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GENDERED LAWS AND WOMEN IN THE WORKFORCE

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This paper offers for the first time a global picture of gender discrimination by the law as it affects women's economic opportunity and charts the evolution of legal inequalities over five decades. Using the World Bank's newly constructed "*Women, Business and the Law*" database, we document large and persistent gender inequalities, especially with regard to pay and treatment of parenthood. We find positive correlations between more equal laws pertaining to women in the workforce and more equal labor market outcomes, such as higher female labor force participation and a smaller wage gap between men and women.

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I. Introduction

One of the most salient and pervasive forms of gender discrimination is the unequal treatment of women and men by the law. Until recently, women did not have the right to vote in most countries. In many parts of the world, women are still not allowed to participate in certain professions. In England, until 2003, the law of rape postulated, in effect, that a man who had sex with a woman believing that it was consensual had to be acquitted, even if there were no reasonable grounds for this belief. While examples of gendered laws abound, what has been missing is a complete picture of the relative severity and evolution of legal gender discrimination around the world. The World Bank's newly compiled *Women, Business and the Law* (WBL) database aims to fill this knowledge gap (World Bank, 2020a). The database measures equality of economic opportunity under the law between men and women in 190 economies, for 50 years, from 1970 until today.

The purpose of this paper is twofold. First, we provide a description of the newly constructed WBL database, which will be updated annually and made publicly available at <https://wbl.worldbank.org/en/resources/data>. Second, we use this database to document a series of stylized facts regarding legal gender discrimination across the world. Some of these facts may have been previously known in qualitative terms, but we provide a quantification that facilitates comparisons across space and time, and allows us to track progress (or regress). In this vein, we document the persistence of large gaps between the legal treatment of men and women despite the tremendous progress that has been made in the past five decades. Other facts are new to the literature, to our knowledge. For instance, we document that the largest inequalities are observed in the areas of *Pay* and *Parenthood* – that is, we find that across the globe, women are most disadvantaged by the law when it comes to the compensation they receive and to their treatment once they have had children. We show that the pace of reforms has varied not only across countries, but also across different aspects of women's employment experience: While legal reforms affecting women's ability to work outside the home were fast-paced across the world, the passing of laws guaranteeing equal pay and equal treatment in pensions has been much slower. Despite common belief that religion dictates laws in many, particularly Islamic, countries, our data show that this need not be the case. Finally, we document positive correlations between improvements in the law and higher female labor force participation as well as a lower wage gap between men and women.

Our study focuses on laws only, but of course, legal discrimination is only one among many sources of gender imbalances. The passing of better laws does not guarantee that these laws will be enforced, especially in countries with social norms disadvantaging women's participation in the formal economy. However, laws are actionable in the short run – in contrast to norms and attitudes which may take longer time to change. In future research, it would be interesting to link the measures of women's legal treatment in the WBL database to measures that capture women's actual economic agency and investigate the relationship between *de jure* and *de facto* female empowerment.

The remainder of the paper is structured as follows. Section 2 provides a brief description of the WBL database. Section 3 documents a series of stylized facts for the 190 countries and 50 years in our sample. Section 4 concludes.

II. Description of the WBL Database

The WBL dataset focuses on legislation that may impact a woman's access to employment and entrepreneurial activity; it does not cover legal gender discrimination across all aspects of a woman's life. The information on the legal environment in each economy is collected through collaboration of legal experts based in the World Bank with local experts, including lawyers, judges, civil society representatives and public officials. In total, a network of over 10,000 legal experts contribute to the WBL project.

II.A Scope of the WBL Database

The database attempts to capture inequality in legislation throughout the duration of a woman's working life, from the time she can enter the labor force through to retirement. Topics chosen for inclusion in the index are based upon their associations with measures of women's economic empowerment as well as a review of the economic literature, as presented in Roy, 2019.

