Gender Inequality and Income Inequality in Iran

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INTRODUCTION

In his monumental and seminal book *Capital in the Twenty-first Century*, Thomas Piketty (2014) meticulously analyzes and presents the cross-country dynamics of income inequality over the past two centuries. He offers a myriad of underlying factors and trends that have over time led to vast wealth and power accumulation of a few and limited upward mobility for the rest. His main argument is that in order to gain wealth and opportunity, birth matters more than effort or talent.

Despite the impressive volume of data and careful analysis, however, Piketty disregards gender inequality as a possible contributing factor to income inequality. This failure of coverage comes despite the evidence from the social science literature about the nexus between gender and marginalization, gender-based lack of access to external and intra-household resources, or the "feminization of poverty" (Cagatay 1998) as women comprise 60 percent of the poor. It has been widely documented that upward economic mobility for women has been far more challenging, and quite often impossible, throughout the ages and across nearly every society. Over centuries, women's biology has served as justification in the construction of social and cultural roles, which have resulted in biases that exacerbate the effects of

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poverty, dependency, and income inequality. The persistence of deep-rooted discriminatory views and institutions has impeded women from all socioeconomic classes, race, or ethnicity to develop their full economic potential.

To bridge the income inequality gap, Piketty does not shy away from proposing a bold solution—a global wealth tax—that is unlikely to gain broad support. However, he falls short of making any recommendations that target the elimination of the many legal and institutional barriers that invariably hold back more than half of the world's population by sex, race, and ethnicity—hence, purely due to the incidence of birth rather than capabilities—among whom women account for the largest share.

Unfortunately, Piketty has not been alone in omitting the linkage between gender-based inequalities and income inequalities. In fact, many prominent economists and policy-makers have shied away from the gender debate by compartmentalizing it into the social, cultural, or religious realms. This disconnect may have also resulted from broader ambiguity in economic literature about the effect of income inequality on growth and vice versa (Aghion et al. 1999; Carvalho and Rezai 2014; Barro 2000). Fortunately, there is a consensus that the distribution of income matters on its own right, even if not for growth purposes. And, the evidence from US data, which are the most widely available and studied, shows that income inequality reduces the potential of the poor to participate in growth-generating activities (Van der Weide and Milanovic 2014). Furthermore, it reduces an individual's lifetime upward mobility and often affects inter-generational mobility due to lower investments in physical and human capital for children. More and more economists are beginning to understand, or venture into, the nature of equality between the sexes and its implication for economic growth.

For the conclusion of the 2015 Millennium Development Goals (MDGs) and in preparation for the 2030 Sustainable Development Goals (SDGs), there is a rapidly expanding body of economic literature between varying dimensions of gender inequality and income inequality across time, across groups, and across countries (World Bank 2012a, 2012b). The empirical evidence suggests that reducing gender inequality, by leveling the playing field for men and women, can impact the overall inequality of opportunity within a society and will over time reduce income inequality in a more sustainable manner than traditional policies used to improve income redistribution, such as taxation, subsidies, or populist policies (Gonzales et al. 2015a).

This chapter first reviews recent literature on the global evidence for the linkages between gender inequality and income inequality. The drivers for sex and income inequality can vary among countries and even within

countries by different groups or regions. In the second section, the chapter will discuss some of the specificities of Iran. Income inequality, and certainly the perception of unjust income distribution, has plagued the Iranian society for decades. Oil revenues have been lavishly spent on implicit and explicit subsidies, as well as populist policies implemented in hopes to achieve the equitable society that was promised since the dawn of the 1979 Islamic Revolution. But more needs to be done. An important policy lever for the Iranian Government could, in fact, be the removal of sex- and gender-based barriers that could free up the earnings potential of Iranian families, particularly those in lower- to middle-income strata, to build a stronger household financial security. Only 17 percent of working age women are in the labor force in Iran (ILO 2015). This rate is among the lowest in the world. It suggests that around 80 percent of Iranian families could be traditional one-earner families. In the United States, only 7 percent of households are one-earner families. Thus, Iranian families are more exposed to economic shocks. Since the purpose of this chapter is to present a synthesis of recent empirical literature, given data constraints, it draws on existing empirical analyses rather than engage in new analytical work.

RECENT EVIDENCE

The concepts and consequences of gender inequality and income inequality have been considered as separate topics in economics. However, gender inequality persists as a major barrier to human development. Women and girls face multiple disadvantages and differential treatment in most social and economic activities; this impedes their capabilities and freedom of choice. As such, evidence is gradually emerging that a host of gender-based inequalities influences macro-economic outcomes (Elborgh-Woytek et al. 2013). One of the most commonly used indicators is United Nations Development Programme's (UNDP) Gender Inequality Index (GII), which is available for 188 countries. The GII uses the same framework as UNDP's human development index to expose the differences between men and women.[1] The GII ranges from 0 to 1—the higher, the more inequality. For instance, Norway ranks number 1 with the lowest GII value (0.067), while Niger ranks last (0.713). Iran is ranked 69th with a value of 0.515 (UNDP 2016).

Since the 1990s, most middle- to upper-income countries have overcome "access" disparities to education and health (see Stotsky et al. 2016). Indeed, in most countries, the younger generations of men and women—those under the age of 30—have almost equal education. Women are also

increasingly outnumbering men in tertiary education in more and more countries. Across the Middle East and North Africa, for instance, among university students, women outnumber men in 13 (out of 18) countries including Iran (UNESCO 2016). Despite this progress, nearly every country experiences persistent gender disparities of one type or another in economic and social empowerment terms.

Economists use two main economic indicators, per capita income and GDP growth, for cross-country comparisons. When exploring the relationship between GII and per capita income, one discovers a strong negative association (Fig. 6.1). One can observe a similar relation when regressing GDP growth against gender inequality (Fig. 6.2). The data suggest that countries with greater gender equality have experienced higher per capita growth.

