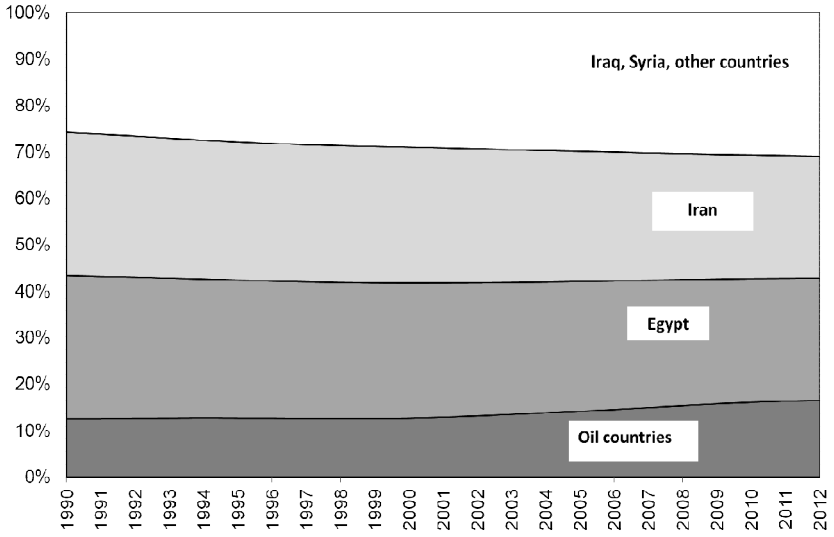
Figure 1: Population Growth in the Middle East 1990-2012



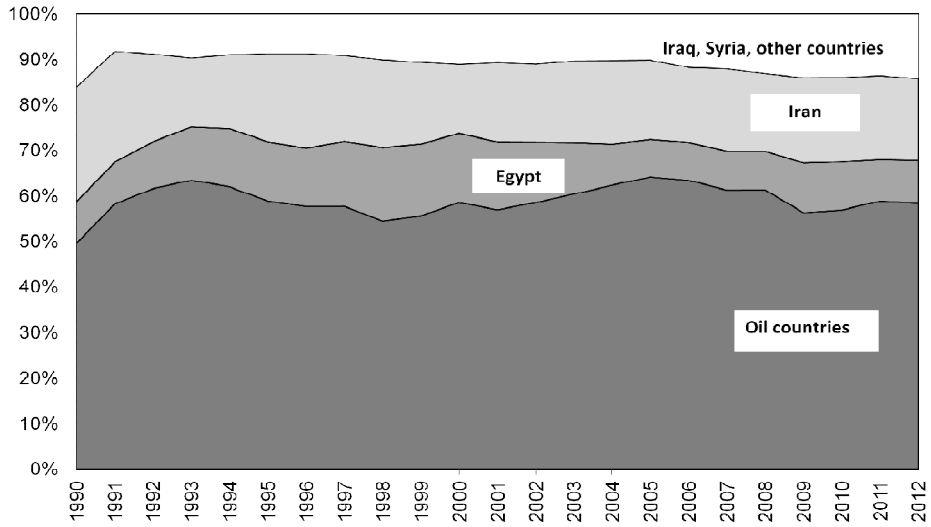
Notes: "Oil countries" include Bahrain, Qatar, UAE, Kuwait, Saudi Arabia and Oman. "Other countries" include Jordan, Lebanon, and Yemen.
Source: Table B1

Figure 2: Distribution of the Population in the Middle East



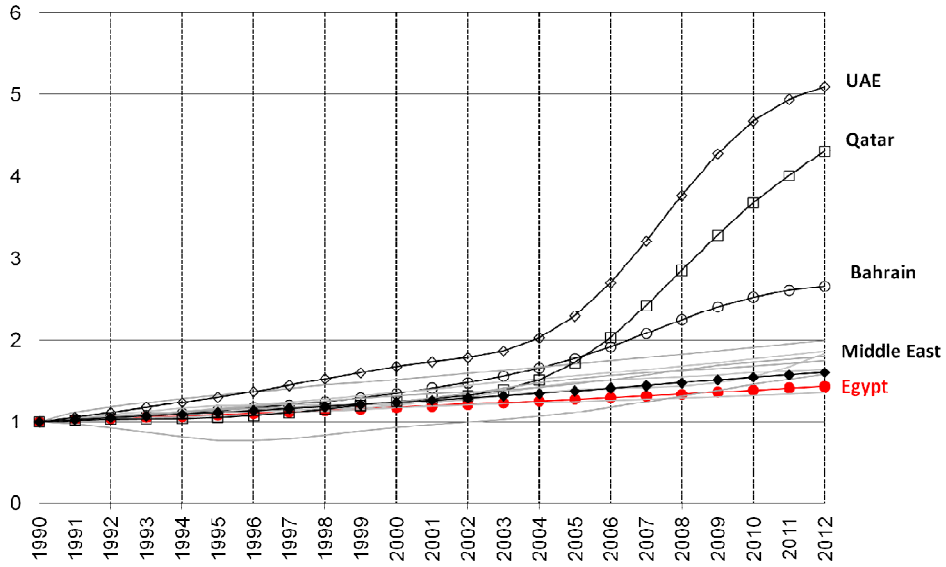
Notes: "Oil countries" include Bahrain, Qatar, UAE, Kuwait, Saudi Arabia and Oman. "Other countries" include Jordan, Lebanon, and Yemen.
Source: Table B1

Figure 3: Distribution of Income in the Middle East



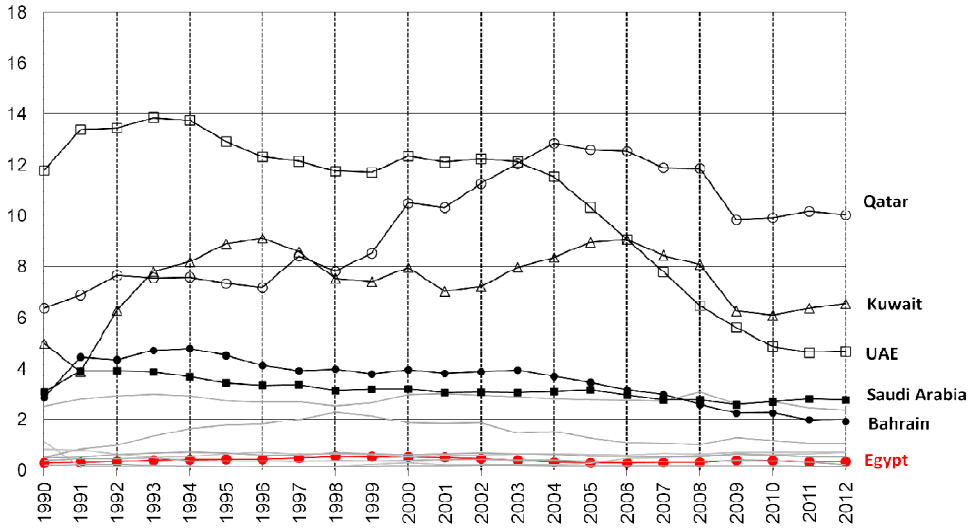
Notes: "Oil countries" include Bahrain, Qatar, UAE, Kuwait, Saudi Arabia and Oman. "Other countries" include Jordan, Lebanon, and Yemen.
Source: Table B1.

Figure 4: Population Growth in the Middle East 1990-2012



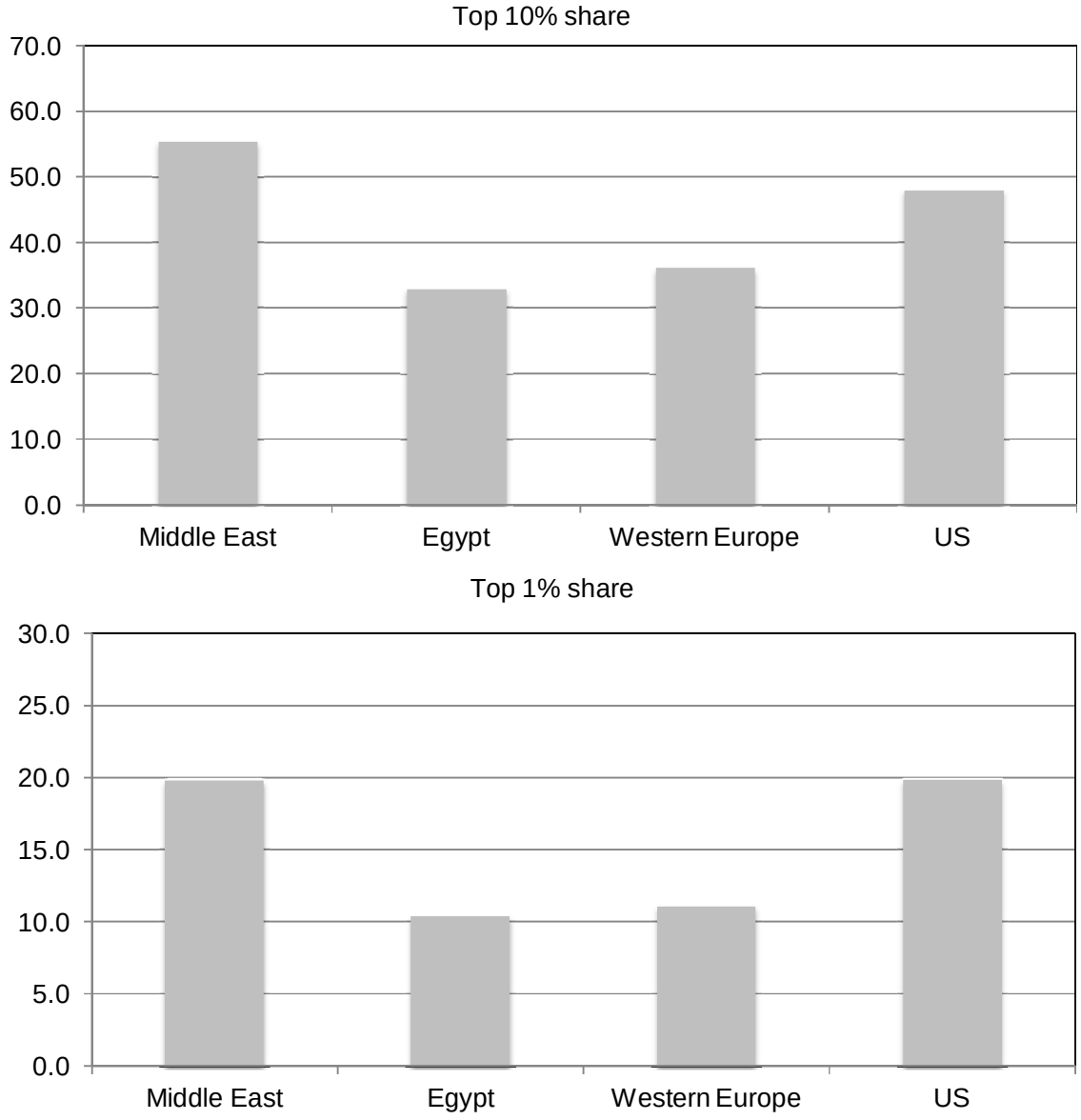
Note: The figure shows the population in each country and in the Middle East as an index equal to 1 in 1990.
Source: Table B1.

Figure 5: Income Per Capita Relative to Middle East Income Per Capita 1990-2012



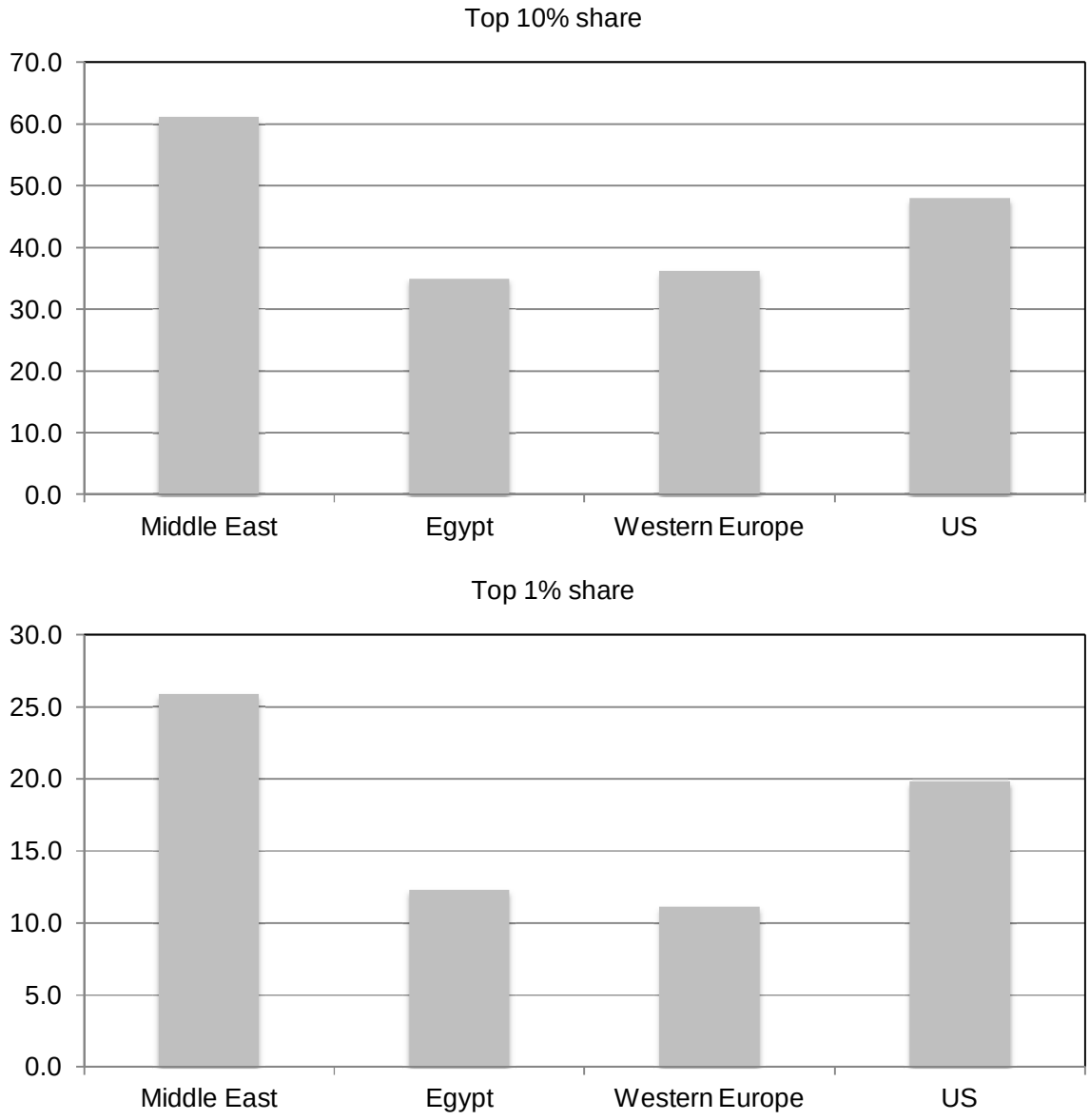
Source: Table B1.

Figure 6: Top Income shares in the Middle East, Egypt, Western Europe and US 2010 Benchmark scenario for the Middle East (scenario 1.1)



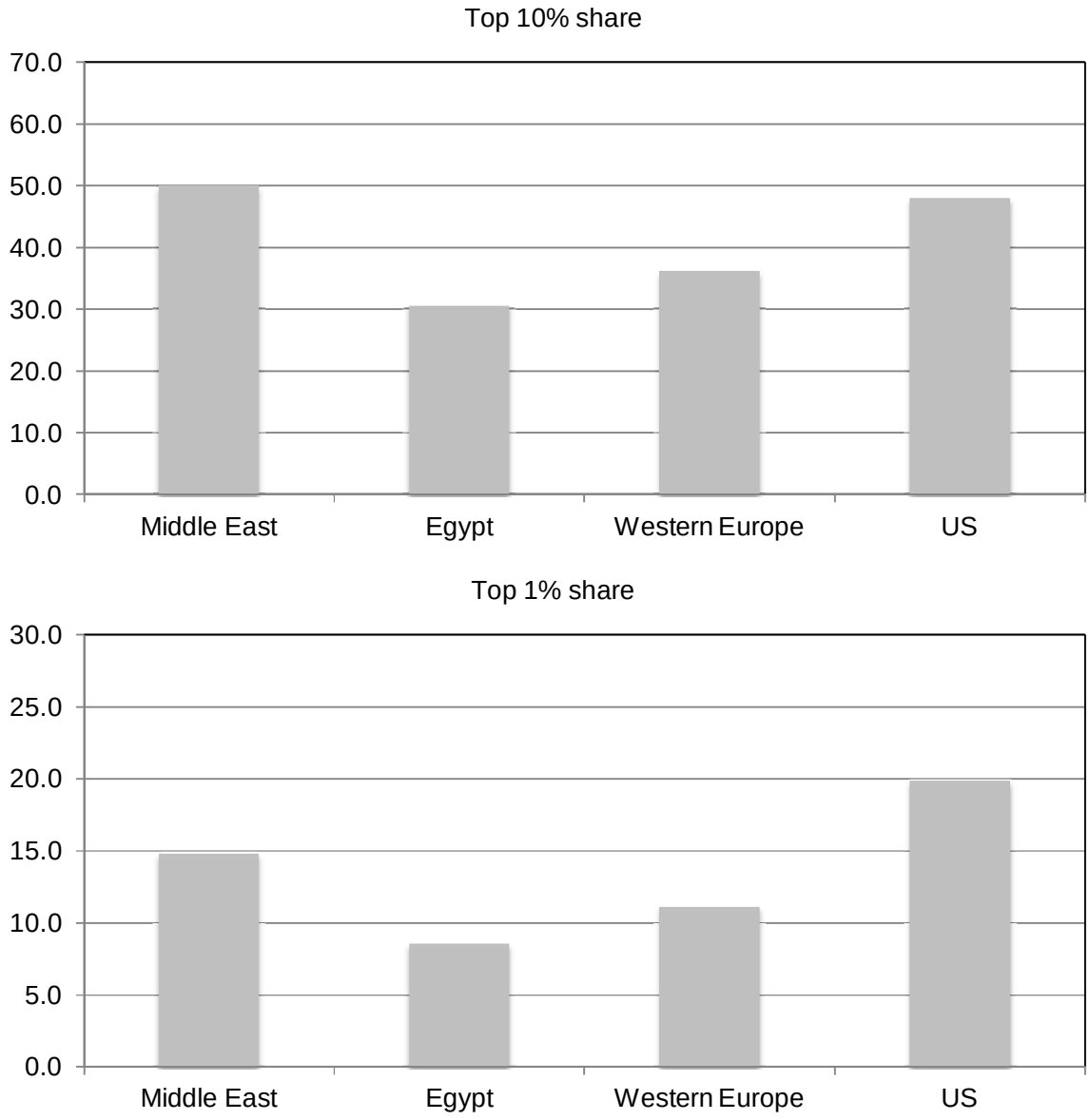
Notes: Data correspond to 2009 for France and 2007 for Germany. Data for US, Germany and Sweden include capital gains.
Sources: WTID and authors' computations.