While the index attempts to capture legislation that affects women's economic participation and opportunity throughout their working lives, it omits some factors that affect women's behavior and outcomes indirectly. Because the focus of the index is on employment outcomes once a woman enters the labor force, the index does not capture laws that affect women prior to the decision to enter the workforce, e.g. laws related to the accumulation of human capital (such as laws on school leaving age). A woman's reproductive rights are also not covered by the index; this is because the index focuses on laws that discriminate between men and women, and laws on reproductive rights intrinsically treat men and

women differently. Further, because the WBL index considers only negative discrimination in the law and rewards countries whose laws treat men and women equally, it does not include measures of affirmative action, such as quotas. The index is designed to measure laws on the books and does not take into account implementation of the law. Implementation may be imperfect due to issues related to enforcement, or legal capacity, factors which themselves vary across countries and over time. And there are, of course, factors besides the law that affect women's opportunity, including social and cultural norms, the economic environment and infrastructure. Still, the advantage of focusing on legislation is that it provides an objective and actionable in the short run measure of the environment in which women live and work, and it facilitates comparison across countries.

II.B The Eight Indicators

In total, thirty-five individual legislative issues are aggregated into the following eight indicators:²

The *Mobility* indicator examines constraints on women's freedom of movement. Laws assessed under this indicator include those governing a woman's right to choose where to live, to obtain a passport, and to travel outside her home and country. In some economies the law explicitly states that, for married couples, it is the right of the husband to choose where to live. For example, Article 153 of the Senegalese family code states that "The choice of the marital home belongs to the husband; the woman is required to live there with him, and he is obliged to receive her". Contrast this with the law in Rwanda, which makes it explicit that "The marital domicile is at the place mutually agreed upon by the spouses." (Rwanda, Law No. 32/2016 Governing Persons and Family, Art. 55). Similarly, in some economies, when a woman applies for a passport, there are additional steps that she must take, such as obtaining permission from her spouse or providing additional documentation such as a marriage certificate, which are not imposed upon male applicants. Several analyses suggest that the topics covered under the *Mobility* indicator are associated with women's economic outcomes.³

The *Workplace* indicator analyzes laws affecting a woman's decision to work. This indicator considers whether there are restrictions in place upon women's ability to get a job, whether there is legislation banning discrimination in employment, as well as legislation on sexual harassment in the workplace (legislation on harassment, and associated penalties or civil remedies). Take, for example, discrimination based on gender in employment: if there are no applicable provisions banning such discrimination under

² A full list of the eight indicators and the 35 legislative issues underlying them are provided in Table A1 of the Appendix.

³ See, for example, Demirguc-Kunt et al. (2013), Islam et al. (2019), and Htun et al. (2019).

the law, this is counted as a restriction under the WBL index. An example of legislation specifically outlawing such discrimination is provided by Australia's 1984 Sex Discrimination Act, which states that "It is unlawful for an employer to discriminate against a person on the ground of the person's sex, sexual orientation, gender identity, intersex status, marital or relationship status, pregnancy or potential pregnancy, breastfeeding or family responsibilities" (Sex Discrimination Act, 1984, No. 4, Compilation No. 38). Laws that impact women's decisions to work and their salaries have also been shown to be impactful.⁴

The *Pay* indicator measures laws and regulations affecting a woman's pay. Assessed within this indicator are items such as whether or not there is legislation mandating equal remuneration for work of equal value, and whether women in an economy are subject to work-related restrictions that are not imposed upon men. If the law does not explicitly mandate equal remuneration for work of equal value, as per the standard set by the ILO (for example, by mandating the less rigorous standard of "equal pay for equal work"), this is counted as a restriction under the WBL index. An example of good practice under this area is Chapter 226 of The Employment Act of Kenya, which states that "An employer shall pay his employees equal remuneration for work of equal value". An example of legislation that does not pass the bar set by the ILO is Jamaica's Employment (Equal Pay for Equal Work) Act. Passed by parliament in 1975, the act mandated equal pay for equal work, which is a lower bar than that established by the ILO. In terms of the issues covered under this particular indicator, the literature has shown that night-work and job restrictions are negatively associated with female employment.⁵

The *Marriage* indicator assesses constraints related to marriage. Issues covered under this indicator are whether a woman is legally obliged to obey her husband, whether she can legally be the head of her household, as well as legislation on domestic violence, divorce and the right to remarry. An example of legislation stating that a woman must obey her husband appears in Article 316 of the Family Code of Mali, which stipulates that "the wife owes obedience to her husband and the husband owes protection to his wife." Similarly, the 2001 Civil Status Code of Jordan states in Article 58 that "The husband is the head of the household". Research from 143 economies shows a negative relationship between restrictions placed upon women's rights within their households and female labor force participation (Gonzales et al., 2015).