The evidence from recent studies indicates that gender equality affects macro-economic indicators through the three channels of economic growth, macro-stability, and long-term development. Reducing gender inequalities can deepen and broaden the talent pool, which leads to greater efficiency, higher productivity, and innovation—all of which boost economic growth
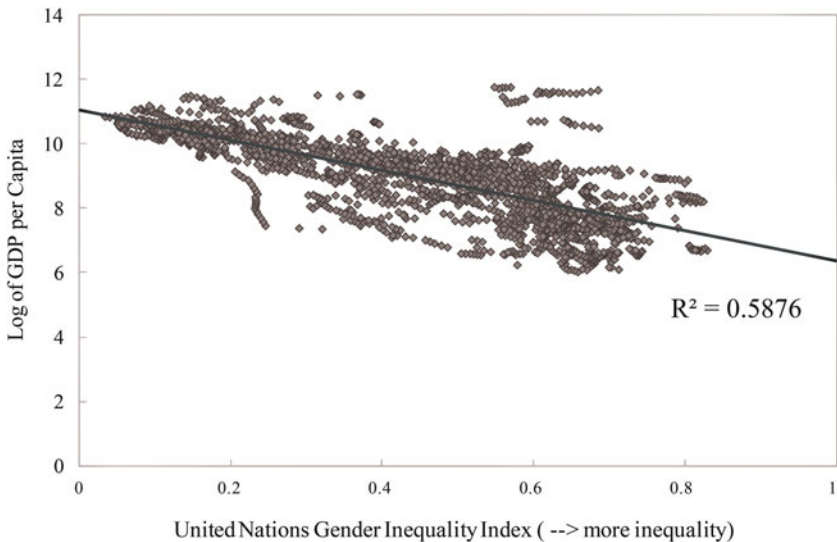

Fig. 6.1   Gender inequality and GDP per capita. *Source*: Gonzales et al. (2015a: 5), based on UNDP Human Development Report, World Bank's World Development Indicators, and IMF Staff estimates
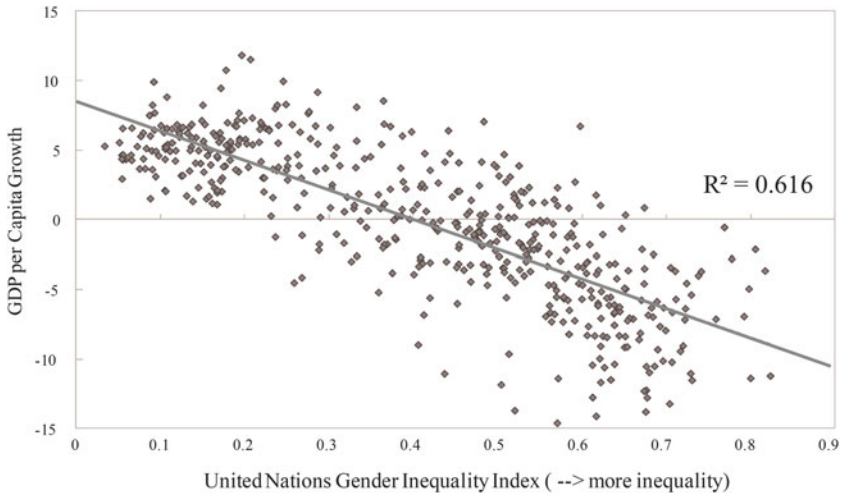
Fig. 6.2 Gender inequality and GDP per capita growth. *Source*: Gonzales et al. (2015a: 6) based on UNDP Human Development Report, World Bank's World Development Indicators, and IMF Staff estimates. *Note*: 1/GDP per capita growth was regressed on initial income to control for convergence

(Cuberes and Teignier 2014; Esteve-Volart 2004; Klasen 1999). Removing gender-based barriers results ultimately in women's greater participation in the labor force. For countries that face stagnant or declining birth rates, increased economic participation rates of women mitigate the risk of a shrinking workforce for the productive sectors and alleviate pressures on pension systems, which are essential for long-term macro-economic stability (Steinberg and Nankane 2012). Finally, there is confirmation that women's income is used toward higher expenditures for school enrollment and children's health (Aguirre et al. 2012)—hence, investment in the future generation improves a country's long-run competitiveness and development (Duflo 2012; WEF 2015).