Figure 7: Top Income Shares in the Middle East, Egypt, Western Europe and US 2010 High-inequality Scenario for the Middle East (scenario 3.6)



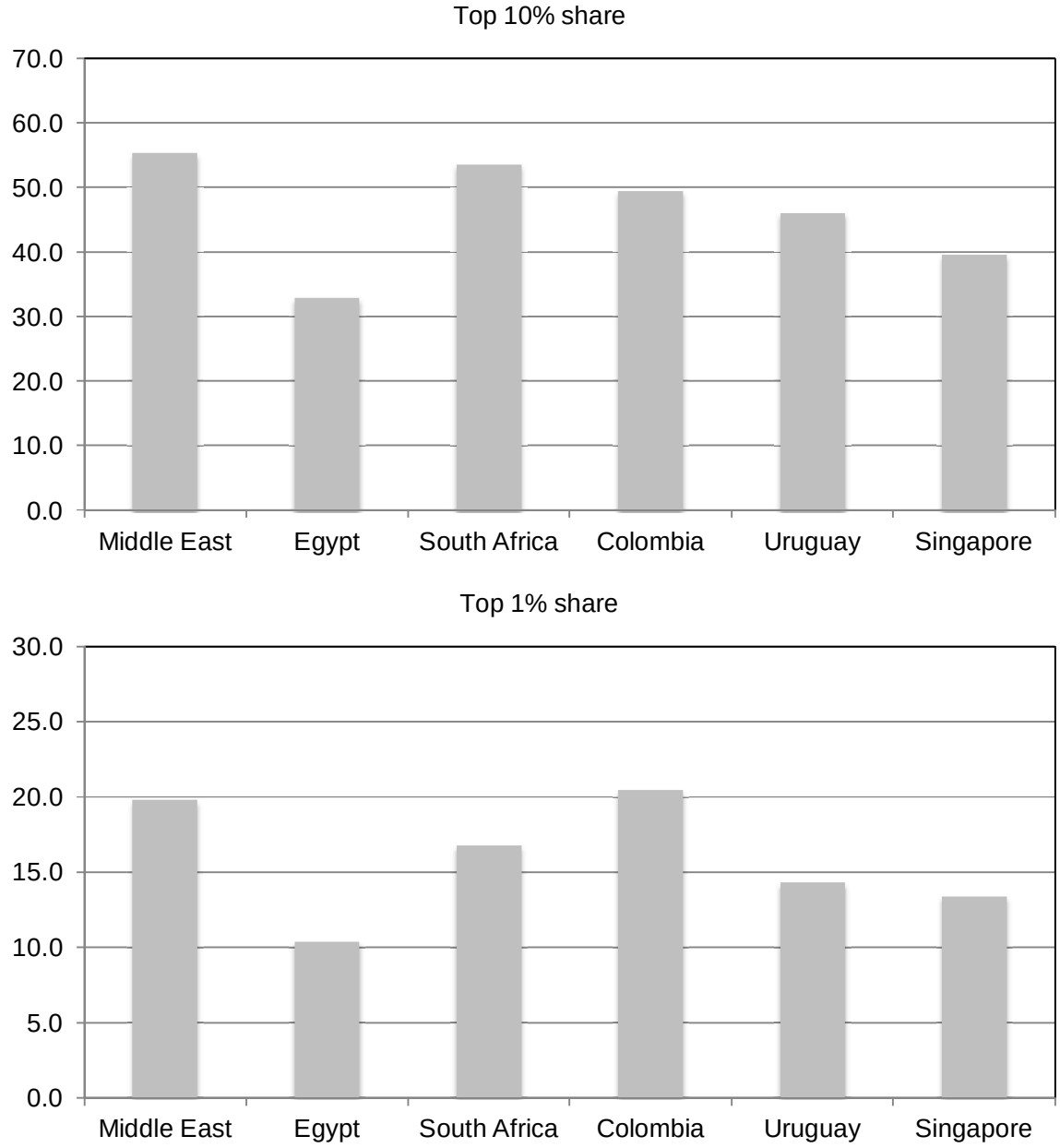
Notes: Data correspond to 2009 for France and 2007 for Germany. Data for US, Germany and Sweden include capital gains.
Sources: WTID and authors' computations.

Figure 8: Top Income Shares in the Middle East, Egypt, Western Europe and US 2010 Low-inequality Scenario for the Middle East (scenario 2.3)



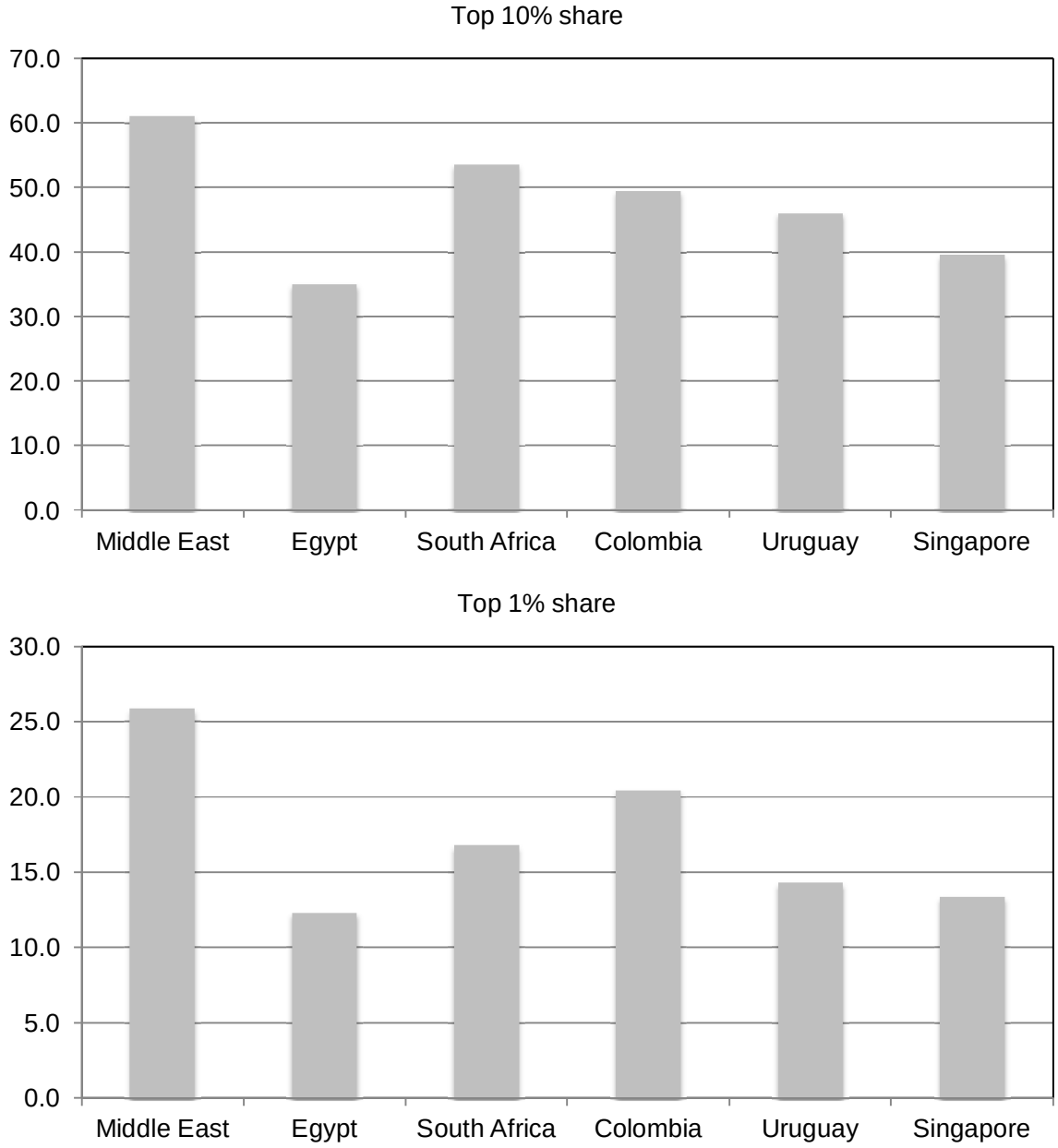
Notes: Data correspond to 2009 for France and 2007 for Germany. Data for US, Germany and Sweden include capital gains.
Sources: WTID and authors' computations.

Figure 9: Top Income Shares in the Middle East, Egypt and Developing Countries, 2010 Benchmark Scenario for the Middle East (scenario 1.1)



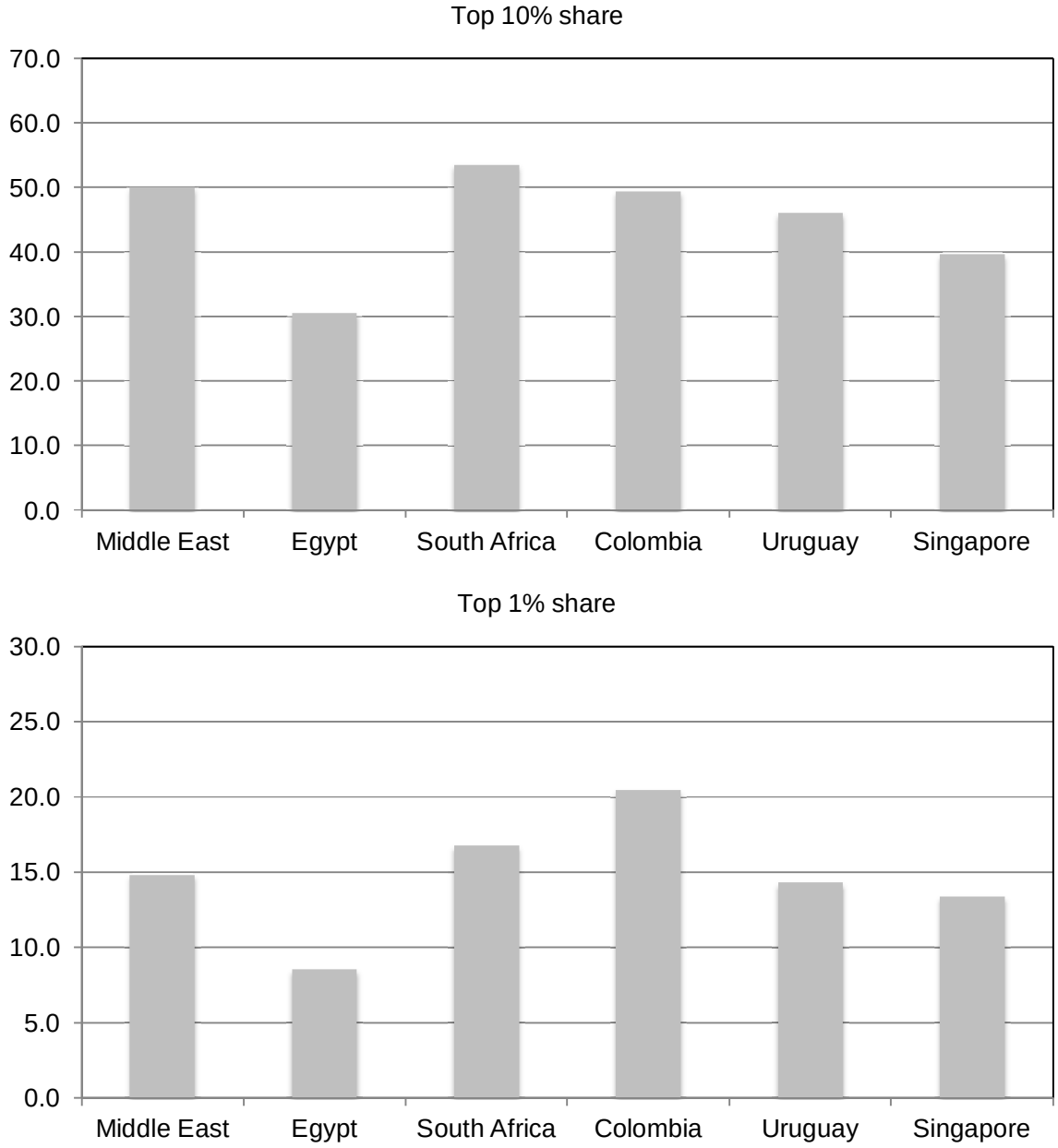
Sources: WTID and authors' computations.

Figure 10: Top Income Shares in the Middle East, Egypt and Developing Countries, 2010 - High-inequality Scenario for the Middle East (scenario 3.6)



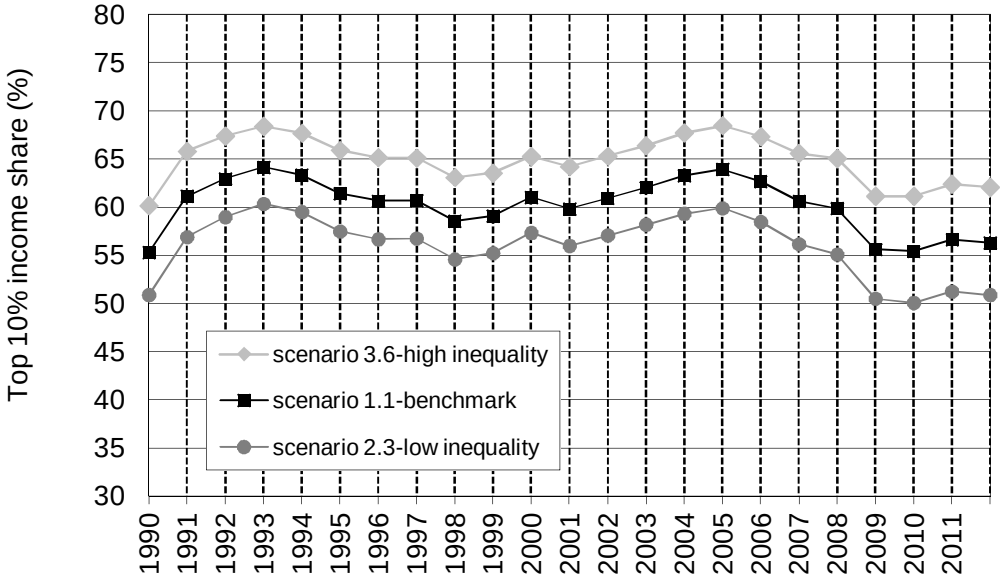
Sources: WTID and authors' computations.

Figure 11: Top Income Shares in the Middle East, Egypt and Developing Countries. 2010 - Low-inequality scenario for the Middle East (scenario 2.3)



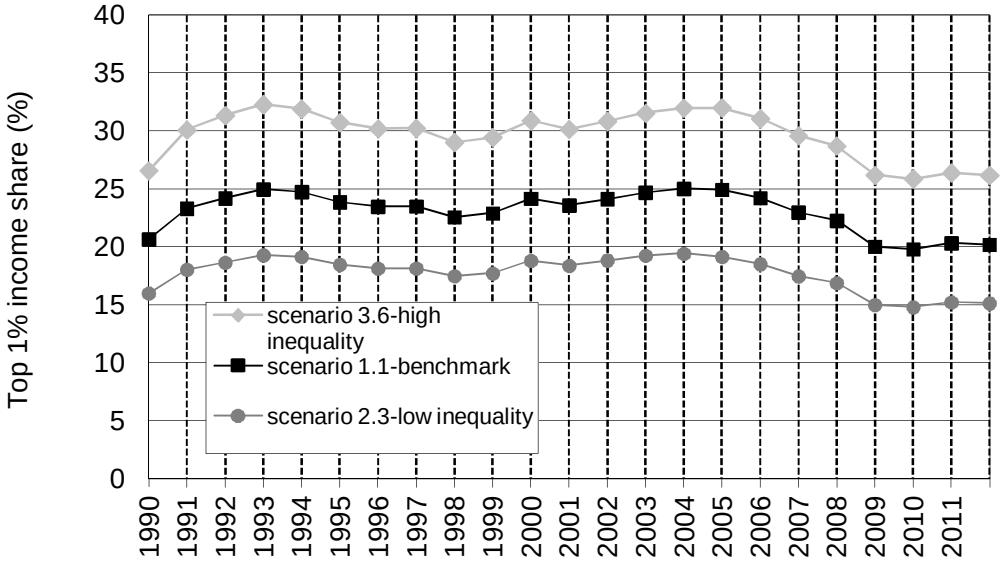
Sources: WTID and authors' computations.

Figure 12: Top 10% Income Share in the Middle East under Three Scenarios



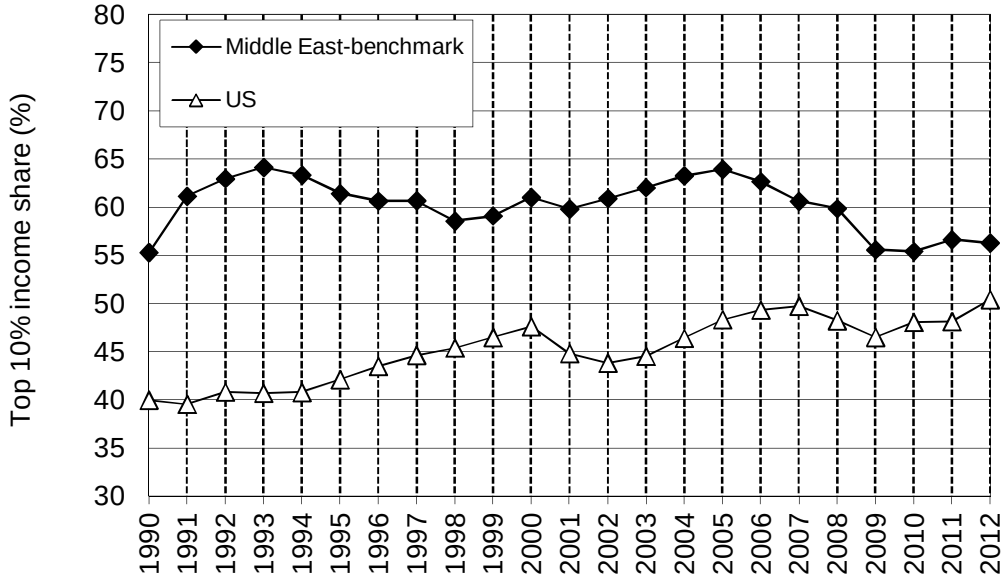
Notes: All three scenarios assume constant inequality across time in each country of the Middle East.
Source: Authors' computations.