The *Parenthood* indicator examines laws that affect women's work after having children. This indicator covers the provision and administration of paid maternity leave, as well as legislation on paternity and parental leave, and the treatment of pregnant workers. Under this indicator, positive scores are awarded

⁴ See Zabalza and Tzannatos (1985), Hallward-Driemeier and Gajigo (2015), Amin and Islam (2015).

⁵ See Zveglic and Rodgers (2003), Ogloblin (1999), and Ogloblin (2005).

to economies that mandate that a minimum of 14 weeks of paid maternity is available for female employees, and where the government administers 100 percent of maternity leave benefits. Positive scores are also awarded in the cases where any paternity or parental leave is mandated under the law. In the case of parental leave, it must be available to both parents. Research suggests that maternity leave may impact women's employment decisions, though the results to date have been inconclusive.⁶

The *Entrepreneurship* indicator assesses constraints to women starting and running a business. Captured under this indicator is legislation mandating non-discrimination in accessing credit, as well as laws that govern women's ability to sign a contract, register a business and open a bank account. Legislation from the Maldives provides a good example of how non-discrimination in credit access can be mandated under the law, where Section 23 of the Gender Equality Act of 2016 states that "It is the responsibility of financial service administrations to ensure that men and women have equal access to financial services and facilities." Restrictions upon a woman's ability to sign a contract, register a business or open a bank account include situations in which a married woman is required to obtain her husband's permission to do so. Prior to July 2016, examples of such restrictions were to be found in the Family Code of the Democratic Republic of Congo, Article 448 of which had mandated that a woman had to obtain her husband's authorization for all legal acts that she performed. Research has found that laws that enable women to sign a contract or open a bank account are associated with higher female labor participation (Gonzales et al., 2015).

The *Assets* indicator covers property ownership rights, inheritance rights (both for children and for surviving spouses), authority of assets during marriage and valuation of non-monetary contributions. Take, for example, property ownership rights; situations in which the husband administers property or in which legal capacity between men and women is unequal are counted as restrictions under the WBL methodology. The literature shows that improved property rights for women is linked to increased female labor supply⁷.

Pensions is the final indicator included in the WBL index. Captured by this indicator are the equalization of retirement ages (with full and partial benefits, as well as the mandatory retirement age) and whether periods of absence from employment due to childcare are accounted for in pension benefits. With regards to legislation on retirement ages, the WBL index reports that there is no discrimination in place if the language in the relevant legislation makes no reference to gender. For example, Section 12-B of the Social

⁶ See Berger and Waldfogel (2004), and Bailey et al., 2019.

⁷ See the cross-country study by Gonzales et al (2015), and a study on India by Heath and Tan (2019).

Security Act of the Philippines states that “A member who has paid at least one hundred twenty (120) monthly contributions prior to the semester of retirement [...] shall be entitled for as long as he lives to a monthly pension”. In this example the reference to “a member” implies no discrimination by gender. On the other hand, Article 51 of the Social Security Law of Brazil states that the old-age pension will be due to the insured person who reaches 65 years old, if they are male, and 60 years old, if they are female. In relation to pension benefit accrual during periods of childcare, an example of good practice can be found in the legislation in Jordan, where it is stated that the maternity leave period granted to the insured will be deemed as an effective period of service for pension calculation. Research has shown that in China, early retirement for women reduces their relative welfare (Lee, Zhao and Zou, 2017). Several country-specific studies show that increases in retirement ages are associated with increased female labor supply.⁸