We now look at the association between gender inequality, income inequality, and poverty. The Gini index is frequently used as a measure of income distribution. It ranges from 0 percent which indicates perfect equality to 100 percent meaning maximum inequality. Though there is some debate about the interpretation of the Gini coefficient and its limitation for comparison across populations, it is routinely used in cross-country regressions. Figure 6.3 demonstrates the relationship between GII to (a) Gini index,
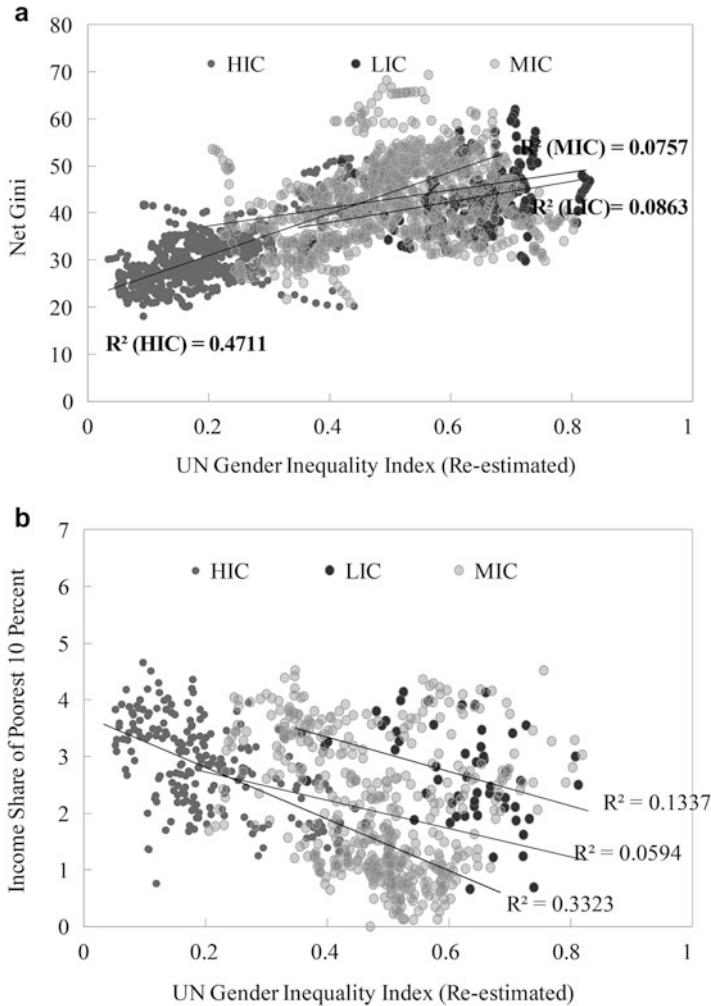
Fig. 6.3 Gender inequality, income inequality, and poverty. (a) Income inequality and gender inequality. *Source*: Gonzales et al. (2015a: 13) based on Standardized World Income Inequality Database (SWIID), United Nations; and further estimates. (b) Income inequality and gender inequality. *Source*: Gonzales et al. (2015a: 13) based World Bank's World Development Indicators; United Nations, and further estimates. (c) Poverty ($2) and Gender Inequality. *Source*: Gonzales et al. (2015a: 13) based World Bank's World Development Indicators; United Nations, and further estimates. (d) Poverty ($1.25) and Gender Inequality. Source: Gonzales et al. (2015a: 13) based World Bank's World Development Indicators; United Nations, and further estimates. *Note*: HIC = High-income countries; LIC = Low-income countries; MIC = Middle-income countries
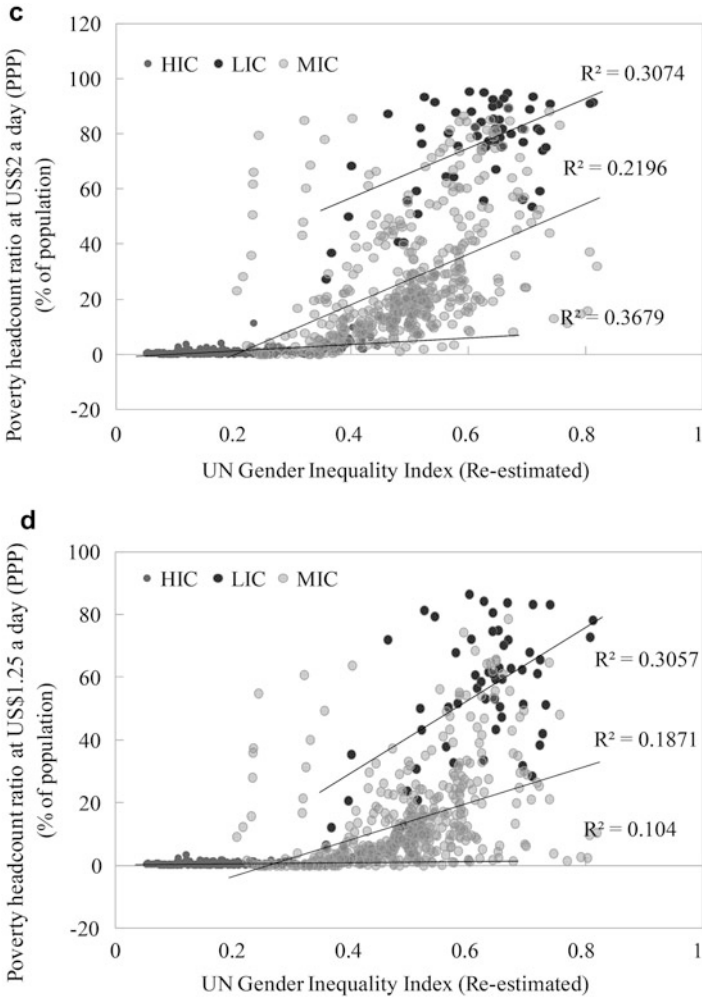
Fig. 6.3 (continued)

(b) income of the poorest decile, (c) poverty at $1.25 PPP, and (d) poverty headcount at $2 PPP thresholds (Gonzales et al. 2015a).

Countries with higher gender inequality seem to have wider income inequality. Different components of gender inequality affect countries differently. Gender gaps in education and health affect income inequality in

emerging markets or low-income countries where such disparities persist (Ibid.:24). The gender gap in labor force participation matters more for income equality in high-income countries as well as those that have narrowed the gap in human capital.

The slope of the relationship is steeper for middle-income countries, which means that in these countries reducing gender barriers has a greater overall impact than in low- or high-income economies. In high-income countries, the lowest 10 percent income groups would respond more rapidly to improved gender equality (per steeper slope), with those below the $1.25 and $2 PPP international poverty lines registering an even stronger impact from the removal of gender-based barriers. In short, the analyses are conclusive that income inequality responds to gender inequality. It does so better for the relatively poorer economic strata within high-income countries—hence, removal of gender-based barriers is (or could definitely be) a tool for upward economic mobility. In low- and middle-income countries, greater gender equality has a higher impact on the absolute poor, thus promising to be a strong poverty alleviation tool (Gonzales et al. 2015a).

Gender gaps in labor force participation rates, wages, and political participation are also strongly related to income inequality, particularly in countries where education and health disparities appear to have been bridged. As men and women possess nearly equal human capital in these countries, differences in earnings are a direct result of discrimination or persistent institutional barriers and translate into economic inequality. For instance, in OECD countries, with greater homogeneity in terms of women's access to education and health, countries with larger pay gaps also have the widest male–female employment gaps and higher overall income inequality (see OECD 2015). Thus, to address income inequality, it is necessary to educate and improve the health of women. Yet, these will not be sufficient, if there are other barriers that prevent women from equal access to opportunities.