Figure 13: Top 1% Income Share in the Middle East under Three Scenarios



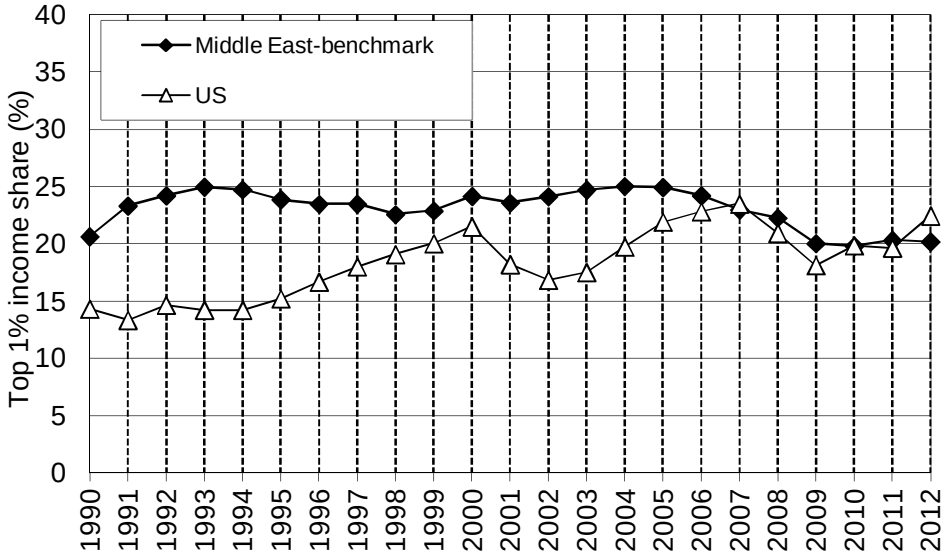
Notes: All three scenarios assume constant inequality across time in each country of the Middle East.
Source: Authors' computations.

Figure 14: Top 10% Income Shares in the Middle East and the US



Note: This figure assumes fixed within country inequality across years in the Middle East. Data for US include capital gains.
Source: Authors' computations and WTID.

Figure 15: Top 1% Income Shares in the Middle East and the US



Note: This figure assumes fixed within country inequality across years in the Middle East. Data for US include capital gains.
Source: Authors' computations and WTID.

Table 1: Population and Income in the Middle East Countries, 2012

	Population (million)	Population (% of ME total)	GDP (current billion US$)	GNI (current billion US$)	GNI (% of ME total)	Ratio GNI/GDP (%)	90% of GNI per capita (current US$)	90% of GNI per capita (% of ME average)
Bahrain	1.3	0.4%	26.7	23.4	0.9%	88%	15,967	192%
Egypt	80.7	27.4%	262.8	256.3	9.4%	98%	2,858	34%
Iran	76.4	26.0%	538.0	495.6	18.2%	92%	5,836	70%
Iraq	32.6	11.1%	210.3	213.1	7.8%	101%	5,887	71%
Jordan	6.3	2.1%	31.0	30.7	1.1%	99%	4,375	53%
Kuwait	3.3	1.1%	182.6	196.6	7.2%	108%	54,440	655%
Lebanon	4.4	1.5%	42.9	42.3	1.6%	99%	8,608	104%
Oman	3.3	1.1%	78.1	72.7	2.7%	93%	19,750	237%
Qatar	2.1	0.7%	192.4	190.0	7.0%	99%	83,377	1003%
Saudi Arabia	28.3	9.6%	711.0	722.0	26.6%	102%	22,972	276%
Syria	22.4	7.6%	45.6	44.2	1.6%	97%	1,775	21%
UAE	9.2	3.1%	384.7	397.6	14.6%	103%	38,871	467%
Yemen	23.9	8.1%	35.6	33.6	1.2%	94%	1,270	15%
Egypt	**80.7**	**27.4%**	**262.8**	**256.3**	**9.4%**	**98%**	**2,858**	**34%**
Iran	**76.4**	**26.0%**	**538.0**	**495.6**	**18.2%**	**92%**	**5,836**	**70%**
Iraq-Syria-Jordan-Lebanon-Yemen	**89.6**	**30.5%**	**365.5**	**364.0**	**13.4%**	**100%**	**3,657**	**44%**
Oil countries (Qatar-UAE-Kuwait-Saudia Arabia-Bahrain-Oman)	**47.4**	**16.1%**	**1,575.6**	**1,602.3**	**58.9%**	**102%**	**30,406**	**366%**
incl. Qatar-UAE-Kuwait	14.5	4.9%	759.7	784.2	28.8%	103%	48,650	585%
Middle East	**294.1**	**100.0%**	**2,741.9**	**2,718.2**	**100.0%**	**99%**	**8,317**	**100%**

Source: Table B1.

Table 2: Population and Income in the Middle East Countries, 1990

	Population (million)	Population (% of ME total)	GDP (current billion US$)	GNI (current billion US$)	GNI (% of ME total)	Ratio GNI/GDP (%)	90% of GNI per capita (current US$)	90% of GNI per capita (% of ME average)
Bahrain	0.5	0.3%	4.2	3.5	0.8%	84%	6,428	286%
Egypt	56.3	30.8%	43.1	42.0	9.2%	97%	671	30%
Iran	56.4	30.8%	116.0	115.9	25.3%	100%	1,851	82%
Iraq	17.5	9.6%	62.4	48.7	10.6%	78%	2,500	111%
Jordan	3.2	1.7%	4.2	3.9	0.9%	95%	1,120	50%
Kuwait	2.1	1.1%	18.4	25.7	5.6%	140%	11,238	500%
Lebanon	2.7	1.5%	2.8	3.5	0.8%	122%	1,152	51%
Oman	1.8	1.0%	11.7	11.4	2.5%	97%	5,658	252%
Qatar	0.5	0.3%	7.4	7.6	1.7%	103%	14,319	637%
Saudi Arabia	16.2	8.8%	116.8	124.8	27.3%	107%	6,928	308%
Syria	12.5	6.8%	12.3	12.0	2.6%	97%	864	38%
UAE	1.8	1.0%	50.7	53.2	11.6%	105%	26,498	1178%
Yemen	11.8	6.4%	5.6	5.6	1.2%	99%	428	19%
Egypt	**56.3**	**30.8%**	**43.1**	**42.0**	**9.2%**	**97%**	**671**	**30%**
Iran	**56.4**	**30.8%**	**116.0**	**115.9**	**25.3%**	**100%**	**1,851**	**82%**
Iraq-Syria-Jordan-Lebanon-Yemen	**47.6**	**26.0%**	**87.4**	**73.6**	**16.1%**	**84%**	**1,391**	**62%**
Oil countries (Qatar-UAE-Kuwait-Saudi Arabia-Bahrain-Oman)	**22.9**	**12.5%**	**209.2**	**226.2**	**49.4%**	**108%**	**8,906**	**396%**
incl. Qatar-UAE-Kuwait	4.3	2.4%	76.5	86.5	18.9%	113%	17,924	797%
Middle East	**183.2**	**100.0%**	**455.7**	**457.7**	**100.0%**	**100%**	**2,249**	**100%**

Source: Table B1.

Table 3: Population and Income in the Middle East Countries, 2012 vs 1990

	Population (% total)		GNI (% total)		per capita GNI (% ME average)	
	1990	**2012**	**1990**	**2012**	**1990**	**2012**
Egypt	30.8	27.4	9.2	9.4	29.9	34.4
Iran	30.8	26.0	25.3	18.2	82.3	70.2
Iraq-Syria-Jordan-Lebanon-Yemen	26.0	30.5	16.1	13.4	61.9	44.0
Oil countries (Qatar-UAE-Kuwait-Saudi Arabia-Bahrain-Oman)	12.5	16.1	49.4	58.9	396.0	365.6
incl. Qatar-UAE-Kuwait	2.4	4.9	18.9	28.8	797.0	585.0
Middle East	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Source: Table B1.

Table 4: Parameters for Lognormal Distribution (bottom 90%)

	benchmark (scenario 1)		low inequality (scenario 2)		high inequality (scenario 3)	
	sigma	**Gini**	**sigma**	**Gini**	**sigma**	**Gini**
Bahrain	2.595	0.500	1.860	0.340	4.330	0.700
Egypt	1.860	0.340	1.860	0.340	1.860	0.340
Iran	2.180	0.420	2.180	0.420	2.180	0.420
Iraq	1.860	0.340	1.860	0.340	1.860	0.340
Jordan	2.050	0.390	2.050	0.390	2.050	0.390
Kuwait	2.595	0.500	1.860	0.340	4.330	0.700
Lebanon	1.860	0.340	1.860	0.340	1.860	0.340
Oman	2.595	0.500	1.860	0.340	4.330	0.700
Qatar	2.595	0.500	1.860	0.340	4.330	0.700
Saudi Arabia	2.595	0.500	1.860	0.340	4.330	0.700
Syria	2.080	0.396	2.080	0.396	2.080	0.396
UAE	2.595	0.500	1.860	0.340	4.330	0.700
Yemen	2.178	0.418	2.178	0.418	2.178	0.418

Table 5: Parameters a and b for Pareto Distribution (top 10%)

		Pareto coefficient b	Pareto coefficient a=b/(b-1)		
scenario 1	variant 1	**2.00**	**2.00**	**scenario 1.1**	**benchmark**
(see table 2)	variant 2	1.50	3.00	scenario 1.2	
	variant 3	1.80	2.25	scenario 1.3	
	variant 4	1.90	2.11	scenario 1.4	
	variant 5	2.10	1.91	scenario 1.5	
	variant 6	2.20	1.83	scenario 1.6	
	variant 7	3.00	1.50	scenario 1.7	
scenario 2	variant 1	2.00	2.00	scenario 2.1	
(see table 2)	variant 2	1.50	3.00	scenario 2.2	
	variant 3	**1.80**	**2.25**	**scenario 2.3**	**low inequality**
	variant 4	1.90	2.11	scenario 2.4	
	variant 5	2.10	1.91	scenario 2.5	
	variant 6	2.20	1.83	scenario 2.6	
	variant 7	3.00	1.50	scenario 2.7	
scenario 3	variant 1	2.00	2.00	scenario 3.1	
(see table 2)	variant 2	1.50	3.00	scenario 3.2	
	variant 3	1.80	2.25	scenario 3.3	
	variant 4	1.90	2.11	scenario 3.4	
	variant 5	2.10	1.91	scenario 3.5	
	variant 6	**2.20**	**1.83**	**scenario 3.6**	**high inequality**
	variant 7	3.00	1.50	scenario 3.7	

Note: In the main paper, scenario 2.3 is identified as the "low inequality" scenario; however, scenario 2.2 shows an even lower level of inequality. Similarly, scenario 3.6 is identified as the "high inequality" scenario, while scenario 3.7 displays a higher level of inequality. The full set of results is presented Appendix C.

Table 6: Summary Results, 2010

	Top 10% income share	Top 1% income share
Benchmark scenario (1.1)		
Egypt	33.0	10.4
Middle East	55.4	19.8
High-inequality scenario (3.6)		
Egypt	35.1	12.3
Middle East	61.1	25.9
Low-inequality scenario (2.3)		
Egypt	30.7	8.5
Middle East	50.1	14.8
Western Europe	36.2	11.1
US	48.0	19.9
South Africa	53.6	16.8
Colombia	49.5	20.5
Uruguay	46.1	14.3
Singapore	39.6	13.4

Appendix A. Pareto approximations for top incomes

This appendix includes supplementary material on Pareto approximations for top incomes (see the discussion in section 2).

Figures A1 to A4 describe the evolution of Pareto coefficients in a number of developed and developing countries over the past century. These figures are extracted from Atkinson, Piketty and Saez (2011, figures 8A-8D) and use data from the "World Top Incomes Database". These coefficients were computed using data on top 0.1% shares within top 1% shares. Details are available in the data appendix to Atkinson, Piketty and Saez (2011).

Figures A5 and A6 describe the profile b(p) of empirical "inverted" Pareto coefficients as a function of percentile p. These figures were obtained using micro files of tax returns for France. The form of the shapes appears to be relatively representative of what we observe in other WTID countries.

Appendix B. Data sources

Table B1 shows the basic income and population data used in the paper. For thirteen countries in the Middle East, namely, Bahrain, Egypt, Iran, Irak, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, Syria, UAE, and Yemen, Table B1 displays the total population, the adult population (aged 15 years old and above), GDP and GNI in current US dollars. The majority of the data come from the World Bank Databank. For years for which GNI was not available, it was interpolated using the GDP growth rate, or, alternatively, the GNI growth rate (also in current US dollars) from the UN Database.

Net national income is defined as 90% of GNI, to take into account capital depreciation. Throughout the paper, individual incomes refer to per capita net national income.

Tables B2 and B3 summarize the information for 2012 and 1990, respectively.

Appendix C. Detailed estimation results for inequality in the Middle East

This appendix includes our detailed estimation results (see discussion in sections 3-5).

For the bottom 90% of each country's distribution, we assume a log-normal distribution to generate a sample of 100,000 observations, with mean income equal to 90% of GNI per capita, and variance parameter sigma chosen to reproduce the Gini coefficients reported on Table 4. For our benchmark estimates, we use the Gini coefficients coming from available household surveys (namely Egypt, Iran, Irak, Jordan, Syria and Yemen), and for the most recent year. The Gini coefficient of per capita income for Egypt (0.34) was taken from Hlansy and Verme (2013). Povcalnet provides the Gini coefficient of per capita consumption (but not income) in Egypt (0.307 in 2008), Iran (0.383 in 2005), Irak (0.309 in 2006), Jordan (0.354 in 2010), Syria (0.358 in 2004), and Yemen (0.377 in 2005). For these last five countries, we approximate the Gini coefficient of per capita income by multiplying the consumption Gini by a factor of 1.107 (equal to the ratio income/consumption Gini in Egypt). For Lebanon, we assume the same Gini coefficient as in Egypt.

For countries for which surveys are not available (in particular oil countries, Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and UAE), we assume a Gini of 0.50 in the benchmark scenario, a Gini of 0.34 (as in Egypt) in the low-inequality scenario, and a Gini of 0.70 (close to South Africa) in the high-inequality scenario.

For the top 10%, we assume a Pareto distribution, and consider seven variants summarized in Table 5. In our benchmark estimate, we take an inverted Pareto coefficient b equal to 2. The other six variants consider b Pareto coefficients ranging from 1.50 to 3.

The detailed simulation results for the twenty-one scenarios are presented in Table C1 (top 10% income share in the Middle East), Table C2 (top 1% income share in the Middle East), Table C3 (Gini coefficient in the Middle East) and Table C4 (Gini coefficient in the Middle East countries).

Figures C1, C2 and C3 show the comparison of the top 10% and the top 1% income shares in Egypt and the Middle East with France, UK, Germany, Sweden, and US.