II.C Data Collection and Score Calculation

Data are collected by sending out questionnaires on the topics covered to an international network of over 2,000 respondents who are experts in various aspects of the law, including family, labor and criminal law. The respondents include lawyers, judges, academics and members of civil society organizations in the 190 economies covered by the index. The network of experts complete written questionnaires and provide references to the relevant legislation.⁹ A team of legal experts within the World Bank then refers to the text of the relevant legislation and verifies that the responses to the questionnaire are in agreement with legislative texts. This process involves researching constitutions, codes, laws, statutes, rules, regulations, and procedures. The process is repeated on an annual basis. In order to facilitate comparability between economies, the WBL methodology employs a number of assumptions. For example, because maternity leave benefits within a country can vary depending on the number of children that a woman has, the methodology assumes a woman only has one child. Furthermore, some of the legislation captured may vary by location within an economy (for example, in the US, some of the relevant legislation is set at the state level), the methodology assumes that the hypothetical woman in question resides in the main business city in each economy. Finally, legislation can differ by subgroup within a country’s population; in these cases, the WBL index captures the law that applies to the most populous group. Thus, restrictions placed upon minority groups can be missed. The strengths and limitations of the WBL methodology are more thoroughly outlined in the *WBL 2020* report (World Bank, 2020b).

⁸ See Staubli and Zweimüller (2013) on Austria; Atalay and Barrett (2015) on Australia; Cribb, Emmerson and Tetlow (2016) on the UK.

⁹ Further details are provided in the online appendix.

Using the data collected from local legal experts, and having cross-checked their inputs against relevant legislation, the indicator-level scores are obtained by calculating the unweighted average of the four or five binary questions within that indicator and scaling the result to 100. The overall index scores are then calculated by taking an unweighted average of the eight indicators, with 100 representing the highest possible score. Take, for example, the legal environment in Afghanistan in 2019: this economy receives a score of 50 out of 100 in the *Mobility* indicator because women face legal restrictions in two of the four legislative issues covered (women in Afghanistan cannot travel outside their home, nor can they choose where to live, in the same way as a man). In the *Workplace* indicator, women face legal restrictions in only one of the four issues covered and, so, Afghanistan receives a score of 75 in this indicator. Overall, based on an unweighted average of the eight indicators, the WBL index score for Afghanistan is 38.1. A WBL index score of 100 would indicate that there are no legal inequalities between men and women in the areas covered by the database.

III. Stylized Facts: 50 years of Uneven Progress

Stylized Fact 1: A woman in the average country has three quarters the rights of a man.

In 2019, the global average WBL score was 75.2 out of 100 points, which indicates that, in the average country, women are accorded about three quarters the number of rights as men in the areas covered by the index. The population-weighted average is similar in magnitude: 74.4. In 2019, no inequalities across gender lines were recorded in eight countries (Belgium, Canada, Denmark, France, Latvia, Luxembourg, Iceland and Sweden). At the other end of the spectrum, unequal treatment under the law remains a significant obstacle for women living in Sudan, the West Bank and Gaza and the Republic of Yemen – each of these economies received a score of less than 30. In some highly populated economies, gender equality is well below the global average; for example, in 2019, Bangladesh and Pakistan received scores of 49.4 points. So, the approximately 180 million women living in these two countries have about half the rights of men in the areas covered by the index.

As one may anticipate, there is significant variation by region in legal gender equality, as illustrated by Panel A in Figure 1. Equality of economic opportunity across gender is highest in high-income OECD economies, where the average score is 94.7 points, and lowest in the Middle East and North Africa (MENA) region, where the average score is 49.6 points. While the WBL data show that women's rights are increasing in income level, to date, the Economics literature has not reached consensus regarding the

expected relationship between women's rights and development. Fernández (2014) presents a theoretical model in which the relationship between per capita income and reform is non-monotonic. Her theoretical analysis shows that men have less to gain from legal systems that favor patriarchy when economies are poorer. However, Fernández's own calibration of the model to US data shows no robust relationship between reform of patriarchal property rights and per capita income. A discussion of the relationship between women's rights and development is provided by Doepke, Tertilt and Voena (2012), who note that the causation in this relationship can go in both directions. The authors outline how the expansion of women's economic rights and political rights increases investments in human and physical capital and social welfare. On the other hand, technological change and economic development can drive reform, as discussed by Geddes and Lueck (2002) and Doepke and Tertilt (2009). According to the model of Geddes and Lueck (2002), when women have relatively few property rights, their provision of effort at work may be sub-optimally low, which has a negative impact on household income; but the penalty associated with suboptimal effort on the part of female workers grows as their opportunities in the labor market increase. Doepke and Tertilt (2009) present an alternative argument, in which men begin to favor more rights for women out of concerns for the welfare of their daughters and because women's rights are associated with increased investments human capital. In their model, economic development, driven by human capital, and women's rights mutually reinforce one another.