> A higher proportion of working women has been associated with lower income in equality in the OECD. In particular, an increase in the proportion of households with working women increases from 52 percent in the mid-1980s/early 1990s to 61 percent in the late 2000s, on average decreased income inequality by 1 Gini point. The increasing work intensity of women was also associated with lower income inequality, having more households with women in paid work, especially full-time work, means less income inequality by about 2 Gini points. (Gonzales et al. 2015a)

Table 6.1 Distribution of male and female workers by type of employment (000), 2014

	M	F	Total	Share of total workers		Share of women workers
				M (percent)	F (percent)	F (percent)
Total workers	17,746	2477	20,223	87.8	12.2	100
Unemployment rate	8.6 %	19.3 %	10.6 %			
Wage & salaried workers (employees) ('000)	10,159	1750	11,909	50.2	8.7	71
Total self-employed workers ('000)	7587	727	8314	37.5	3.6	29
of which:						0
Employers ('000)	745	36	781	3.7	0.2	1
Own-account workers ('000)	6842	691	7533	33.8	3.4	28
Contributing family workers ('000)	449	605	1054	2.2	3.0	24

Source: KILM 2016 (http://www.ilo.org/global/publications/books/WCMS_409035/lang--en/index.htm)

Economic literature identifies several key drivers of income equality in emerging economies. Among them are trade openness, technological progress, skills premium, access to finance, fiscal spending, financial deepening, labor market institutions, and, at times, female mortality rates. Indeed, Dabla-Norris et al. (2015: 25) find a statistically significant association between these variables and various measures of income distribution at the global level (see Table 6.2 in Appendix A). When a similar analysis is carried out with the additional gender equality index (see Table 6.3 in Appendix A), the latter variable has a high economic value and is statistically significant, while some variables in the earlier regression are no longer significant, such as trade openness (Gonzales et al. 2015a). Hence, the association between gender inequality and the actual income distribution is strong. According to Gonzales et al. (2015a: 22):

An increase in the GII from 0 (perfect gender equality) to 1 (perfect gender inequality) is associated with an increase in net inequality by almost 10 points. Alternatively, if the GII falls from the highest level of 0.7 (highest level in the sample, seen in Yemen) to the median level of 0.4 (seen in Peru), the net Gini decreases by 3.4 points, which is similar to the difference in net Gini between

Mali and Switzerland. Higher gender inequality is strongly associated with higher income shares in the top 10 percent income group. If the GII index increases from the median to the highest levels, the income share of the top 10 percent increases by 5.8 percentage points, which is the difference between Norway and Greece. Gender inequality also goes hand in hand with lower income shares at the bottom of the income distribution. As before, if the GII index increases from median to highest levels, the income share of the bottom 20 percent declines by 2 percentage points (which is similar to the difference between Estonia and Uganda).

While the regression shows robust results, questions could be raised about the direction of causality between gender and income inequality. Could gender inequality be the result of, or be influenced by, income inequality rather than income inequality be impacted by gender inequality? To address this, Gonzales et al. (2015a: 27) use a set of legal restrictions on women's economic participation as an instrument to carry out the following two-stage analysis and find that the direction of causality is in fact one way, from gender inequality to income inequality[2]:

> Legal rights appear as valid instruments since they are not expected to affect income inequality directly but only indirectly through the labor force participation gap. The legal restrictions related to guaranteed equality under the law and a daughter's inheritance rights are the strongest instruments as seen in the first stage regression. The statistical tests support the validity of the instruments. Using these instruments for the gender gap in labor force participation, the second stage regression highlights that a widening of the gender gap in labor force participation leads to greater income inequality. In addition to the legal restrictions, we use other instruments to test the robustness of the results. Our results also hold when the labor force participation gap is instrumented by other instruments used in the literature. For instance, we include the lag of the share of female tertiary teachers as an instrument for the LFP gap.
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> To further explore the effect of policy interventions on gender equality (specifically), female labor force participation, and income inequality, we employ the Synthetic Control Method, a methodology to formalize a case-study approach to examine the effect of policy interventions on the variable of interest. This data-driven procedure is used to construct a counterfactual, and the effect of the policy intervention can be discerned by comparing the actual outcome and outcome for the constructed "synthetic" country. Using Chile as an illustrative case, the finding is that changes to the law to guarantee legal equality for women led to a fall in the gender gap in labor force participation, which in turn lowered income inequality. These effects were not seen in the synthetic control group.

Why does gender inequality of opportunity and outcome matter? Inequality of opportunity of any kind significantly undermines individuals' life choices. It leads to misallocation of resources and high social costs when the privileged group advances through favored treatment, patronage, or nepotism. Inequality of any kind often goes hand in hand with weak rule of law, poor governance, biased institutions in favor of the powerful, and corruption (Dabla-Norris et al. 2015). Gender inequality exacerbates these circumstances even further and hurts the welfare of the society (see Jain-Chandra 2015).

According to the late Gary Becker (1992), when the share of the discriminated is small compared to discriminators, for instance a religious or ethnic minority, then discrimination does not have much of a negative effect on the discriminator and would not lower overall social well-being. However, when the share of the discriminated is large in comparison to the total population, as is the case with women who constitute half of the population, discrimination injures the discriminator as well.

Aguirre et al. (2012) estimate that some 865 million women worldwide (of whom over 800 million live in emerging markets) have the potential to contribute more fully to their family's well-being and national economies. No pay, low pay, low participation, or insecure employment, which affect women more than men, may drag down the global economy as a whole. According to ActionAid (2015), the global cost of gender inequality is in the order of $9 trillion per year (see also Watson 2015). The above discussion indicates that the income equality benefits to an economy can be significant if women can develop their full economic potential.

THE CASE OF IRAN

Iran's Gini index, which stood at 0.56 in the late 1970s, fell to about 0.46 following the Revolution and the Iran-Iraq War, and has hovered around 0.37 in the recent period (Salehi-Isfahani 2009). Iran's Gini index is below Turkey's but above Egypt's—the latter two countries being comparable to Iran in terms of population and region. Factors likely to have influenced Iran's Gini include the age structure of the population over the last 3–4 decades, the near reversal of the share of the rural/urban population, and the considerable populist policies of the government for income redistribution through government transfers from oil revenues. Despite the decline in the share of the country's population below the international poverty line to below 2 percent (Salehi-Isfahani 2009), relatively high inequality, particularly in urban areas, is a cause of resentment among Iranians.

A formidable accomplishment over the last four decades has been the expansion of educational opportunities, particularly for rural women. Average years of schooling for rural women born in the 1960s were 40 percent of their male counterparts; it has risen to 90 percent for those born in the late 1980s. The availability of free education from primary to university level has also improved tertiary educational opportunities for women. "The education Gini of years of schooling for adults born in the 1950s was more than 0.60. It declined to 0.35 for cohorts born 20 years later, which is a substantial increase in access to education inequality in just one generation (Salehi-Isfahani 2009)." Beginning in the mid-1990s, women began to outnumber men 2:1 in universities by receiving higher scores in entrance exams. This ratio led the Iran's Majles (the Iranian parliament, also known as the Islamic Consultative Assembly) to implement a 60:40 affirmative quota for men, and quite a few schools even began rejecting women in certain disciplines—some in science and engineering. Despite these actions, according to UNESCO (2016) data, females outnumber males by a significant margin at institutions of higher education in science, technology, engineering, and mathematics (STEM) fields. In fact, Iran posts one of the highest absolute numbers of female STEM students globally. And, women also account for a considerable share of students in medicine.