Figure A1: Inverted-Pareto Coefficients: English-speaking Countries, 1910-2005

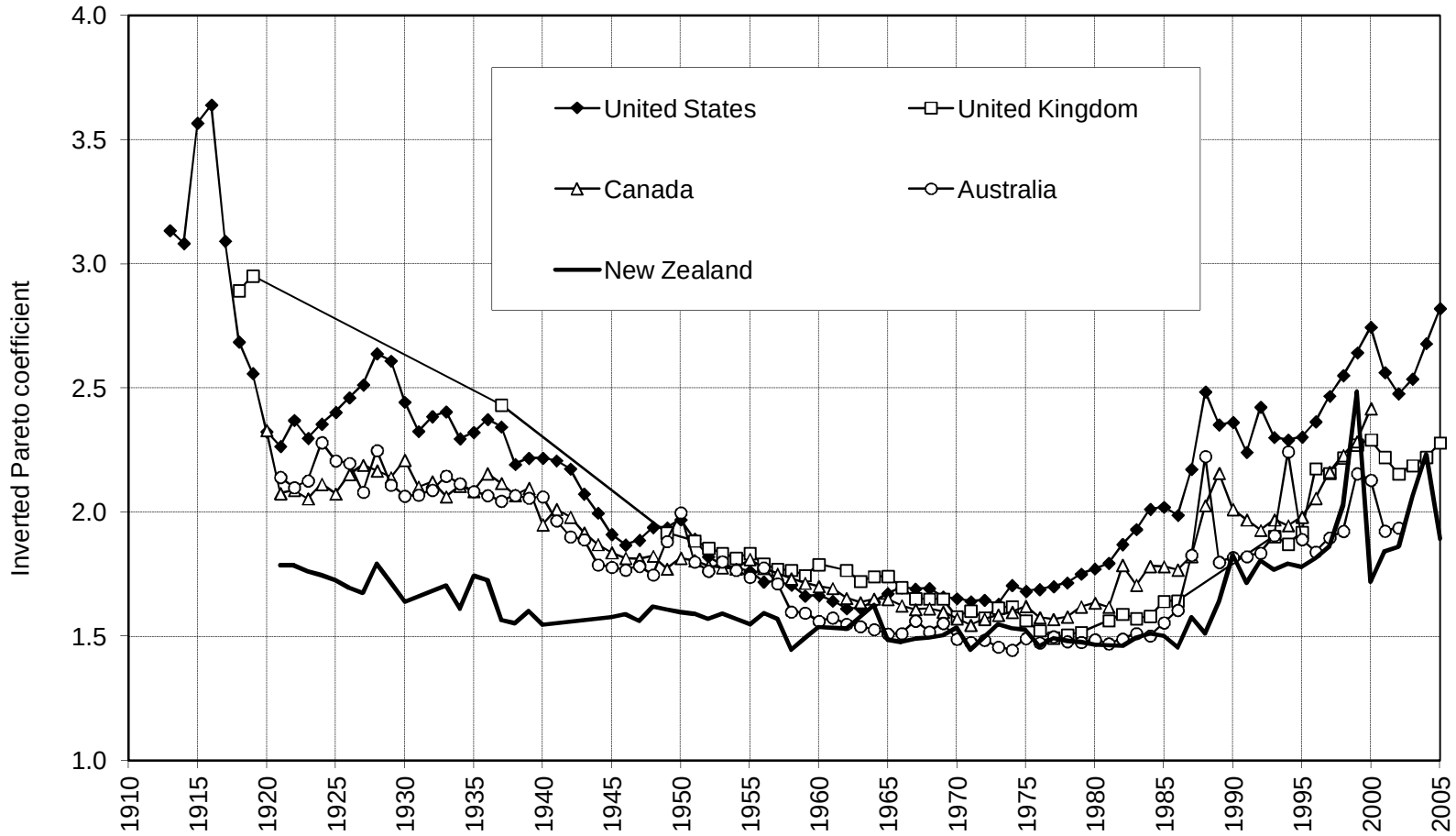


Figure A2: Inverted-Pareto Coefficients: Continental Europe & Japan 1900-2005

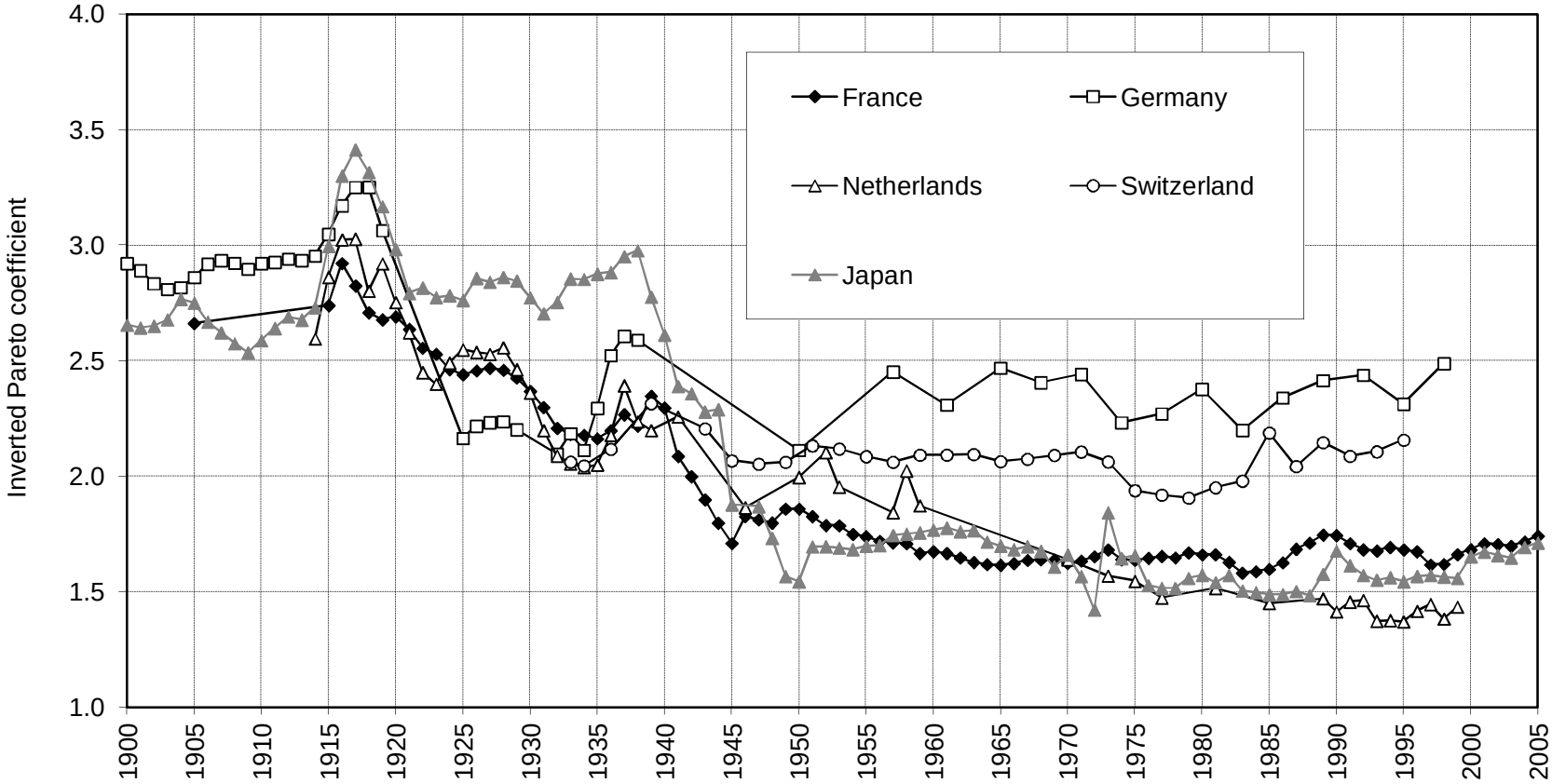


Figure A3 : Inverted-Pareto Coefficients: Nordic & Southern Europe, 1900-2006

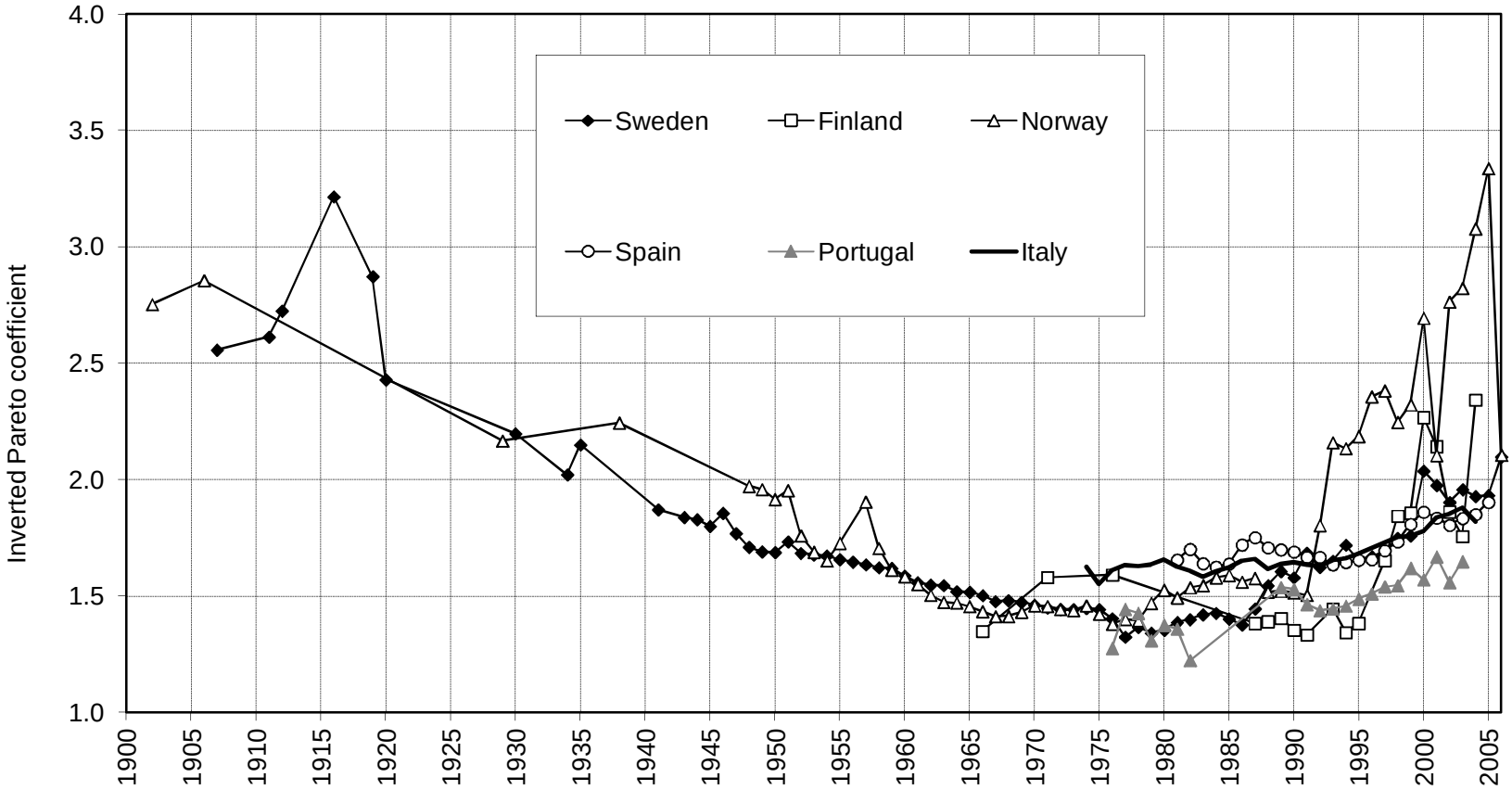


Figure A4: Inverted-Pareto Coefficients: Developing Countries: 1920-2005

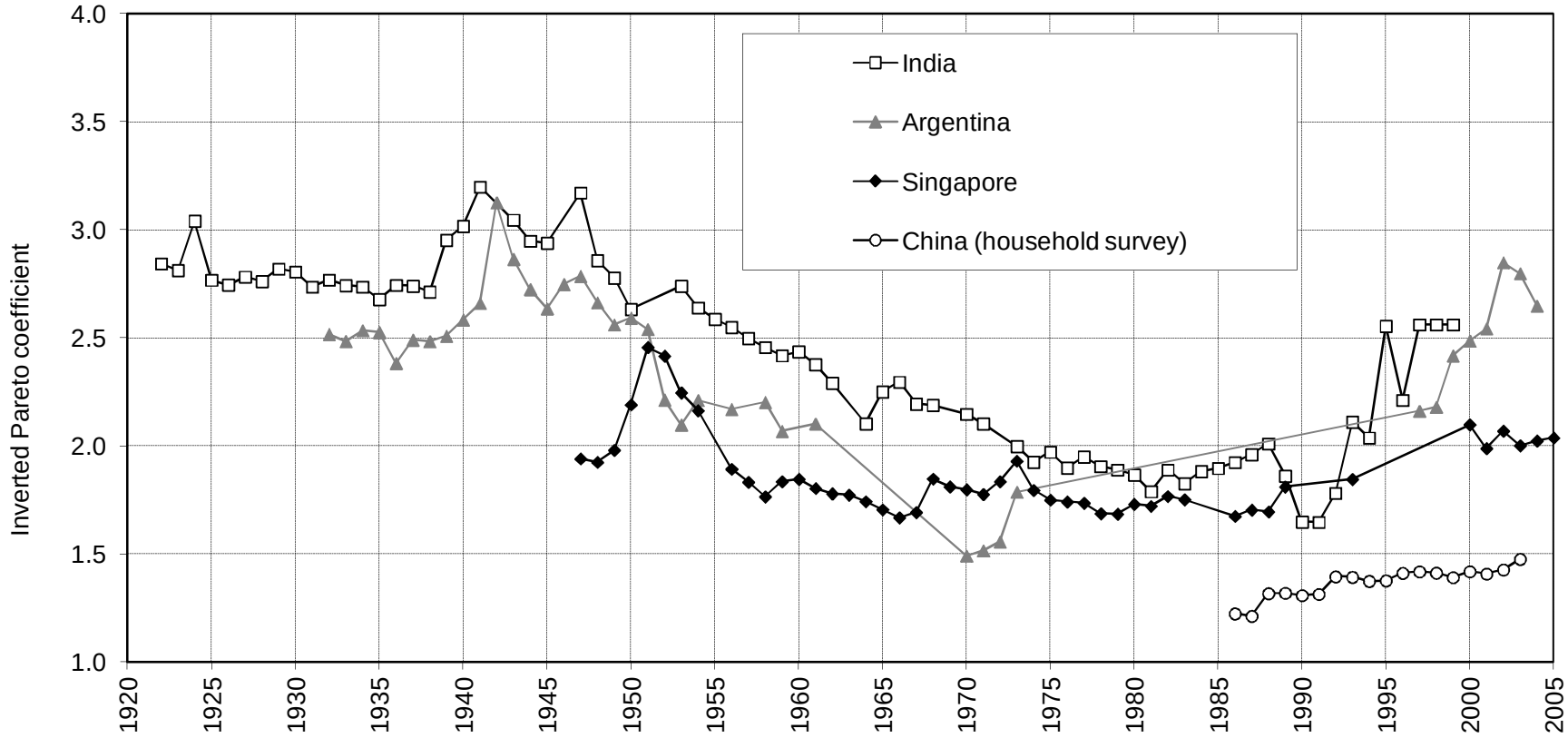
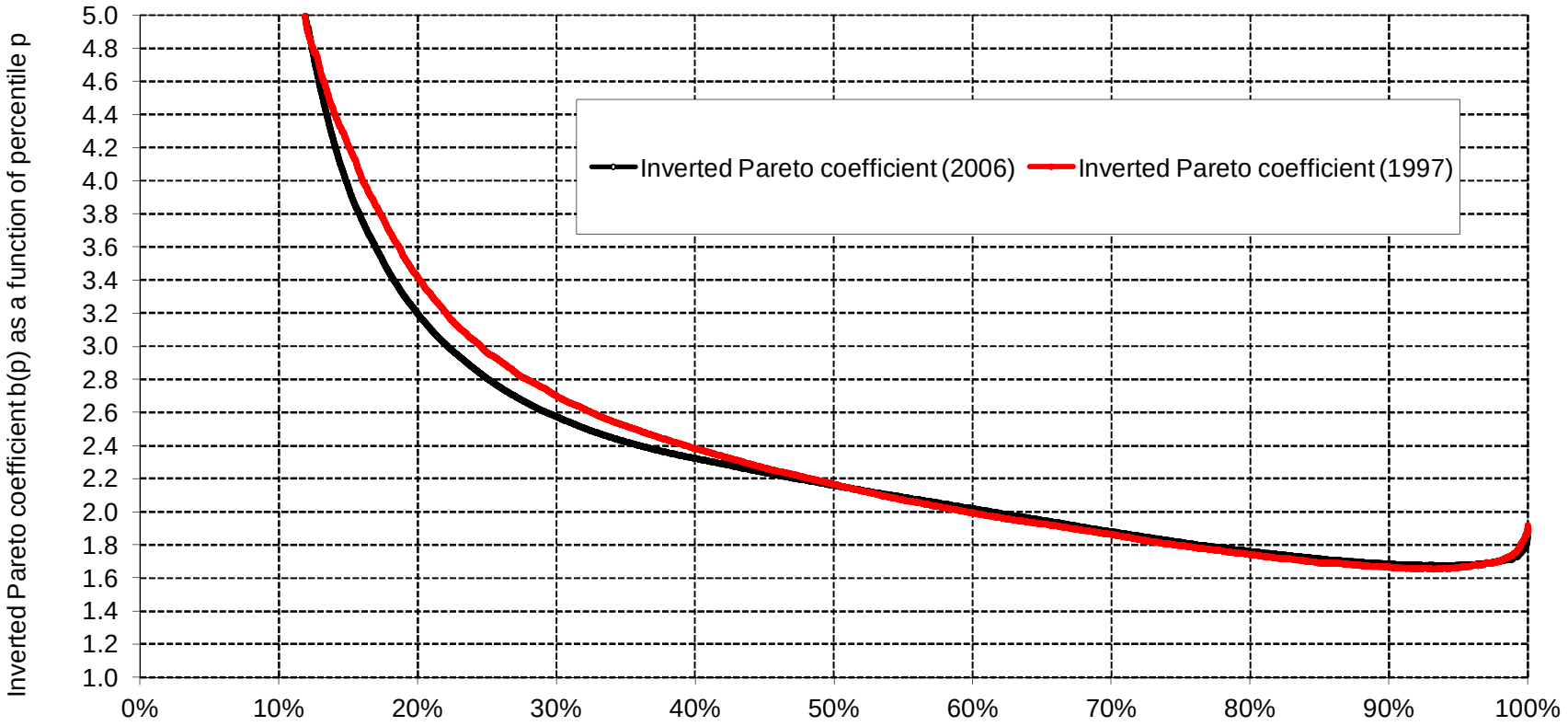
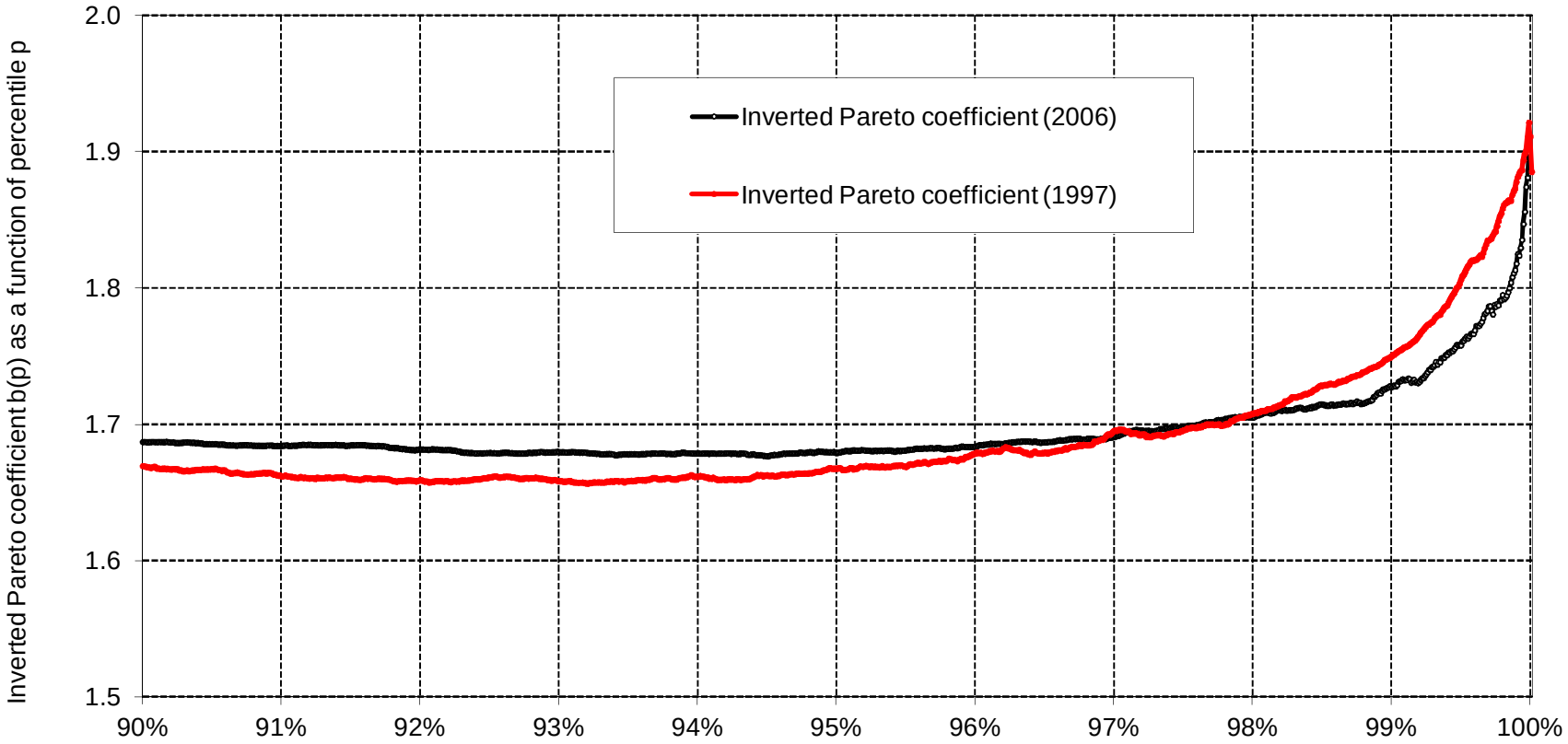