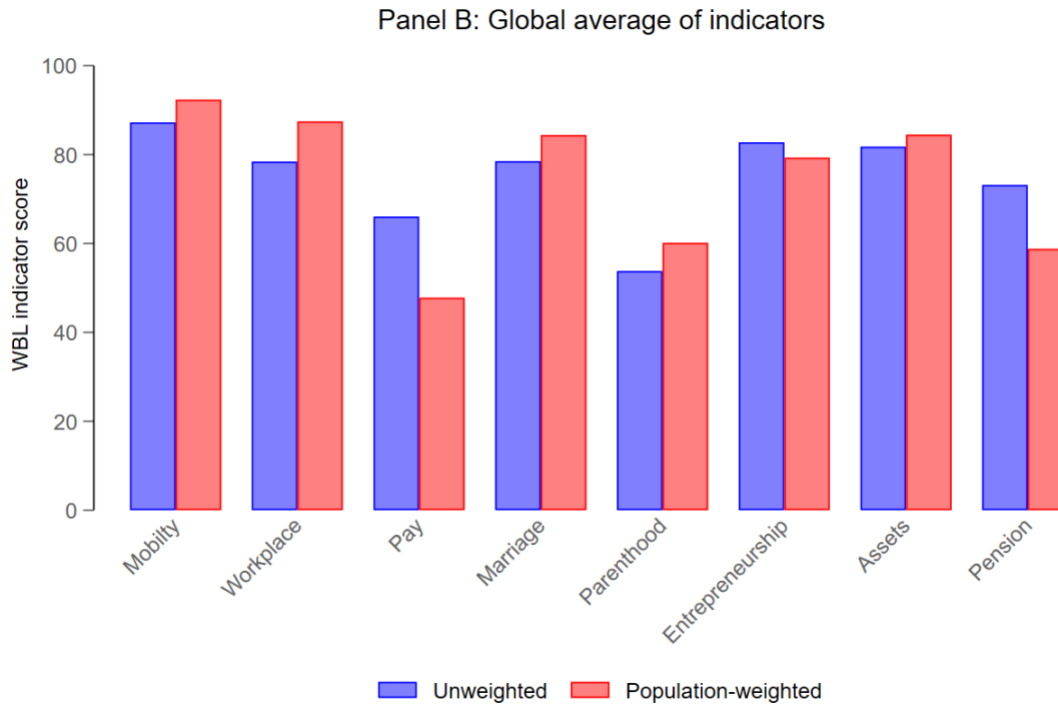
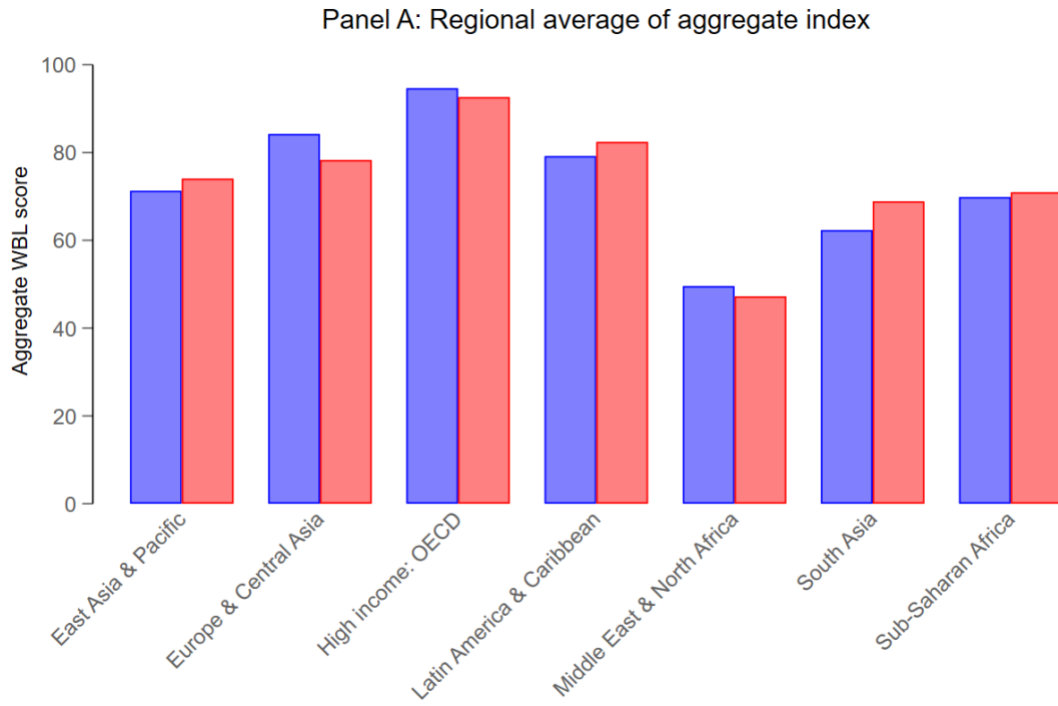