A further factor in reducing inequality has been the improvement in health, particularly in rural areas, due to the provision of good-quality basic services as well as electricity and potable water. Iran's maternal mortality was reduced drastically and stands now at similar levels as in high-income countries. Fertility rates, especially in rural areas, have been lowered drastically due to better maternal education and provision of one of the world's best family planning schemes. For instance, the average number of births per woman dropped from eight in the mid-1980s to about two by 2006 (Salehi-Isfahani 2009; see Table 6.4 in Appendix B).

Despite these impressive gains, Iran continues to show a disappointing record on the utilization of its female economic potential. Overall, Iran's rank among the World Economic Forum's Gender equality index in 2015 was 141 out of 146 (WEF 2015). This is mainly due to women's low economic participation rate and even lower rates of political representation. Iranian women's rate of labor force participation is only 17 percent with no improvement or even some decline over the last 15 years (Fig. 6.4). Among those women who are included in the active workforce, unemployment is as high as 20 percent—nearly double the male unemployment rate (Table 6.1). Among employed women, one in five is a family worker (compared with only
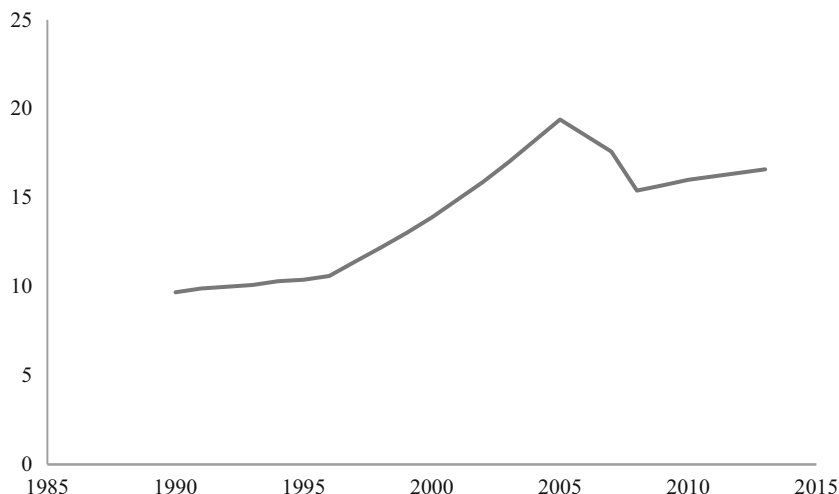
Fig. 6.4 Female labor force participation in Iran (percent of total labor force). *Source*: ILO (2015); author's illustration

2.5 percent of men); about 24 percent are self-employed and only 56 percent are wage and salary workers (ILO 2016). The male-female participation gap (Fig. 6.5), which is a measure of level playing field, is wide in absolute terms and in comparison with many other countries.

Iran's low female labor force participation rates result from (a) overall economic policies generate private-sector employment and (b) legal barriers or social norms that in effect impede women's access to jobs and entrepreneurial opportunities (Gonzales et al. 2015a; World Bank 2004; Chamlou 2008).

With highly inflexible labor market regulations, Iran ranks 118 out of 189 countries in the *Doing Business* (World Bank 2016a) report. Globally, difficult business climates and cumbersome labor regulation reduce the agility of the private sector to grow and create jobs. High levels of unemployment affect women and youth more significantly, because men are seen as the main breadwinners and more deserving of jobs. Moreover, the *Women, Business and the Law 2016* (World Bank Group 2015), which monitors the number and kind of gender-based legal barriers globally, reports that the Iranian legal framework imposes an additional 23 specific and significant gender-based legal differences that disadvantage women over and above the considerable difficulties men already face on a day-to-day basis. In fact, it places Iran as
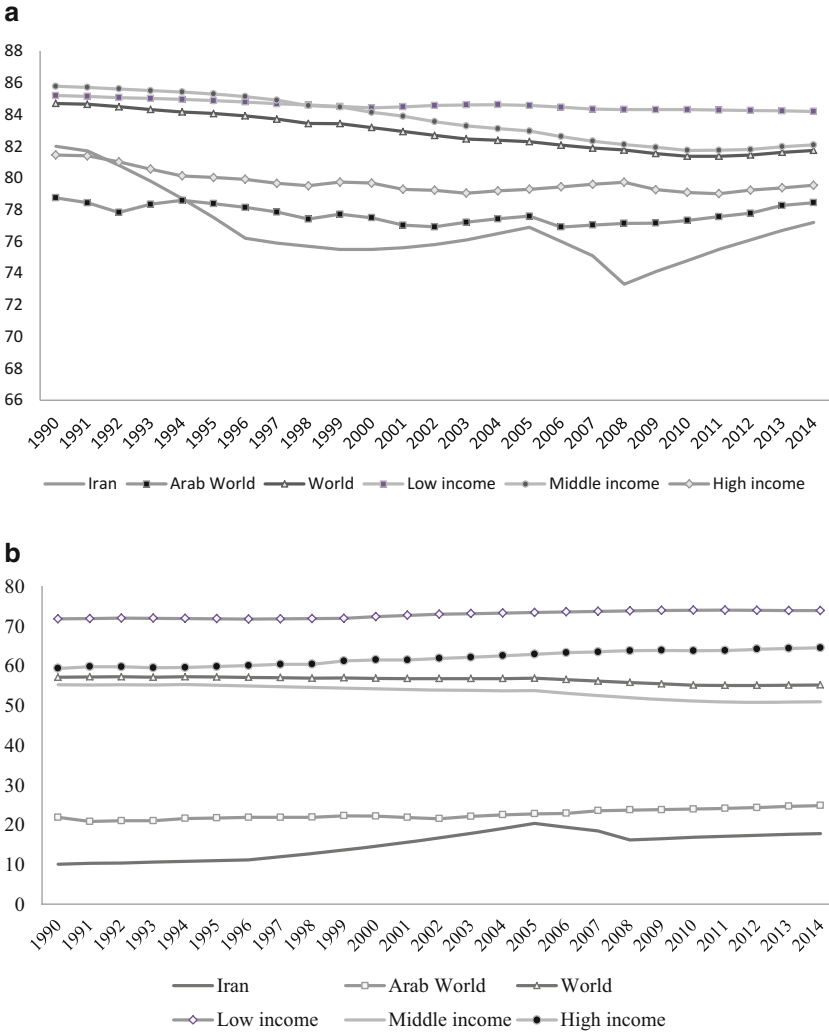
a