Figure A5: Pareto Curves for the Distribution of Income (France)



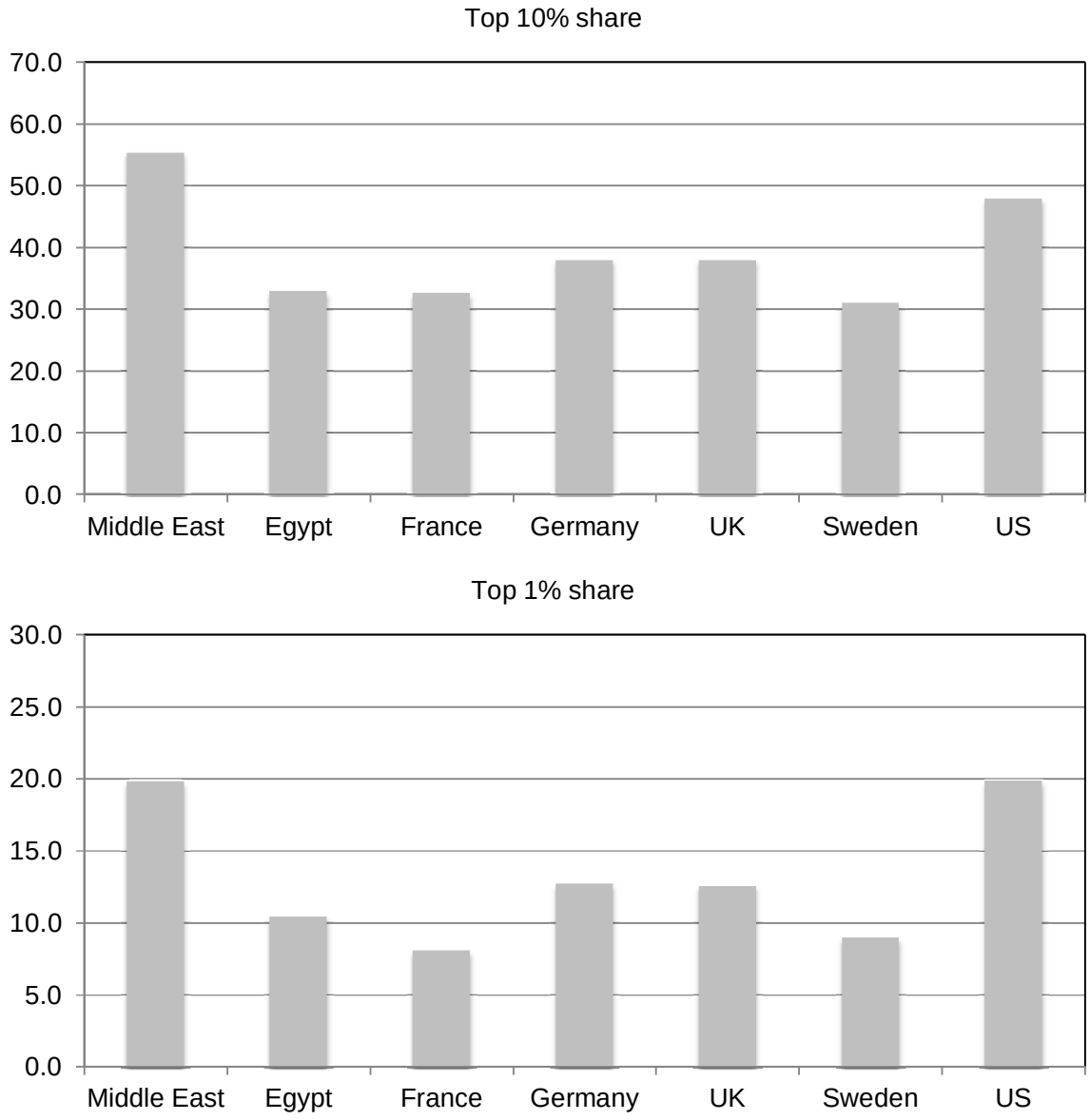
Notes: In 1997, the average income within the top decile is 1.67 times larger than the income threshold that one needs to pass in order to enter the top decile. I.e. b(p)=E(y|y>yp)/yp=1.67 if p=0.9. In 2006, b(p)=1.69 if p=0.9.

Figure A6: Pareto Curves for the Distribution of Income (France, top decile)



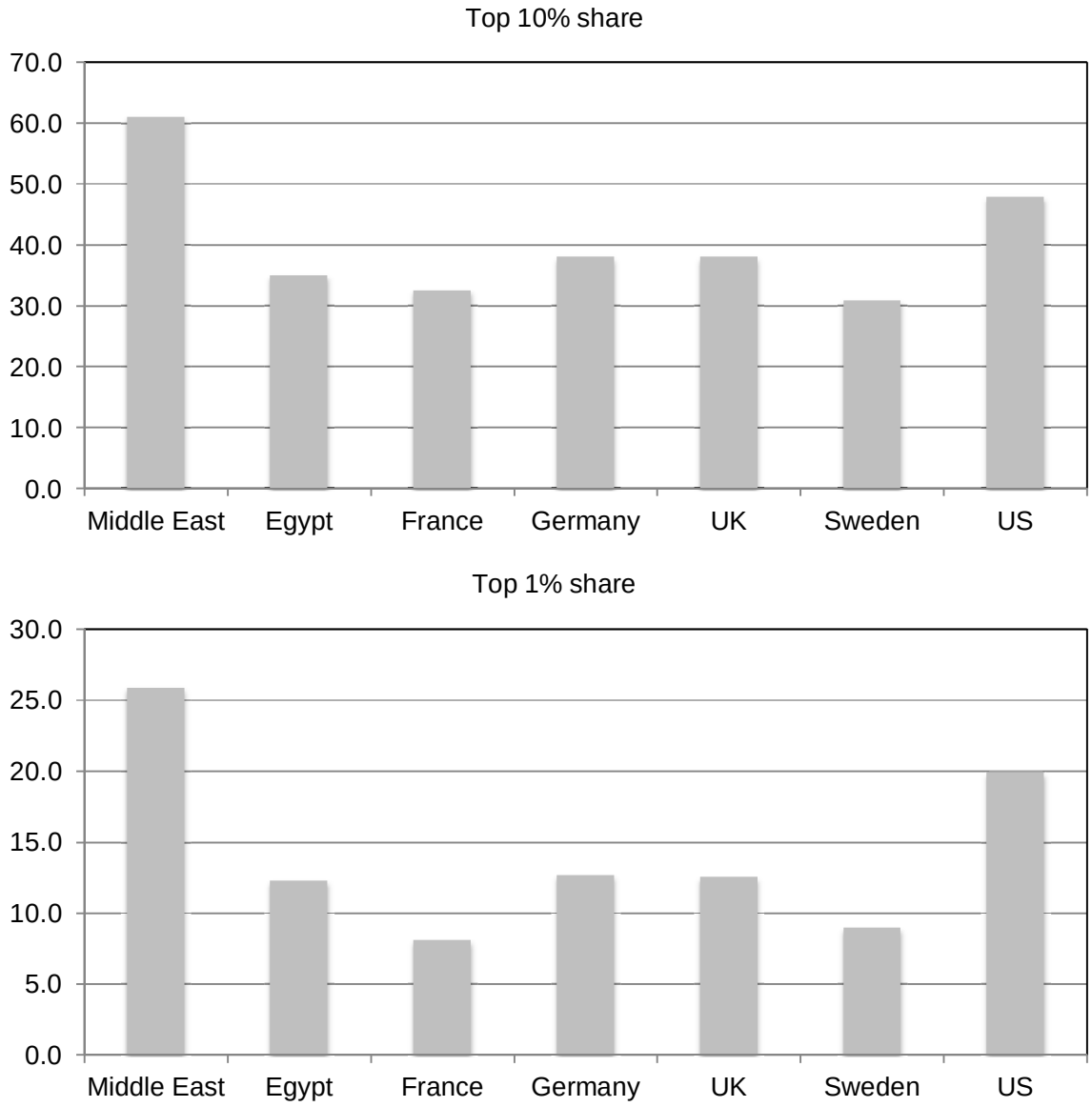
Notes: In 1997, the average income within the top decile is 1.67 times larger than the income threshold that one needs to pass in order to enter the top decile. That is, b(p)=E(y|y>yp)/yp=1.67 if p=0.9. In 2006, b(p)=1.69 if p=0.9.

Figure C1: Top Income Shares in the Middle East, Egypt and Selected OECD Countries 2010 Scenario 1.1 (benchmark)



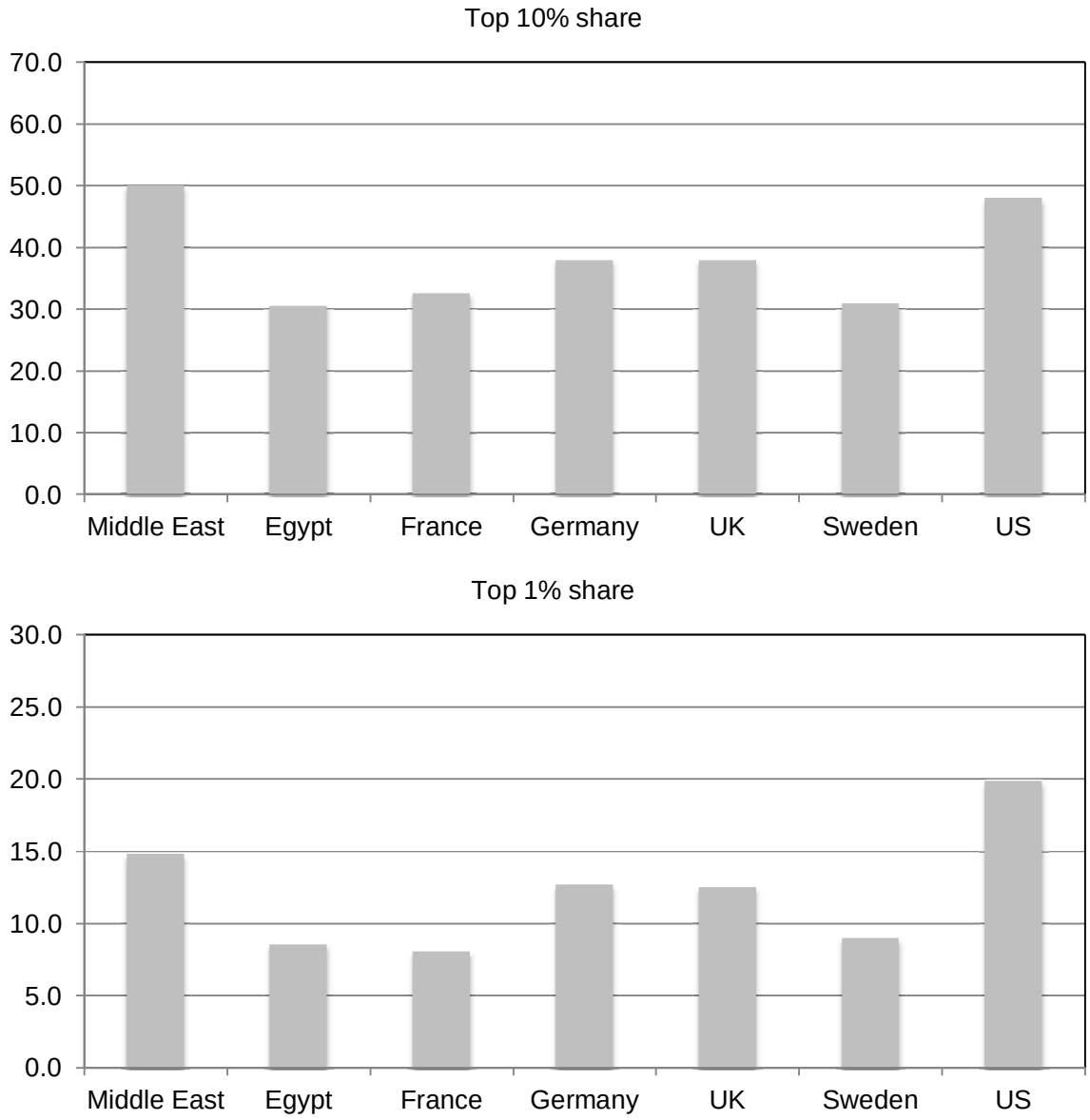
Notes: Data correspond to 2009 for France and 2007 for Germany. Data for US, Germany and Sweden include capital gains.
Sources: WTID and authors' computations.

Figure C2: Top Income Shares in the Middle East, Egypt and Selected OECD Countries 2010, Scenario 3.6



Notes: Data correspond to 2009 for France and 2007 for Germany. Data for US, Germany and Sweden include capital gains.
Sources: WTID and authors' computations.

Figure C3: Top Income Shares in the Middle East, Egypt and Selected OECD Countries 2010, Scenario 2.3



Notes: Data correspond to 2009 for France and 2007 for Germany. Data for US, Germany and Sweden include capital gains.
Sources: WTID and authors' computations.

Table B1: Population and Income in the Middle East Countries, 1990-2012

		Population total	Adult population aged 15+	GDP (current US$)	GNI (current US$)	Ratio GNI/ GDP	90% of GNI per capita (current US$)	90% of GNI per adult (current US$)
Bahrain	2012	1,317,827	1,052,092	26,695,757,336	23,379,450,253	0.88	15,967	20,000
	2011	1,292,764	1,036,685	25,442,410,306	22,281,801,508	0.88	15,512	19,344
	2010	1,251,513	1,002,860	23,490,600,094	20,572,456,867	0.88	14,794	18,462
	2009	1,191,539	947,522	19,318,822,541	16,918,922,541	0.88	12,779	16,070
	2008	1,116,038	874,356	21,902,892,584	20,979,212,545	0.96	16,918	21,595
	2007	1,032,353	791,726	18,473,097,689	18,174,419,532	0.98	15,844	20,660
	2006	950,951	711,630	15,854,942,951	15,469,028,432	0.98	14,640	19,564
	2005	879,534	642,884	13,460,198,290	13,046,889,429	0.97	13,350	18,265
	2004	820,505	588,102	11,235,671,061	10,660,655,774	0.95	11,694	16,314
	2003	772,058	545,100	9,747,599,583	9,254,501,367	0.95	10,788	15,280
	2002	732,541	512,024	8,491,183,201	7,966,169,242	0.94	9,787	14,002
	2001	698,749	485,285	7,928,934,210	7,607,383,107	0.96	9,798	14,109
	2000	668,239	462,107	7,970,690,894	7,747,014,735	0.97	10,434	15,088
	1999	640,913	442,496	6,621,186,419	6,350,434,540	0.96	8,918	12,916
	1998	617,537	427,199	6,183,941,092	6,022,234,665	0.97	8,777	12,687
	1997	597,400	414,888	6,349,202,600	6,113,032,380	0.96	9,209	13,261
	1996	579,697	403,949	6,101,861,656	6,076,595,953	1.00	9,434	13,539
	1995	563,730	393,154	5,849,468,115	5,790,426,071	0.99	9,244	13,255
	1994	549,170	381,850	5,567,553,552	5,325,532,097	0.96	8,728	12,552
	1993	535,711	369,989	5,200,266,050	5,006,649,022	0.96	8,411	12,179
	1992	522,751	357,735	4,751,063,992	4,782,713,015	1.01	8,234	12,032
	1991	509,645	345,550	4,616,223,477	4,807,181,101	1.04	8,489	12,521
	1990	495,944	333,773	4,229,787,379	3,542,287,440	0.84	6,428	9,552
Egypt	2012	80,721,874	55,497,786	262,831,912,587	256,346,567,687	0.98	2,858	4,157
	2011	79,392,466	54,478,152	236,000,735,704	229,429,009,921	0.97	2,601	3,790
	2010	78,075,705	53,470,823	218,887,812,550	217,726,796,471	0.99	2,510	3,665
	2009	76,775,023	52,481,456	188,984,088,127	191,178,203,908	1.01	2,241	3,278
	2008	75,491,922	51,504,594	162,818,181,818	165,654,545,455	1.02	1,975	2,895
	2007	74,229,577	50,521,091	130,477,817,194	132,930,407,743	1.02	1,612	2,368
	2006	72,990,754	49,504,919	107,484,034,648	111,381,788,442	1.04	1,373	2,025
	2005	71,777,678	48,439,728	89,685,724,889	89,431,924,889	1.00	1,121	1,662
	2004	70,591,288	47,316,954	78,845,185,709	78,638,485,709	1.00	1,003	1,496
	2003	69,432,477	46,148,722	82,923,680,622	82,816,480,590	1.00	1,073	1,615
	2002	68,302,914	44,964,878	87,850,680,573	87,946,480,573	1.00	1,159	1,760
	2001	67,204,189	43,807,162	97,632,008,051	98,703,508,083	1.01	1,322	2,028
	2000	66,136,590	42,706,132	99,838,540,997	100,770,340,997	1.01	1,371	2,124
	1999	65,097,777	41,671,589	90,710,703,939	91,715,103,939	1.01	1,268	1,981
	1998	64,084,443	40,696,262	84,828,807,270	86,042,107,238	1.01	1,208	1,903
	1997	63,094,069	39,772,593	78,436,575,744	79,403,875,712	1.01	1,133	1,797
	1996	62,123,592	38,886,410	67,629,717,780	68,168,317,780	1.01	988	1,578
	1995	61,168,397	38,026,555	60,159,244,485	60,300,044,485	1.00	887	1,427
	1994	60,231,864	37,192,705	51,897,983,716	51,775,983,716	1.00	774	1,253
	1993	59,307,778	36,387,013	46,578,631,213	46,006,531,245	0.99	698	1,138
	1992	58,370,712	35,603,108	41,855,483,504	41,530,183,504	0.99	640	1,050
	1991	57,387,589	34,833,295	36,970,555,122	36,607,852,900	0.99	574	946
	1990	56,336,614	34,071,681	43,130,415,154	42,025,300,067	0.97	671	1,110
Iran	2012	76,424,443	58,325,646	537,997,208,880	495,554,742,752	0.92	5,836	7,647
	2011	75,424,285	57,617,496	514,059,508,514	473,505,481,620	0.92	5,650	7,396
	2010	74,462,314	56,876,769	422,567,967,405	379,243,848,255	0.90	4,584	6,001
	2009	73,542,954	56,112,569	362,661,111,280	328,593,250,408	0.91	4,021	5,270
	2008	72,660,887	55,310,516	355,988,367,222	335,653,638,478	0.94	4,158	5,462
	2007	71,809,219	54,410,918	286,057,933,326	282,999,983,192	0.99	3,547	4,681
	2006	70,976,584	53,336,117	222,880,533,511	219,295,950,033	0.98	2,781	3,700
	2005	70,152,384	52,036,832	192,014,940,324	188,502,764,504	0.98	2,418	3,260
	2004	69,342,126	50,494,019	163,226,579,221	160,331,753,229	0.98	2,081	2,858
	2003	68,543,171	48,742,344	135,409,681,532	132,752,580,270	0.98	1,743	2,451
	2002	67,727,274	46,854,534	116,420,833,374	114,418,825,349	0.98	1,520	2,198
	2001	66,857,624	44,933,443	115,438,386,682	115,688,438,991	1.00	1,557	2,317
	2000	65,911,052	43,060,554	101,286,514,977	101,334,946,710	1.00	1,384	2,118
	1999	64,858,754	41,250,431	104,656,040,168	104,528,522,066	1.00	1,450	2,281
	1998	63,713,397	39,501,959	102,661,888,397	102,780,365,057	1.00	1,452	2,342
	1997	62,542,531	37,860,837	105,298,720,965	105,122,069,768	1.00	1,513	2,499
	1996	61,440,887	36,376,845	110,573,439,131	109,839,230,511	0.99	1,609	2,718
Iran	1995	60,468,352	35,080,509	90,829,495,171	90,172,134,835	0.99	1,342	2,313
	1994	59,663,107	34,003,137	67,128,216,023	65,962,842,134	0.98	995	1,746
	1993	58,982,430	33,127,694	60,088,309,491	59,253,534,673	0.99	904	1,610
	1992	58,307,457	32,374,932	78,737,216,210	78,142,915,872	0.99	1,206	2,172
	1991	57,472,293	31,632,233	97,386,122,930	97,032,297,071	1.00	1,519	2,761
	1990	56,361,868	30,818,431	116,035,029,649	115,921,678,270	1.00	1,851	3,385