Iran —■— Arab World —△— World —▣— Low income —●— Middle income —◇— High income

b

Iran —□— Arab World —△— World
—◇— Low income — Middle income —●— High income

Fig. 6.5 Gender gaps in labor force participation. *Source*: World Bank (2016b); author's illustration. (a) Labor force participation rate, male (percent of male population ages 15–64) (modeled ILO estimate). (b) Labor force participation rate, female (percent of female population ages 15–64) (modeled ILO estimate)

having the third highest number of economic barriers for women, even among Muslim-majority countries (Fig. 6.6). More equal laws, according to the IMF, boost female labor force participation, while empowering women economically is an important tool for tackling income inequality (Gonzales et al. 2015b).

Over the last three decades, some government policies readily reduced female participation in Iran's formal and informal sectors. For instance, women or their husbands received cash incentives if women were to quit their jobs; working conditions were made difficult for married women; and employers were overburdened with female-protective laws that discouraged hiring women (Moghadam 2001). In 2015, the government announced that between 2009 and 2014, the actual number of women in the workforce declined from 3.7 million to 3.145 million—a yearly decline of 100,000 women who left the job market and were not replaced (Taghato 2015). This translates into 400 women becoming economically inactive every day.[3] The decline was also partly due to the dearth of job creation for women; during said period, the economy created 871,000 male jobs and destroyed 568,000 female jobs (Salehi Esfahani 2015). The decrease in the absolute number of female workers in relation to a rising share of 15–64 age cohort in the total population (as Iran has a young population structure) is one explanation of a declining female labor force participation in Iran, which is among the lowest in the world (World Bank 2016b). For those still economically active, unemployment rate jumped from 16.8 to 19.8 percent between 2009 and 2013 when male unemployment declined from 19.8 to 8.6 percent (ILO 2015).

International experience suggests that for female labor force participation (FLFP) to go beyond the 30 percent threshold, married women with children need integration into the workforce. This increase entails removing hurdles and inconveniences that married women face in balancing work and family, such as explicit legal restrictions limiting married women's choice of work, availability of an infrastructure for various types of care (not just childcare but also elderly care), and work environments that value diversity and meritocracy.

Several studies have attempted to estimate the effects of women's under-utilization in the economy. Chamlou and Karshenas (2016) estimate that Iran's GDP could have been between 22 (net) and 35 (gross) percent higher than it is today.[4] Cuberes and Teignier (2014) estimate the gender shortfall slightly differently. For Iran, based on a cross-country regression, they estimate that the short-run (i.e. when capital stock is fixed) total income loss due to gender gap to be 38 percent, and the long-run income loss to be 41 percent (i.e. when capital stock takes a steady-state value). The
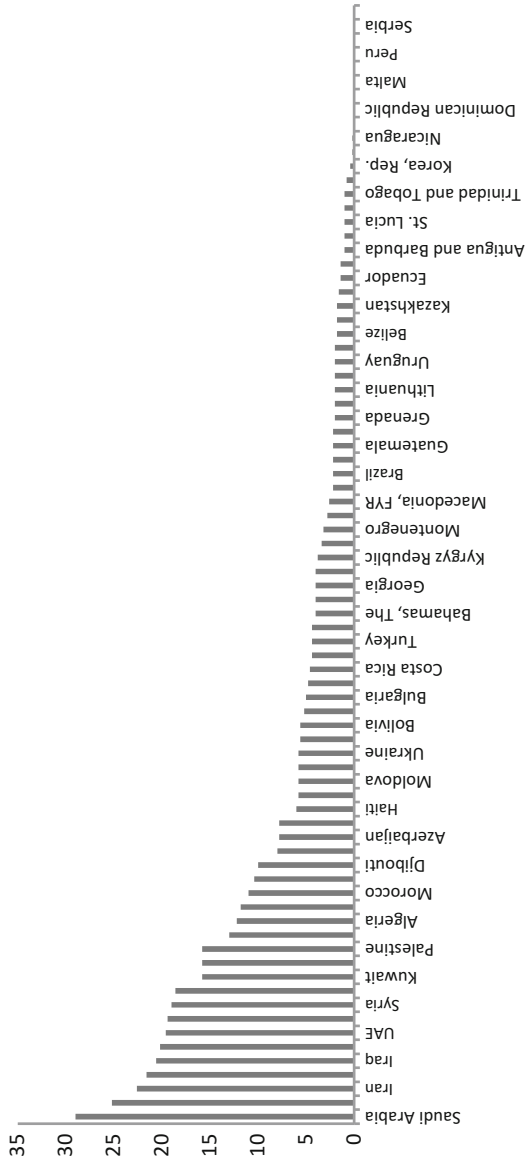
Fig. 6.6 Gender-based legal barriers. *Source:* IBRD (2016); author's illustration

long-term versus the short-term value takes into account female entrepreneurship as well. Comparing countries of similar population size, Cuberes and Teignier's results for Turkey are 30 and 33 percent, for Germany 13 and 15 percent, and for Egypt 36 and 39 percent, respectively. The losses for Iran are the highest, given its large population and the size of its economy (Fig. 6.7).

To put the above figures in perspective, Iran's nominal GDP in 2014 was $416 billion, which made the country the 29th largest economy in the world; a 40 percent larger GDP would have meant an economy of $150–170 billion more (roughly the size of Bangladesh or Kuwait) and could push Iran at least 8–9 ranks up. Iran cannot afford to exclude women and still realize its ambitions with respect to domestic welfare and its aspiration of being a regional power, if not a major global driver.

At a time when Iranian policy-makers are considering deep-rooted economic reforms within the next five-year plan under the slogan "resilience economy," it is critical that—at various stages of the reform process—specific attention be given to updating laws and institutions that have held back women's economic empowerment. Iran can benefit from specific examples and actions taken by advanced and emerging economies that promoted growth through better engagement of the female workforce. Countries with high per capita income, less poverty, and better income distribution, such as Norway, or leading world economies like Japan, realized that their long-term economic health depends on a meaningful integration of women into the economy, politics, decision-making, and leadership.

Conclusion

The purpose of this chapter has been to demonstrate the association between gender inequality and income inequality. Recent studies show that equality of opportunities for women and removing the obstacles that prevent them from reaching their full economic participation have a considerable impact on the distribution of income and upward mobility of families. The economic power of women remains untapped. Equal law boosts female labor force participation, which in turn reduces income inequality (Gonzales et al. 2015b).

Particularly in Iran, and in spite of the relatively low Gini coefficient, the perception of income inequality is high and heavy emphasis has been placed on social justice in political rhetoric (Salehi-Isfahani 2009). The economy and society have suffered from years of sanctions and economic mismanagement; removing gender-based barriers can give a considerable
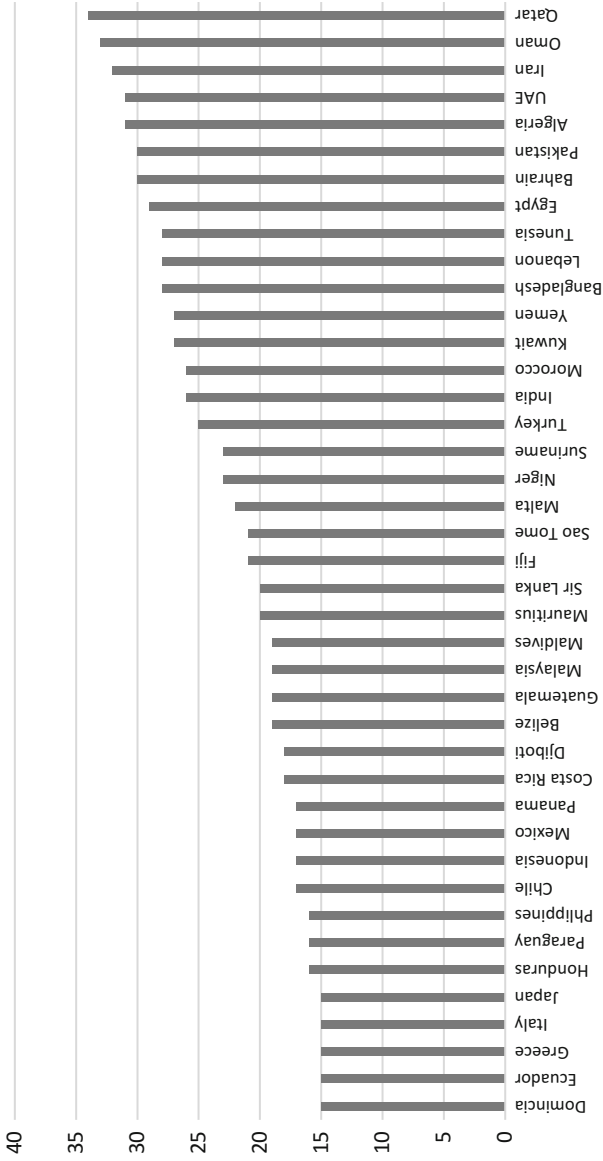
Fig. 6.7 GDP losses due to economic gender gaps in selected countries (percent of GDP). *Source:* Gonzales et al. (2015b: 5), based on estimates by Cuberes and Teignier (2014). *Note:* Losses are estimated for a particular year for each country and can thus be interpreted as a one-off increase in GDP if gender gaps were to be removed

boost to growth and income distribution. While Iran has successfully bridged education and health disparities, it has failed to make sufficient progress on women's economic opportunities. Iran's gender-based barriers are among the highest in the world. And, these obstacles, like any other obstacles in an economy, translate themselves into a very high cost. Iran's GDP would have been around 40 percent higher if Iranian women could have made a similar contribution as their peers in other countries, commensurate with their acquired skills. This gain could then be spent on much needed social protection, infrastructure, or investments that could boost the welfare of the entire population and narrowed income disparities.

Different components of gender inequality affect countries differently. The cross-country empirical evidence provided in this chapter suggests that the gender gap in labor force participation matters more with respect to reducing income inequality in middle-income countries, which have bridged the gap in education and health. This would be the case for Iran as well. The impact of removing gender barriers could particularly impact urban areas where income inequalities are more glaring. Continuing to bridge remaining gender gaps in education and health could further improve income inequality distribution in marginalized and low-income regions where disparities are high.

Beyond income gains, removing barriers to women's empowerment has non-monetary benefits that are not easily quantifiable. Countries with greater inclusion of women in decision-making tend to have better rule of law, stronger governance, and lower corruption. In this context, consider a passage from the memoir of a nineteenth-century Princess Taj Al-Saltaneh (2003: 288), daughter of Qajar monarch Nassereddin Shah, who expresses in simple language how she imagines women's empowerment could benefit her society:

> A Persian wage-earner makes two *qerans* a day. He has to support his mother, his sister, his niece, his wife, and his daughter. If we divide two *qerans* by five, we get seven *shahis* a day. With these seven *shahis*, how can one person provide for clothing and food as well as have a savings? Thus it is that necessity corrupts people. In order to gain comfort and ease, they will submit to any gross indignity, prepare to perform any wicked deed. Now if these five women and children were not forced into a veil, they would have to be educated. After education, each of these five could take a job in a store, a tea-house, a shop, a school, or an office. Then every person would have an income of two *qerans* a day. Six people making twelve *qerans* a day could feed and clothe themselves comfortably, without the need to degrade themselves or change their lifestyle. And they could preserve their conscience, their honor, their chastity, and

their family and national pride. In addition, there would be spiritual unity within this group, and many great benefits would accrue from unity.