Table B1: Continued

		Population total	Adult population aged 15+	GDP (current US$)	GNI (current US$)	Ratio GNI/ GDP	90% of GNI per capita (current US$)	90% of GNI per adult (current US$)
Iraq	2012	32,578,209	19,381,116	210,279,947,256	213,115,780,343	1.01	5,887	9,896
	2011	31,760,020	18,769,615	180,606,795,374	180,402,407,607	1.00	5,112	8,650
	2010	30,962,380	18,196,827	135,488,471,368	137,081,181,538	1.01	3,985	6,780
	2009	30,163,199	17,653,522	111,659,988,889	110,251,600,000	0.99	3,290	5,621
	2008	29,429,829	17,175,709	131,611,819,294	128,391,311,479	0.98	3,926	6,728
	2007	28,740,630	16,742,345	88,837,727,881	85,460,307,201	0.96	2,676	4,594
	2006	28,064,095	16,322,900	65,141,035,028	68,752,451,757	1.06	2,205	3,791
	2005	27,377,045	15,894,720	36,743,640,204	32,822,960,568	0.89	1,079	1,859
	2004	26,673,536	15,451,586	25,509,364,916	19,882,611,472	0.78	671	1,158
	2003	25,959,531	14,998,505	22,239,478,064	17,333,983,152	0.78	601	1,040
	2002	25,238,267	14,537,672	18,969,591,211	14,785,354,832	0.78	527	915
	2001	24,516,842	14,074,837	18,936,094,868	14,759,246,978	0.78	542	944
	2000	23,801,156	13,614,634	25,857,106,736	20,153,649,795	0.78	762	1,332
	1999	23,091,408	13,157,142	17,942,362,576	13,984,708,172	0.78	545	957
	1998	22,387,179	12,701,285	10,468,730,247	8,159,579,699	0.78	328	578
	1997	21,693,597	12,249,760	10,113,863,358	7,882,987,926	0.78	327	579
	1996	21,017,108	11,806,009	8,772,737,574	6,837,682,291	0.78	293	521
	1995	20,363,138	11,373,418	8,451,290,527	6,587,138,744	0.78	291	521
	1994	19,731,733	10,951,027	8,137,422,488	6,342,502,460	0.78	289	521
	1993	19,123,947	10,540,691	7,832,512,797	6,104,848,526	0.78	287	521
	1992	18,547,047	10,151,767	7,543,513,639	5,879,595,643	0.78	285	521
	1991	18,009,865	9,796,202	7,279,302,564	5,673,663,188	0.78	284	521
	1990	17,517,521	9,481,541	62,427,408,830	48,657,421,267	0.78	2,500	4,619
Jordan	2012	6,318,000	4,161,932	31,015,239,496	30,709,965,096	0.99	4,375	6,641
	2011	6,181,000	4,043,024	28,840,197,019	28,660,478,709	0.99	4,173	6,380
	2010	6,046,000	3,924,733	26,425,379,367	26,334,252,606	1.00	3,920	6,039
	2009	5,915,000	3,808,491	23,820,013,059	24,327,337,002	1.02	3,702	5,749
	2008	5,786,000	3,692,148	21,971,835,256	22,667,340,399	1.03	3,526	5,525
	2007	5,661,000	3,578,499	17,110,610,000	17,794,107,893	1.04	2,829	4,475
	2006	5,536,000	3,467,192	15,056,937,190	15,510,471,590	1.03	2,522	4,026
	2005	5,411,000	3,360,264	12,582,876,895	12,919,638,895	1.03	2,149	3,460
	2004	5,290,000	3,261,662	11,407,566,660	11,682,059,460	1.02	1,987	3,223
	2003	5,164,000	3,166,024	10,193,023,726	10,323,068,926	1.01	1,799	2,935
	2002	5,038,000	3,075,502	9,580,161,951	9,657,257,151	1.01	1,725	2,826
	2001	4,917,000	2,991,187	8,972,965,061	9,134,780,261	1.02	1,672	2,749
	2000	4,797,000	2,908,844	8,457,923,945	8,558,458,345	1.01	1,606	2,648
	1999	4,681,000	2,830,723	8,147,494,329	7,992,910,393	0.98	1,537	2,541
	1998	4,597,000	2,773,514	7,910,621,093	7,772,539,269	0.98	1,522	2,522
	1997	4,459,000	2,682,239	7,244,402,975	7,035,658,255	0.97	1,420	2,361
	1996	4,325,000	2,588,075	6,928,359,295	6,623,893,631	0.96	1,378	2,303
	1995	4,195,000	2,488,491	6,727,446,669	6,448,931,341	0.96	1,384	2,332
	1994	4,061,000	2,376,260	6,237,650,243	5,922,681,731	0.95	1,313	2,243
	1993	3,906,000	2,242,453	5,606,237,931	5,296,236,491	0.94	1,220	2,126
	1992	3,733,000	2,094,584	5,311,188,450	4,963,144,898	0.93	1,197	2,133
	1991	3,545,000	1,943,713	4,344,467,193	3,981,979,129	0.92	1,011	1,844
	1990	3,170,000	1,705,070	4,159,928,734	3,944,906,894	0.95	1,120	2,082
Kuwait	2012	3,250,496	2,440,992	182,562,915,204	196,617,874,554	1.08	54,440	72,494
	2011	3,124,705	2,341,383	160,912,705,746	173,300,881,820	1.08	49,915	66,615
	2010	2,991,580	2,237,488	119,934,674,735	132,166,317,665	1.10	39,761	53,162
	2009	2,850,102	2,128,720	105,911,338,608	112,839,338,608	1.07	35,632	47,707
	2008	2,702,221	2,016,211	147,402,413,798	158,145,413,798	1.07	52,672	70,593
	2007	2,554,920	1,904,989	114,721,830,986	127,126,760,563	1.11	44,782	60,060
	2006	2,417,445	1,801,622	101,561,153,806	112,527,139,263	1.11	41,893	56,213
	2005	2,296,314	1,710,691	80,797,945,205	87,979,452,055	1.09	34,482	46,286
	2004	2,196,466	1,635,513	59,440,511,982	64,628,874,305	1.09	26,482	35,564
	2003	2,116,353	1,574,836	47,875,837,662	51,238,253,681	1.07	21,790	29,282
Kuwait	2002	2,048,232	1,523,138	38,138,801,497	41,462,372,637	1.09	18,219	24,500
	2001	1,980,604	1,472,238	34,890,773,740	39,791,328,168	1.14	18,081	24,325
	2000	1,906,231	1,416,796	37,718,011,469	44,417,277,983	1.18	20,971	28,215
	1999	1,818,405	1,352,746	30,120,888,964	35,232,087,078	1.17	17,438	23,440
	1998	1,722,208	1,283,244	25,946,185,994	31,812,961,917	1.23	16,625	22,312
	1997	1,635,999	1,218,658	30,350,433,060	36,628,866,750	1.21	20,150	27,051
	1996	1,585,244	1,173,510	31,492,937,201	36,672,123,610	1.16	20,820	28,125
	1995	1,586,123	1,157,101	27,191,687,674	32,074,395,209	1.18	18,200	24,948
	1994	1,689,505	1,197,807	24,848,484,745	28,016,835,656	1.13	14,925	21,051
	1993	1,792,887	1,238,513	23,941,392,355	27,768,212,768	1.16	13,939	20,179
	1992	1,896,269	1,279,219	19,858,555,905	25,100,546,111	1.26	11,913	17,660
	1991	1,999,651	1,319,925	11,009,955,543	16,424,527,317	1.49	7,392	11,199
	1990	2,059,774	1,338,735	18,427,778,571	25,718,751,329	1.40	11,238	17,290

Table B1: Continued

		Population total	Adult population aged 15+	GDP (current US$)	GNI (current US$)	Ratio GNI/ GDP	90% of GNI per capita (current US$)	90% of GNI per adult (current US$)
Lebanon	2012	4,424,888	3,467,453	42,945,273,632	42,321,751,681	0.99	8,608	10,985
	2011	4,382,790	3,389,627	40,094,328,358	39,916,328,358	1.00	8,197	10,598
	2010	4,341,092	3,312,012	37,124,378,109	36,615,478,109	0.99	7,591	9,950
	2009	4,246,924	3,196,379	34,650,746,269	34,422,646,269	0.99	7,295	9,692
	2008	4,186,088	3,108,944	30,079,601,990	30,516,801,990	1.01	6,561	8,834
	2007	4,139,813	3,037,754	25,056,716,418	25,797,416,418	1.03	5,608	7,643
	2006	4,079,823	2,963,896	22,438,474,295	22,622,074,295	1.01	4,990	6,869
	2005	3,986,865	2,874,255	21,860,696,517	21,674,296,517	0.99	4,893	6,787
	2004	3,853,582	2,764,887	21,789,054,726	20,972,354,726	0.96	4,898	6,827
	2003	3,690,110	2,642,404	20,082,918,740	16,645,618,740	0.83	4,060	5,669
	2002	3,515,604	2,516,714	19,152,238,806	18,284,638,806	0.95	4,681	6,539
	2001	3,357,600	2,402,202	17,649,751,244	17,575,751,244	1.00	4,711	6,585
	2000	3,235,380	2,308,844	17,260,364,842	17,581,364,842	1.02	4,891	6,853
	1999	3,156,706	2,240,691	17,391,056,437	17,599,056,437	1.01	5,018	7,069
	1998	3,114,014	2,193,411	17,247,179,483	17,394,179,483	1.01	5,027	7,137
	1997	3,092,718	2,158,476	15,751,867,489	16,069,867,489	1.02	4,676	6,701
	1996	3,070,984	2,123,329	13,690,217,121	14,089,217,121	1.03	4,129	5,972
	1995	3,033,406	2,079,151	11,718,795,352	12,210,795,352	1.04	3,623	5,286
	1994	2,974,647	2,022,605	9,599,127,189	9,925,908,181	1.03	3,003	4,417
	1993	2,900,862	1,957,217	7,535,259,914	7,775,178,821	1.03	2,412	3,575
	1992	2,821,868	1,889,267	5,545,921,821	5,788,381,943	1.04	1,846	2,757
	1991	2,752,473	1,828,155	4,451,497,337	4,825,088,556	1.08	1,578	2,375
	1990	2,703,019	1,780,441	2,838,485,398	3,460,782,156	1.22	1,152	1,749
Oman	2012	3,314,001	2,512,199	78,110,784,836	72,722,674,567	0.93	19,750	26,053
	2011	3,024,774	2,247,820	69,971,912,138	65,145,224,259	0.93	19,383	26,083
	2010	2,802,768	2,034,683	58,813,004,375	54,687,155,213	0.93	17,561	24,190
	2009	2,663,224	1,884,660	46,866,060,196	43,847,060,196	0.94	14,818	20,939
	2008	2,593,523	1,788,030	60,566,970,579	57,807,542,729	0.95	20,060	29,097
	2007	2,569,739	1,729,687	41,901,170,689	41,097,529,590	0.98	14,394	21,384
	2006	2,554,905	1,685,186	36,803,641,389	36,137,841,644	0.98	12,730	19,300
	2005	2,522,325	1,636,613	30,905,071,771	29,882,965,130	0.97	10,663	16,433
	2004	2,464,001	1,579,692	24,673,602,280	24,283,485,241	0.98	8,870	13,835
	2003	2,389,121	1,520,325	21,542,262,852	21,001,300,559	0.97	7,911	12,432
	2002	2,308,409	1,462,517	20,049,414,986	19,081,924,731	0.95	7,440	11,743
	2001	2,239,025	1,413,343	19,949,284,975	19,241,284,975	0.96	7,734	12,253
	2000	2,192,535	1,377,268	19,867,880,550	19,114,688,665	0.96	7,846	12,491
	1999	2,172,287	1,355,646	15,710,148,340	15,031,160,529	0.96	6,228	9,979
	1998	2,171,135	1,344,363	14,085,373,243	13,468,777,502	0.96	5,583	9,017
	1997	2,177,723	1,336,028	15,837,451,381	15,300,702,553	0.97	6,323	10,307
	1996	2,175,998	1,320,619	15,277,763,468	14,791,601,219	0.97	6,118	10,080
	1995	2,154,600	1,291,239	13,802,600,905	13,406,047,999	0.97	5,600	9,344
	1994	2,109,246	1,244,560	12,918,855,771	12,499,412,942	0.97	5,333	9,039
	1993	2,043,912	1,183,364	12,493,108,041	12,107,013,921	0.97	5,331	9,208
	1992	1,965,586	1,114,391	12,452,275,788	12,055,676,886	0.97	5,520	9,736
	1991	1,885,036	1,047,593	11,341,482,539	11,159,924,209	0.98	5,328	9,588
	1990	1,810,103	990,120	11,685,045,608	11,379,937,628	0.97	5,658	10,344
Qatar	2012	2,050,514	1,778,159	192,402,595,463	189,962,718,862	0.99	83,377	96,148
	2011	1,910,902	1,655,716	171,476,093,959	169,301,588,421	0.99	79,738	92,028
	2010	1,749,713	1,509,481	125,122,249,141	125,699,413,913	1.00	64,656	74,946
Qatar	2009	1,564,082	1,335,950	97,583,513,671	97,134,513,671	1.00	55,893	65,437
	2008	1,359,114	1,140,655	115,019,776,905	116,781,776,905	1.02	77,332	92,143
	2007	1,152,459	942,002	79,546,975,729	80,843,975,729	1.02	63,134	77,239
	2006	967,602	764,707	60,496,701,553	62,259,348,054	1.03	57,910	73,274
	2005	821,159	626,261	43,040,108,650	44,294,135,645	1.03	48,547	63,655
	2004	720,383	534,063	31,675,273,812	32,598,172,237	1.03	40,726	54,934
	2003	660,238	482,686	23,533,790,531	24,219,476,733	1.03	33,015	45,159
	2002	629,745	460,844	19,363,735,706	19,927,922,184	1.03	28,480	38,918
	2001	611,808	450,975	17,538,461,033	18,049,465,868	1.03	26,552	36,021
	2000	593,693	439,987	17,759,889,598	18,277,346,029	1.03	27,707	37,387
	1999	572,155	424,705	12,393,131,511	12,754,220,782	1.03	20,062	27,028
	1998	550,367	408,416	10,255,494,737	10,554,301,308	1.03	17,259	23,258
	1997	529,491	392,039	11,297,801,802	11,626,977,282	1.03	19,763	26,692
	1996	512,476	378,218	9,059,340,117	9,323,295,802	1.03	16,373	22,186
	1995	501,154	368,655	8,137,911,748	8,375,020,066	1.03	15,040	20,446
	1994	495,106	362,740	7,374,450,565	7,589,314,454	1.03	13,796	18,830
	1993	491,996	358,427	7,156,593,446	7,365,109,660	1.03	13,473	18,494
	1992	489,606	354,423	7,646,153,766	7,868,955,905	1.03	14,465	19,982
	1991	485,129	349,179	6,883,516,285	7,083,516,420	1.03	13,141	18,258
	1990	476,517	341,537	7,360,439,208	7,581,428,529	1.03	14,319	19,978

Table B1: Continued

		Population total	Adult population aged 15+	GDP (current US$)	GNI (current US$)	Ratio GNI/ GDP	90% of GNI per capita (current US$)	90% of GNI per adult (current US$)
Saudi Arabia	2012	28,287,855	19,890,290	711,049,600,000	722,020,737,286	1.02	22,972	32,670
	2011	27,761,728	19,385,192	669,506,666,667	679,174,666,667	1.01	22,018	31,532
	2010	27,258,387	18,883,711	526,811,466,667	533,855,466,667	1.01	17,626	25,444
	2009	26,796,375	18,396,110	429,097,866,667	437,710,866,667	1.02	14,701	21,414
	2008	26,366,358	17,919,097	519,796,800,000	528,963,800,000	1.02	18,056	26,568
	2007	25,915,624	17,422,351	415,909,018,143	422,305,018,143	1.02	14,666	21,815
	2006	25,371,936	16,864,923	376,900,133,511	385,392,133,511	1.02	13,671	20,567
	2005	24,690,067	16,222,393	328,459,608,764	334,314,608,764	1.02	12,186	18,547
	2004	23,839,231	15,475,660	258,742,133,333	260,000,133,333	1.00	9,816	15,121
	2003	22,852,333	14,646,568	214,572,800,000	213,272,800,000	0.99	8,399	13,105
	2002	21,825,217	13,801,474	188,551,196,399	188,330,196,399	1.00	7,766	12,281
	2001	20,891,594	13,032,048	183,012,268,442	182,493,258,274	1.00	7,862	12,603
	2000	20,144,584	12,402,308	188,441,864,875	188,921,868,015	1.00	8,440	13,710
	1999	19,620,692	11,937,970	160,957,062,622	163,881,069,227	1.02	7,517	12,355
	1998	19,282,965	11,614,792	145,772,799,590	148,541,293,636	1.02	6,933	11,510
	1997	19,060,850	11,385,288	164,993,858,632	167,778,394,984	1.02	7,922	13,263
	1996	18,848,350	11,177,696	157,743,126,867	160,189,325,953	1.02	7,649	12,898
	1995	18,567,343	10,939,014	142,457,681,256	145,261,152,175	1.02	7,041	11,951
	1994	18,197,011	10,654,521	134,327,104,601	135,799,468,447	1.01	6,716	11,471
	1993	17,758,096	10,337,948	132,151,405,583	136,059,827,496	1.03	6,896	11,845
	1992	17,263,613	9,998,474	136,304,139,411	141,737,520,217	1.04	7,389	12,758
	1991	16,739,895	9,654,455	131,335,915,473	138,102,275,810	1.05	7,425	12,874
	1990	16,206,078	9,318,573	116,778,111,980	124,756,748,357	1.07	6,928	12,049
Syria	2012	22,399,254	14,480,102	45,639,768,700	44,188,056,856	0.97	1,775	2,746
	2011	21,961,676	14,167,703	62,947,476,606	60,945,240,399	0.97	2,498	3,872
	2010	21,532,647	13,838,123	59,147,033,452	57,265,681,914	0.97	2,394	3,724
	2009	21,031,546	13,431,710	53,934,534,351	52,827,856,976	0.98	2,261	3,540
	2008	20,346,056	12,883,638	52,581,913,978	51,432,913,978	0.98	2,275	3,593
	2007	19,561,477	12,259,582	40,405,006,007	39,715,797,004	0.98	1,827	2,916
	2006	18,804,914	11,658,206	33,332,844,575	32,393,616,325	0.97	1,550	2,501
	2005	18,167,367	11,150,099	28,858,965,517	27,979,782,709	0.97	1,386	2,258
	2004	17,676,012	10,755,738	25,086,930,693	24,333,960,521	0.97	1,239	2,036
	2003	17,298,476	10,449,393	21,828,144,686	20,975,661,635	0.96	1,091	1,807
	2002	16,994,676	10,200,081	21,582,248,882	20,657,248,818	0.96	1,094	1,823
	2001	16,700,984	9,958,774	21,099,833,784	20,316,833,784	0.96	1,095	1,836
	2000	16,371,208	9,689,964	19,325,894,913	18,446,494,913	0.95	1,014	1,713
	1999	15,995,760	9,386,663	15,873,875,969	15,265,393,605	0.96	859	1,464
	1998	15,591,261	9,061,939	15,200,846,139	14,708,892,293	0.97	849	1,461
	1997	15,168,523	8,723,994	14,505,233,970	13,804,384,981	0.95	819	1,424
	1996	14,746,306	8,387,058	13,789,560,878	13,768,083,832	1.00	840	1,477
	1995	14,338,240	8,061,837	11,396,706,587	11,590,958,084	1.02	728	1,294
	1994	13,945,646	7,748,998	10,122,020,000	10,290,460,000	1.02	664	1,195
	1993	13,562,742	7,445,198	13,695,962,017	13,364,912,686	0.98	887	1,616
Syria	1992	13,187,960	7,152,656	13,253,565,901	12,899,428,965	0.97	880	1,623
	1991	12,818,302	6,873,550	12,981,833,333	12,579,833,333	0.97	883	1,647
	1990	12,451,539	6,609,315	12,308,624,284	11,954,908,675	0.97	864	1,628
UAE	2012	9,205,651	7,878,948	384,730,252,190	397,588,001,740	1.03	38,871	45,416
	2011	8,925,096	7,676,520	348,594,972,517	360,245,074,960	1.03	36,327	42,235
	2010	8,441,537	7,271,589	287,421,927,883	297,548,476,848	1.04	31,723	36,827
	2009	7,718,319	6,627,584	270,334,929,438	273,634,929,438	1.01	31,907	37,159
	2008	6,798,635	5,786,219	314,844,665,222	318,744,665,222	1.01	42,195	49,578
	2007	5,797,347	4,857,773	258,150,041,411	266,523,084,536	1.03	41,376	49,379
	2006	4,875,639	3,997,656	222,105,928,741	226,843,845,826	1.02	41,873	51,070
	2005	4,148,883	3,317,505	180,617,023,539	183,503,340,844	1.02	39,807	49,782
	2004	3,658,658	2,856,346	147,824,374,543	148,532,339,165	1.00	36,538	46,801
	2003	3,369,254	2,580,481	124,346,361,619	124,291,902,802	1.00	33,201	43,350
	2002	3,223,969	2,439,716	109,816,204,634	110,737,375,525	1.01	30,913	40,851
	2001	3,132,104	2,352,643	103,311,643,523	108,376,313,511	1.05	31,142	41,459
	2000	3,026,352	2,258,609	104,337,375,343	109,452,330,013	1.05	32,550	43,614
	1999	2,893,648	2,147,184	84,445,475,523	88,585,265,105	1.05	27,552	37,131
	1998	2,753,498	2,035,847	75,674,338,445	79,384,138,596	1.05	25,947	35,094
	1997	2,608,993	1,924,051	78,839,008,363	82,703,950,841	1.05	28,530	38,686
	1996	2,470,810	1,816,745	73,571,233,920	77,177,933,104	1.05	28,112	38,233
	1995	2,346,305	1,717,289	65,743,666,508	68,966,633,090	1.05	26,454	36,144
	1994	2,232,159	1,621,353	59,305,093,918	62,212,420,905	1.05	25,084	34,534
	1993	2,121,143	1,523,656	55,625,170,196	58,352,095,453	1.05	24,759	34,468
	1992	2,012,977	1,426,388	54,239,171,831	56,898,150,978	1.05	25,439	35,901
	1991	1,908,002	1,333,542	51,552,165,569	54,079,419,002	1.05	25,509	36,498
	1990	1,806,498	1,248,031	50,701,443,696	53,186,991,999	1.05	26,498	38,355

Table B1: Continued

		Population total	Adult population aged 15+	GDP (current US$)	GNI (current US$)	Ratio GNI/ GDP	90% of GNI per capita (current US$)	90% of GNI per adult (current US$)
Yemen	2012	23,852,409	14,140,527	35,645,823,132	33,649,055,533	0.94	1,270	2,142
	2011	23,304,206	13,677,429	31,724,633,891	29,442,466,083	0.93	1,137	1,937
	2010	22,763,008	13,213,556	31,883,409,719	29,921,778,860	0.94	1,183	2,038
	2009	22,229,625	12,748,303	24,581,907,774	23,436,203,781	0.95	949	1,655
	2008	21,703,571	12,283,812	26,869,018,825	24,956,590,626	0.93	1,035	1,828
	2007	21,182,162	11,824,275	21,596,088,517	20,249,283,587	0.94	860	1,541
	2006	20,661,714	11,375,387	18,941,303,850	17,714,875,655	0.94	772	1,402
	2005	20,139,661	10,941,463	16,753,787,028	15,139,185,523	0.90	677	1,245
	2004	19,612,696	10,522,510	13,873,500,888	12,526,476,901	0.90	575	1,071
	2003	19,081,306	10,117,768	11,777,768,087	10,751,195,526	0.91	507	956
	2002	18,551,068	9,729,602	10,693,278,292	9,874,936,476	0.92	479	913
	2001	18,029,989	9,360,661	9,854,042,165	9,163,055,443	0.93	457	881
	2000	17,522,537	9,011,872	9,636,342,275	8,862,682,034	0.92	455	885
	1999	17,035,531	8,687,739	7,641,101,221	6,945,339,663	0.91	367	719
	1998	16,564,235	8,385,757	6,325,219,773	5,967,690,065	0.94	324	640
	1997	16,088,019	8,091,486	6,839,039,030	6,225,469,192	0.91	348	692
	1996	15,578,640	7,785,294	5,785,685,311	5,278,102,816	0.91	305	610
	1995	15,018,201	7,454,571	4,258,788,725	4,073,605,062	0.96	244	492
	1994	14,396,720	7,091,481	4,167,356,037	4,088,247,678	0.98	256	519
	1993	13,726,827	6,704,012	5,368,270,615	5,267,489,204	0.98	345	707
	1992	13,040,955	6,314,660	6,463,649,985	6,313,485,166	0.98	436	900
	1991	12,384,543	5,955,125	5,930,370,370	5,734,006,734	0.97	417	867
	1990	11,790,249	5,647,681	5,647,251,908	5,611,374,046	0.99	428	894
Middle East	2012	294,145,421	205,007,242	2,741,907,078,711	2,718,177,377,209	0.99	8,317	12,037
	2011	288,446,412	200,486,363	2,540,178,436,798	2,511,750,650,332	0.99	7,837	11,403
	2010	282,678,644	195,772,656	2,073,118,374,864	2,048,718,304,927	0.99	6,523	9,530
	2009	276,687,912	190,752,976	1,769,404,920,868	1,747,122,729,463	0.99	5,683	8,348
	2008	270,540,242	185,483,929	1,961,454,257,472	1,960,695,553,604	1.00	6,523	9,517
	2007	264,346,320	180,022,991	1,538,244,033,990	1,561,018,091,132	1.01	5,315	7,690
	2006	258,252,362	174,454,340	1,298,997,665,048	1,326,300,564,827	1.02	4,622	6,701
	2005	252,370,282	168,853,709	1,075,780,587,594	1,081,491,945,473	1.01	3,857	5,734
	2004	246,738,484	163,236,732	873,329,749,825	869,071,362,074	1.00	3,170	4,815
	2003	241,328,428	157,615,155	746,073,347,703	734,876,823,979	0.98	2,741	4,260
	2002	236,135,916	152,078,696	668,659,569,511	663,130,702,724	0.99	2,527	3,957
	2001	231,138,112	146,734,798	656,214,447,776	660,900,648,687	1.01	2,573	4,025
	2000	226,306,557	141,657,919	657,758,401,415	663,638,463,076	1.01	2,639	4,179
Middle East	1999	221,635,036	136,885,725	572,610,528,018	579,865,271,535	1.01	2,355	3,765
	1998	217,149,239	132,427,988	522,561,425,504	532,609,060,729	1.02	2,207	3,551
	1997	212,748,913	128,210,336	545,857,459,370	555,696,238,114	1.02	2,351	3,832
	1996	208,475,092	124,223,757	520,415,980,317	528,835,403,621	1.02	2,283	3,770
	1995	204,303,989	120,430,984	456,724,783,722	465,257,282,513	1.02	2,050	3,413
	1994	200,276,914	116,849,044	401,631,318,849	405,751,610,400	1.01	1,823	3,093
	1993	196,254,331	113,416,175	383,273,119,649	389,727,639,966	1.02	1,787	3,041
	1992	192,159,801	110,111,604	393,961,900,205	403,960,699,104	1.03	1,892	3,220
	1991	187,897,423	106,912,517	386,083,407,735	398,091,564,770	1.03	1,907	3,250
	1990	183,185,724	103,684,928	455,729,750,399	457,742,516,658	1.00	2,249	3,956

Source: WB Databank, UN Database and author's calculations.

Table B2: Population and Income in the Middle East Countries, 2012

	Population total	Adult population aged 15+	GDP (current US$)	GNI (current US$)	Ratio GNI/GDP	90% of GNI per capita (current US$)	90% of GNI per adult (current US$)
Bahrain	1,317,827	1,052,092	26,695,757,336	23,379,450,253	0.88	15,967	20,000
Egypt	80,721,874	55,497,786	262,831,912,587	256,346,567,687	0.98	2,858	4,157
Iran	76,424,443	58,325,646	537,997,208,880	495,554,742,752	0.92	5,836	7,647
Iraq	32,578,209	19,381,116	210,279,947,256	213,115,780,343	1.01	5,887	9,896
Jordan	6,318,000	4,161,932	31,015,239,496	30,709,965,096	0.99	4,375	6,641
Kuwait	3,250,496	2,440,992	182,562,915,204	196,617,874,554	1.08	54,440	72,494
Lebanon	4,424,888	3,467,453	42,945,273,632	42,321,751,681	0.99	8,608	10,985
Oman	3,314,001	2,512,199	78,110,784,836	72,722,674,567	0.93	19,750	26,053
Qatar	2,050,514	1,778,159	192,402,595,463	189,962,718,862	0.99	83,377	96,148
Saudi_Arabia	28,287,855	19,890,290	711,049,600,000	722,020,737,286	1.02	22,972	32,670
Syria	22,399,254	14,480,102	45,639,768,700	44,188,056,856	0.97	1,775	2,746
UAE	9,205,651	7,878,948	384,730,252,190	397,588,001,740	1.03	38,871	45,416
Yemen	23,852,409	14,140,527	35,645,823,132	33,649,055,533	0.94	1,270	2,142
Middle East	294,145,421	205,007,242	2,741,907,078,711	2,718,177,377,209	0.99	8,317	11,933

Source: Table B1.

Table B3: Population and Income in the Middle East Countries, 1990

	Population total	Adult population aged 15+	GDP (current US$)	GNI (current US$)	Ratio GNI/GDP	90% of GNI per capita (current US$)	90% of GNI per adult (current US$)
Bahrain	1,317,827	1,052,092	26,695,757,336	23,379,450,253	0.88	15,967	20,000
Egypt	80,721,874	55,497,786	262,831,912,587	256,346,567,687	0.98	2,858	4,157
Iran	76,424,443	58,325,646	537,997,208,880	495,554,742,752	0.92	5,836	7,647
Iraq	32,578,209	19,381,116	210,279,947,256	213,115,780,343	1.01	5,887	9,896
Jordan	6,318,000	4,161,932	31,015,239,496	30,709,965,096	0.99	4,375	6,641
Kuwait	3,250,496	2,440,992	182,562,915,204	196,617,874,554	1.08	54,440	72,494
Lebanon	4,424,888	3,467,453	42,945,273,632	42,321,751,681	0.99	8,608	10,985
Oman	3,314,001	2,512,199	78,110,784,836	72,722,674,567	0.93	19,750	26,053
Qatar	2,050,514	1,778,159	192,402,595,463	189,962,718,862	0.99	83,377	96,148
Saudi_Arabia	28,287,855	19,890,290	711,049,600,000	722,020,737,286	1.02	22,972	32,670
Syria	22,399,254	14,480,102	45,639,768,700	44,188,056,856	0.97	1,775	2,746
UAE	9,205,651	7,878,948	384,730,252,190	397,588,001,740	1.03	38,871	45,416
Yemen	23,852,409	14,140,527	35,645,823,132	33,649,055,533	0.94	1,270	2,142
Middle East	294,145,421	205,007,242	2,741,907,078,711	2,718,177,377,209	0.99	8,317	11,933

Source: Table B1.

Table C1: Top 10% Income Shares in the Middle East under Different Parameter Assumptions, 1990-2012

	Scenario							Scenario							Scenario						
	1.1	1.2	1.3	1.4	1.5	1.6	1.7	2.1	2.2	2.3	2.4	2.5	2.6	2.7	3.1	3.2	3.3	3.4	3.5	3.6	3.7
				Pareto b							Pareto b							Pareto b			
	2.00	1.50	1.80	1.90	2.10	2.20	3.00	2.00	1.50	1.80	1.90	2.10	2.20	3.00	2.00	1.50	1.80	1.90	2.10	2.20	3.00
				Pareto a							Pareto a							Pareto a			
	2.00	3.00	2.25	2.11	1.91	1.83	1.50	2.00	3.00	2.25	2.11	1.91	1.83	1.50	2.00	3.00	2.25	2.11	1.91	1.83	1.50
	benchmark							low inequality							high inequality						
1990	55.3	51.7	56.0	56.6	52.3	55.3	61.3	52.3	48.7	50.9	51.6	53.0	53.7	58.5	58.8	55.3	57.5	58.2	59.5	60.2	64.6
1991	61.1	58.1	61.7	62.3	58.1	61.1	66.3	58.1	55.2	56.9	57.5	58.6	59.2	63.3	64.7	61.7	63.5	64.1	65.2	65.8	69.6
1992	63.0	60.3	63.5	64.0	60.0	63.0	67.8	60.0	57.5	59.0	59.5	60.5	61.0	64.8	66.3	63.6	65.2	65.8	66.9	67.4	71.0
1993	64.1	61.7	64.6	65.1	61.3	64.1	68.7	61.3	59.0	60.3	60.8	61.8	62.2	65.8	67.4	64.8	66.4	66.9	67.9	68.4	71.9
1994	63.3	60.8	63.9	64.4	60.5	63.3	68.0	60.5	58.1	59.5	60.0	61.0	61.5	65.2	66.7	64.0	65.6	66.1	67.2	67.7	71.2
1995	61.4	58.6	62.0	62.5	58.6	61.4	66.5	58.6	55.9	57.5	58.0	59.1	59.7	63.6	64.8	61.9	63.6	64.2	65.4	65.9	69.7
1996	60.6	57.7	61.2	61.8	57.8	60.6	65.8	57.8	55.0	56.7	57.2	58.4	58.9	63.0	64.0	61.0	62.8	63.4	64.6	65.2	69.0
1997	60.7	57.8	61.2	61.8	57.9	60.7	65.8	57.9	55.1	56.8	57.3	58.4	59.0	63.0	64.0	61.0	62.8	63.4	64.5	65.1	69.0
1998	58.6	55.4	59.2	59.8	55.8	58.6	64.0	55.8	52.8	54.6	55.2	56.4	57.0	61.3	61.9	58.7	60.6	61.3	62.5	63.1	67.2
1999	59.1	56.1	59.7	60.3	56.4	59.1	64.4	56.4	53.5	55.2	55.8	57.0	57.5	61.7	62.4	59.2	61.1	61.8	63.0	63.5	67.6
2000	61.0	58.3	61.6	62.1	58.4	61.0	66.0	58.4	55.8	57.3	57.9	58.9	59.5	63.4	64.2	61.2	63.0	63.6	64.7	65.3	69.1
2001	59.8	56.9	60.4	61.0	57.1	59.8	65.1	57.1	54.4	56.0	56.6	57.7	58.3	62.4	63.1	60.0	61.8	62.5	63.6	64.2	68.2
2002	60.9	58.1	61.5	62.0	58.2	60.9	66.0	58.2	55.5	57.1	57.6	58.7	59.3	63.2	64.2	61.2	63.0	63.6	64.7	65.3	69.1
2003	62.0	59.3	62.6	63.1	59.3	62.0	67.0	59.3	56.7	58.2	58.7	59.8	60.3	64.2	65.3	62.5	64.2	64.8	65.9	66.4	70.1
2004	63.3	60.6	63.8	64.3	60.3	63.3	68.0	60.3	57.9	59.3	59.8	60.9	61.4	65.1	66.7	64.0	65.6	66.2	67.2	67.7	71.3
2005	63.9	61.4	64.4	64.9	60.9	63.9	68.6	60.9	58.5	59.9	60.4	61.4	61.9	65.5	67.5	64.9	66.4	67.0	68.0	68.5	71.9
2006	62.6	60.0	63.2	63.7	59.5	62.6	67.4	59.5	57.0	58.5	59.0	60.0	60.5	64.3	66.3	63.6	65.2	65.8	66.8	67.3	70.9
2007	60.6	57.8	61.2	61.8	57.3	60.6	65.8	57.3	54.6	56.2	56.7	57.8	58.4	62.5	64.5	61.5	63.3	63.9	65.0	65.6	69.4
2008	59.9	56.9	60.4	61.0	56.2	59.9	65.1	56.2	53.4	55.1	55.7	56.8	57.4	61.5	64.0	61.0	62.8	63.4	64.5	65.1	69.0
2009	55.6	52.2	56.2	56.9	51.8	55.6	61.5	51.8	48.6	50.5	51.2	52.5	53.1	57.8	59.9	56.5	58.5	59.2	60.5	61.2	65.5
2010	55.4	52.0	56.1	56.7	51.4	55.4	61.3	51.4	48.1	50.1	50.7	52.1	52.7	57.4	59.9	56.5	58.5	59.2	60.5	61.1	65.5
2011	56.6	53.4	57.3	57.9	52.5	56.6	62.4	52.5	49.4	51.2	51.9	53.2	53.8	58.4	61.2	57.9	59.9	60.5	61.8	62.4	66.6
2012	56.3	53.0	56.9	57.6	52.2	56.3	62.1	52.2	49.0	50.9	51.5	52.9	53.5	58.1	60.8	57.5	59.5	60.2	61.5	62.1	66.3