APPENDIX A

Table 6.2   Economic drivers of inequality, 1980–2012

Variables	Market Gini (1)	Net Gini (2)	Top10 % (3)	Fifth Income Decile (4)	Bottom10 % (5)
Trade openness	−0.025	−0.008	−0.011	0.002	0.005
	(0.017)	(0.014)	(0.014)	(0.003)	(0.005)
Financial openness	0.098***	0.047**	0.026**	−0.002	−0.008*
	(0.016)	(0.019)	(0.011)	(0.002)	(0.004)
Technology	56.85*	15.03	31.11*	−3.775	−11.51***
	(31.01)	(30.01)	(15.81)	(3.572)	(3.587)
Financial deepening	0.050**	0.026**	0.022***	−0.004	−0.002
	(0.021)	(0.011)	(0.007)	(0.001)	(0.002)
Aes × Financial deepening	−0.049**	−0.033**	−0.03***	0.007***	0.004*
	(0.021)	(0.014)	(0.008)	(0.002)	(0.002)
Skill Premium	−0.413	−1.351	−0.475	0.063	−0.083
	(0.726)	(0.859)	(0.670)	(0.110)	(0.139)
Aes × Skill premium	1.165**	0.555	1.184***	−0.131**	0.024
	(0.521)	(0.556)	(0.346)	(0.064)	(0.057)
Education Gini	6.085	−3.245	12.52	−1.906	−3.370*
	(10.94)	(11.39)	(8.104)	(1.364)	(1.721)
Labor market institutions	0.803***	0.497	0.338*	−0.045	−0.140**
	(0.291)	(0.320)	(0.195)	(0.036)	(0.063)
Female mortality	0.021**	0.015*	0.026	−0.005***	0.001
	(0.009)	(0.009)	(0.032)	(0.002)	(0.002)
Government spending	−0.26	0.426***	−0.349***	0.046***	0.0332
	(0.162)	(0.145)	(0.103)	(0.017)	(0.023)
Country fixed effects	Yes	Yes	Yes	Yes	Yes
Time dummies	Yes	Yes	Yes	Yes	Yes
#. of Observation	361	361	220	220	220
#. of countries	97	97	67	67	67
Adjusted R-squared	0.386	0.246	0.491	0.412	0.225

Source: Dabla-Norris et al. (2015: 25), based on Fraser Institute; IMF, *World Economic Outlook*; Solt Database; UNU-WIDER's World Income Inequality Database; World Bank's World Economic Indicators; World Economic Forum; and IMF Staff calculations

Note: Standard errors in parentheses, $*p < 0.1$; $**p < 0.05$; and $***p < 0.01$. Estimated using fixed-effects panel regressions with robust standard errors clustered at the country level. Additional controls include lagged GDP growth and share of employment in agriculture and industry. Income shares represent disposable (after tax) incomes or consumption based on household data. AEs = advanced economies

Table 6.3 Gender inequality and economic distribution, 1980–2010

Variables	Dependent variable: Net GINI and income shares				
	(1) Net GINI	(2) Top 10	(3) Top 60	(4) Bottom 40	(5) Bottom 20
United nation gender inequality index (GII)	9.761* (5.589)	16.81* (8.431)	10.09** (4.444)	−9.367** (4.385)	−5.934** (2.390)
Trade openness	−0.0109 (0.0140)	−0.00942 (0.0121)	−0.0146 (0.0101)	0.0132 (0.0102)	0.00588 (0.00550)
Financial openness	0.0422*** (0.0113)	0.0310*** (0.0115)	0.0347*** (0.00967)	−0.0291*** (0.0100)	−0.0141** (0.00544)
Technology	−1.567 (18.53)	25.30 (20.74)	22.83* (12.21)	−22.24* (12.45)	−14.59** (6.187)
Financial deepening	0.0233** (0.00916)	0.0230*** (0.00785)	0.0208** (0.00809)	−0.0200** (0.00800)	−0.00876** (0.00385
Financial deepening × AM interaction	−0.0286*** (0.0101)	−0.0208** (0.00952)	−0.0315*** (0.00847)	0.0296*** (0.00841)	0.0132*** (0.00408)
Educational attainment	−0.793** (0.334)	−0.504 (0.318)	−0.481** (0.194)	0.546*** (0.203)	0.292*** (0.109)
Labor market institutions	0.688*** (0.197)	0.268 (0.172)	0.331** (0.133)	−0.249* (0.140)	−0.133* (0.0733)
Government spending	−0.320*** (0.102)	−0.356*** (0.105)	−0.112** (0.0501)	0.132** (0.0533)	0.0660** (0.0256)
Population over the age of 65	0.361** (0.150)	0.206 (0.175)	0.251* (0.136)	−0.292** (0.134)	−0.140* (0.0709)
Observations (five-year averages)	338	208	244	244	244
Countries	97	66	89	89	89
Adjusted R-squared	0.236	0.421	0.359	0.345	0.305

Sources: Gonzales et al. (2015b: 24), based on Barro-Lee education attainment data set; Fraser Institute; IMF's *World Economic Outlook*; Solt Database; UNU-WIDER World Income Inequality Database; World Bank's World Development Indicators; World Economic Forum; and IMF Staff estimates

Note: Estimated using country and year fixed-effects panel regressions with robust standard errors clustered at the country level shown in parentheses, $*p < 0.10$; $**p < 0.05$; $***p < 0.01$

Appendix B

Table 6.4 Human development indicators

Health	2015
Life expectancy at birth, female (years)	76.3
Life expectancy at birth, male (years)	74.0
Mortality rate, under-5, female (per 1000)	14.9
Mortality rate, under-5, male (per 1000)	16.2
Births attended by skilled health staff (percent of total)	96.4
Education indicators	*2013*
Literacy rate, female (percent of females ages 15–25)	97.7
Literacy rate, male (percent of males ages 15–25)	98.3

Source: World Bank (2016b), World Development Indicators

Notes

1. "GII measures gender inequalities in three important aspects of human development—reproductive health, measured by maternal mortality ratio and adolescent birth rates; empowerment, measured by proportion of parliamentary seats occupied by females and proportion of adult females and males aged 25 years and older with at least some secondary education; and economic status, expressed as labor market participation and measured by labor force participation rate of female and male populations aged 15 years and older (UNDP, 2016)."
2. See Appendix B.
3. 100,000/year≈8000/month≈2000/week≈400/day.
4. Gross impact is percentage increase in per capita GDP assuming women having the same hours of work and productivity as men. Net impact is adjusted for productivity drag and part time work.

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