Table C2: Top 1% Income Shares in Middle East under Different Parameter Assumptions, 1990-2012

	Scenario							Scenario							Scenario						
	1.1	1.2	1.3	1.4	1.5	1.6	1.7	2.1	2.2	2.3	2.4	2.5	2.6	2.7	3.1	3.2	3.3	3.4	3.5	3.6	3.7
				Pareto b							Pareto b							Pareto b			
	2.00	1.50	1.80	1.90	2.10	2.20	3.00	2.00	1.50	1.80	1.90	2.10	2.20	3.00	2.00	1.50	1.80	1.90	2.10	2.20	3.00
				Pareto a							Pareto a							Pareto a			
	2.00	3.00	2.25	2.11	1.91	1.83	1.50	2.00	3.00	2.25	2.11	1.91	1.83	1.50	2.00	3.00	2.25	2.11	1.91	1.83	1.50
	benchmark							low inequality							high inequality						
1990	20.7	16.5	18.9	19.8	21.5	22.4	29.1	17.6	13.8	16.0	16.8	18.4	19.3	25.7	24.8	20.3	23.0	23.9	25.7	26.6	33.3
1991	23.3	18.9	21.5	22.4	24.2	25.1	31.8	19.7	15.8	18.1	18.9	20.5	21.3	27.7	28.3	23.5	26.4	27.3	29.2	30.1	36.8
1992	24.2	19.8	22.4	23.3	25.1	26.0	32.6	20.3	16.4	18.7	19.5	21.1	21.9	28.2	29.5	24.7	27.6	28.6	30.4	31.4	38.0
1993	25.0	20.6	23.2	24.1	25.9	26.7	33.2	20.9	17.1	19.3	20.1	21.7	22.5	28.6	30.5	25.7	28.6	29.5	31.4	32.3	38.8
1994	24.7	20.5	23.0	23.9	25.6	26.5	32.9	20.7	17.0	19.2	19.9	21.5	22.3	28.5	30.1	25.4	28.3	29.2	31.0	31.9	38.4
1995	23.9	19.7	22.2	23.0	24.7	25.6	32.1	20.0	16.4	18.5	19.2	20.8	21.6	27.8	29.0	24.4	27.1	28.1	29.9	30.7	37.3
1996	23.5	19.3	21.8	22.6	24.3	25.2	31.7	19.7	16.0	18.1	18.9	20.5	21.3	27.5	28.4	23.9	26.6	27.5	29.3	30.2	36.7
1997	23.5	19.4	21.8	22.7	24.4	25.2	31.7	19.7	16.0	18.2	18.9	20.5	21.3	27.5	28.5	24.0	26.7	27.6	29.4	30.3	36.7
1998	22.6	18.6	20.9	21.7	23.4	24.3	30.7	19.0	15.4	17.5	18.2	19.8	20.6	26.8	27.3	22.9	25.5	26.4	28.2	29.0	35.5
1999	22.9	18.9	21.2	22.1	23.7	24.6	31.0	19.2	15.7	17.7	18.5	20.0	20.8	27.0	27.7	23.3	26.0	26.8	28.6	29.5	35.9
2000	24.2	20.2	22.5	23.4	25.0	25.8	32.1	20.3	16.8	18.8	19.5	21.0	21.8	27.8	29.2	24.8	27.5	28.3	30.1	30.9	37.2
2001	23.6	19.6	22.0	22.8	24.4	25.2	31.6	19.9	16.4	18.4	19.1	20.6	21.4	27.5	28.4	24.1	26.7	27.6	29.3	30.2	36.5
2002	24.1	20.2	22.5	23.3	25.0	25.8	32.1	20.3	16.9	18.8	19.6	21.1	21.8	27.9	29.1	24.7	27.4	28.2	30.0	30.8	37.2
2003	24.7	20.7	23.1	23.9	25.5	26.4	32.7	20.7	17.3	19.3	20.0	21.5	22.3	28.3	29.8	25.4	28.1	28.9	30.7	31.5	37.9
2004	25.0	21.0	23.4	24.2	25.9	26.7	33.1	20.9	17.4	19.4	20.2	21.7	22.5	28.6	30.2	25.7	28.4	29.3	31.1	32.0	38.4
2005	24.9	20.7	23.2	24.1	25.8	26.7	33.1	20.7	17.0	19.2	19.9	21.5	22.3	28.5	30.2	25.6	28.4	29.3	31.1	32.0	38.5
2006	24.2	20.1	22.5	23.4	25.1	25.9	32.4	20.1	16.4	18.5	19.3	20.9	21.7	27.9	29.3	24.7	27.5	28.4	30.2	31.1	37.6
2007	23.0	18.8	21.3	22.1	23.9	24.7	31.3	19.1	15.3	17.5	18.3	19.9	20.7	27.0	27.8	23.2	26.0	26.9	28.7	29.6	36.2
2008	22.3	17.9	20.5	21.4	23.2	24.1	30.8	18.5	14.6	16.9	17.7	19.3	20.2	26.6	26.9	22.2	25.0	25.9	27.8	28.7	35.5
2009	20.0	15.7	18.2	19.1	21.0	21.9	28.7	16.7	12.7	15.0	15.8	17.5	18.4	25.0	24.3	19.7	22.4	23.4	25.3	26.2	33.1
2010	19.8	15.3	18.0	18.9	20.7	21.6	28.5	16.5	12.5	14.8	15.6	17.3	18.2	24.8	24.0	19.1	22.0	23.0	24.9	25.9	32.9
2011	20.3	15.8	18.5	19.4	21.2	22.2	29.1	16.9	12.9	15.2	16.1	17.8	18.6	25.2	24.5	19.6	22.5	23.5	25.4	26.4	33.4
2012	20.2	15.7	18.4	19.3	21.1	22.0	28.9	16.8	12.8	15.1	16.0	17.7	18.5	25.1	24.3	19.4	22.3	23.3	25.2	26.2	33.2

Table C3: Gini Coefficients in the Middle East under Different Parameter Assumptions, 1990-2012

	Scenario							Scenario							Scenario						
	1.1	1.2	1.3	1.4	1.5	1.6	1.7	2.1	2.2	2.3	2.4	2.5	2.6	2.7	3.1	3.2	3.3	3.4	3.5	3.6	3.7
				Pareto b							Pareto b							Pareto b			
	2.00	1.50	1.80	1.90	2.10	2.20	3.00	2.00	1.50	1.80	1.90	2.10	2.20	3.00	2.00	1.50	1.80	1.90	2.10	2.20	3.00
				Pareto a							Pareto a							Pareto a			
	2.00	3.00	2.25	2.11	1.91	1.83	1.50	2.00	3.00	2.25	2.11	1.91	1.83	1.50	2.00	3.00	2.25	2.11	1.91	1.83	1.50
	benchmark							low inequality							high inequality						
1990	0.65	0.63	0.64	0.65	0.66	0.66	0.70	0.64	0.61	0.63	0.63	0.65	0.65	0.69	0.68	0.65	0.66	0.67	0.68	0.69	0.72
1991	0.70	0.67	0.69	0.69	0.70	0.71	0.74	0.69	0.66	0.68	0.68	0.69	0.69	0.73	0.72	0.69	0.71	0.71	0.72	0.73	0.76
1992	0.70	0.68	0.70	0.70	0.71	0.71	0.74	0.69	0.67	0.68	0.69	0.70	0.70	0.73	0.72	0.70	0.71	0.72	0.73	0.73	0.76
1993	0.71	0.69	0.70	0.70	0.71	0.72	0.75	0.70	0.67	0.69	0.69	0.70	0.71	0.74	0.73	0.70	0.72	0.72	0.73	0.74	0.76
1994	0.71	0.68	0.70	0.70	0.71	0.71	0.74	0.69	0.67	0.68	0.69	0.70	0.70	0.73	0.72	0.70	0.72	0.72	0.73	0.73	0.76
1995	0.69	0.67	0.69	0.69	0.70	0.70	0.73	0.68	0.66	0.67	0.68	0.69	0.69	0.72	0.71	0.69	0.70	0.71	0.72	0.72	0.75
1996	0.69	0.67	0.68	0.69	0.69	0.70	0.73	0.68	0.65	0.67	0.67	0.68	0.69	0.72	0.71	0.69	0.70	0.70	0.71	0.72	0.75
1997	0.69	0.66	0.68	0.68	0.69	0.70	0.73	0.67	0.65	0.66	0.67	0.68	0.68	0.72	0.71	0.68	0.70	0.70	0.71	0.72	0.75
1998	0.67	0.64	0.66	0.66	0.67	0.68	0.71	0.66	0.63	0.65	0.65	0.66	0.67	0.70	0.69	0.66	0.68	0.68	0.69	0.70	0.73
1999	0.67	0.64	0.66	0.66	0.67	0.68	0.71	0.66	0.63	0.65	0.65	0.66	0.67	0.70	0.69	0.66	0.68	0.68	0.69	0.70	0.73
2000	0.68	0.65	0.67	0.67	0.68	0.69	0.72	0.67	0.64	0.66	0.66	0.67	0.68	0.71	0.70	0.67	0.69	0.69	0.70	0.71	0.74
2001	0.67	0.65	0.66	0.67	0.68	0.68	0.72	0.66	0.63	0.65	0.66	0.67	0.67	0.70	0.69	0.67	0.68	0.69	0.70	0.70	0.73
2002	0.68	0.66	0.67	0.68	0.69	0.69	0.72	0.67	0.64	0.66	0.66	0.67	0.68	0.71	0.70	0.68	0.69	0.70	0.71	0.71	0.74
2003	0.69	0.67	0.68	0.69	0.70	0.70	0.73	0.68	0.66	0.67	0.67	0.68	0.69	0.72	0.71	0.69	0.70	0.71	0.72	0.72	0.75
2004	0.71	0.68	0.70	0.70	0.71	0.71	0.74	0.69	0.67	0.68	0.69	0.70	0.70	0.73	0.72	0.70	0.72	0.72	0.73	0.73	0.76
2005	0.71	0.69	0.70	0.71	0.71	0.72	0.75	0.70	0.67	0.69	0.69	0.70	0.71	0.73	0.73	0.71	0.72	0.72	0.73	0.74	0.77
2006	0.70	0.67	0.69	0.69	0.70	0.71	0.74	0.69	0.66	0.68	0.68	0.69	0.69	0.72	0.72	0.70	0.71	0.71	0.72	0.73	0.76
2007	0.68	0.66	0.67	0.68	0.69	0.69	0.73	0.67	0.65	0.66	0.67	0.67	0.68	0.71	0.71	0.68	0.70	0.70	0.71	0.72	0.75
2008	0.68	0.66	0.67	0.68	0.69	0.69	0.72	0.67	0.64	0.66	0.66	0.67	0.67	0.71	0.70	0.68	0.69	0.70	0.71	0.71	0.74
2009	0.64	0.61	0.63	0.64	0.65	0.65	0.69	0.63	0.60	0.61	0.62	0.63	0.64	0.67	0.67	0.64	0.66	0.66	0.67	0.68	0.71
2010	0.64	0.61	0.63	0.64	0.65	0.65	0.69	0.62	0.60	0.61	0.62	0.63	0.64	0.67	0.67	0.64	0.66	0.66	0.67	0.68	0.72
2011	0.66	0.63	0.65	0.65	0.66	0.67	0.70	0.64	0.61	0.63	0.63	0.65	0.65	0.69	0.68	0.66	0.67	0.68	0.69	0.69	0.73
2012	0.65	0.63	0.64	0.65	0.66	0.67	0.70	0.64	0.61	0.63	0.63	0.64	0.65	0.68	0.68	0.65	0.67	0.68	0.69	0.69	0.73

Table C4: Gini Coefficients in the Middle East under Different Parameter Assumptions

	Scenario								Scenario								Scenario							
	1.1	1.2	1.3	1.4	1.5	1.6	1.7		2.1	2.2	2.3	2.4	2.5	2.6	2.7		3.1	3.2	3.3	3.4	3.5	3.6	3.7
	Pure			Pareto b					Pure			Pareto b					Pure			Pareto b			
	lorgnormal	2.00	1.50	1.80	1.90	2.10	2.20	3.00	lorgnormal	2.00	1.50	1.80	1.90	2.10	2.20	3.00	lorgnormal	2.00	1.50	1.80	1.90	2.10	2.20	3.00
				Pareto a								Pareto a								Pareto a			
	2.00	3.00	2.25	2.11	1.91	1.83	1.50		2.00	3.00	2.25	2.11	1.91	1.83	1.50		2.00	3.00	2.25	2.11	1.91	1.83	1.50
	benchmark								low inequality								high inequality							
Middle East	**0.61**	**0.64**	**0.61**	**0.63**	**0.64**	**0.65**	**0.65**	**0.69**	**0.59**	**0.62**	**0.60**	**0.61**	**0.62**	**0.63**	**0.64**	**0.67**	**0.64**	**0.67**	**0.64**	**0.66**	**0.66**	**0.67**	**0.68**	**0.72**
Bahrain	0.50	0.53	0.48	0.51	0.52	0.54	0.55	0.60	0.34	0.40	0.35	0.38	0.39	0.41	0.42	0.48	0.70	0.66	0.61	0.64	0.65	0.67	0.68	0.72
Egypt	**0.34**	**0.40**	**0.35**	**0.38**	**0.39**	**0.41**	**0.42**	**0.48**	**0.34**	**0.40**	**0.35**	**0.38**	**0.39**	**0.41**	**0.42**	**0.48**	**0.34**	**0.40**	**0.35**	**0.38**	**0.39**	**0.41**	**0.42**	**0.48**
Iran	0.42	0.47	0.42	0.45	0.46	0.48	0.48	0.54	0.42	0.47	0.42	0.45	0.46	0.48	0.48	0.54	0.42	0.47	0.42	0.45	0.46	0.48	0.48	0.54
Iraq	0.34	0.40	0.35	0.38	0.39	0.41	0.42	0.48	0.34	0.40	0.35	0.38	0.39	0.41	0.42	0.48	0.34	0.40	0.35	0.38	0.39	0.41	0.42	0.48
Jordan	0.39	0.44	0.39	0.42	0.43	0.45	0.46	0.52	0.39	0.44	0.39	0.42	0.43	0.45	0.46	0.52	0.39	0.44	0.39	0.42	0.43	0.45	0.46	0.52
Kuwait	0.50	0.53	0.48	0.51	0.52	0.54	0.54	0.60	0.34	0.40	0.35	0.38	0.39	0.41	0.42	0.48	0.70	0.65	0.59	0.63	0.64	0.65	0.66	0.70
Lebanon	0.34	0.40	0.35	0.38	0.39	0.41	0.42	0.48	0.34	0.40	0.35	0.38	0.39	0.41	0.42	0.48	0.34	0.40	0.35	0.38	0.39	0.41	0.42	0.48
Oman	0.50	0.53	0.48	0.51	0.52	0.54	0.55	0.60	0.34	0.40	0.35	0.38	0.39	0.41	0.42	0.48	0.70	0.66	0.61	0.64	0.65	0.67	0.67	0.72
Qatar	0.50	0.53	0.47	0.51	0.52	0.53	0.54	0.60	0.34	0.40	0.35	0.38	0.39	0.41	0.42	0.48	0.70	0.63	0.58	0.62	0.63	0.64	0.65	0.69
Saudi Arabia	0.50	0.53	0.48	0.51	0.52	0.54	0.55	0.60	0.34	0.40	0.35	0.38	0.39	0.41	0.42	0.48	0.70	0.66	0.61	0.64	0.65	0.67	0.67	0.72
Syria	0.40	0.45	0.40	0.43	0.44	0.46	0.47	0.53	0.40	0.45	0.40	0.43	0.44	0.46	0.47	0.53	0.40	0.45	0.40	0.43	0.44	0.46	0.47	0.53
UAE	0.50	0.53	0.48	0.51	0.52	0.54	0.55	0.60	0.34	0.40	0.35	0.38	0.39	0.41	0.42	0.48	0.70	0.65	0.60	0.64	0.65	0.66	0.67	0.71
Yemen	0.42	0.47	0.42	0.45	0.46	0.48	0.48	0.54	0.42	0.47	0.42	0.45	0.46	0.48	0.48	0.54	0.42	0.47	0.42	0.45	0.46	0.48	0.48	0.54