Figure 1: Legal gender inequality – index average by region and global average for each indicator

Stylized Fact 2: Women are most severely penalized when it comes to laws that are related to having children and getting paid.

Looking at the aggregate WBL index masks some interesting differences between the eight topics covered. Breaking the aggregate index down into the eight indicators, the data—displayed in Panel B of Figure 1—show that, in 2019, women faced the greatest inequality in laws related to having children. On the other hand, laws placing constraints on freedom of movement (*Mobility*) showed the lowest levels of gender inequality. When comparing weighted and unweighted scores, we see that the relative rankings of the indicators change. For example, when country scores are weighted by population, the averages show that, across the world, women are most severely penalized when it comes laws that are related to their compensation. This reflects the fact that women are severely discriminated against in some highly populated countries, such as China and India, which, in 2019, both scored only 25 out of 100 possible points in this indicator.

The regional averages for each topic—summarized in Table A2 in the appendix—show some interesting patterns. In high-income OECD economies, the average score is high for each topic; laws related to getting paid show the greatest degree of inequality but, nonetheless, receive a score of 89.8. There is more variation in other regions. Europe and Central Asia, for example, have high average scores, but economies in this region have significant room for improvement in laws that affect the size of a woman’s pension.

Stylized Fact 3: The last five decades have seen tremendous progress, but the pace of reform has differed across regions.

The unweighted global average WBL score has increased from 46.4 points to 75.2 between 1970 and 2019, but different regions have made progress in terms of legal gender equality at different paces. As Figure 2 illustrates, while OECD economies are currently at the top of the ranking, in the 1970s, women in the Europe and Central Asia (ECA) region faced fewer legal gender restrictions than their OECD counterparts. The lower level of restrictions facing women in the ECA region is likely related to the communist past of many countries in the region. Communist countries liberalized family law in the twentieth century to allow women to participate in the workforce and also to constrain the influence of religion (as discussed by Htun and Weldon, 2011). On the other hand, while regional average scores in the Latin America and Caribbean (LAC) and East Asia Pacific (EAP) regions were very close in 1970, economies in LAC, which were influenced by early movements towards reform in Europe (Htun and Weldon, 2011), have made greater progress

towards legal gender equality. Another interesting comparison is between Sub-Saharan Africa and South Asia; while legal gender restrictions in 1970 were fewer in South Asia compared to Sub-Saharan Africa, by 2019, South Asia lagged behind Sub-Saharan Africa by nine points in the average WBL score.

Figure 2 also illustrates the slow progress in the MENA region. The overall index increased by less than four points from 1970 to 1995, but the subsequent 25 years (1995 to 2019) showed greater progress, with the average score increasing by almost 15 additional points. The fact that women in the MENA region have historically been, and continue to be, subjected to the highest level of legal gender discrimination cannot be explained entirely on the basis of compliance with Sharia (Islamic law). Indeed, several authors (see, for example, Mashhour (2005), Ross (2008) and Barlas (2019)) have argued that it is patriarchal cultures, and not Islamic law, that often lies behind gender inequality. Tunisia is highlighted by Mashhour (2005) as an example of how gender equality in the family sphere can be incorporated within the bounds of Sharia. Indeed, with a WBL score of 70 in 2019, Tunisia is notably above the MENA average of 49.6.

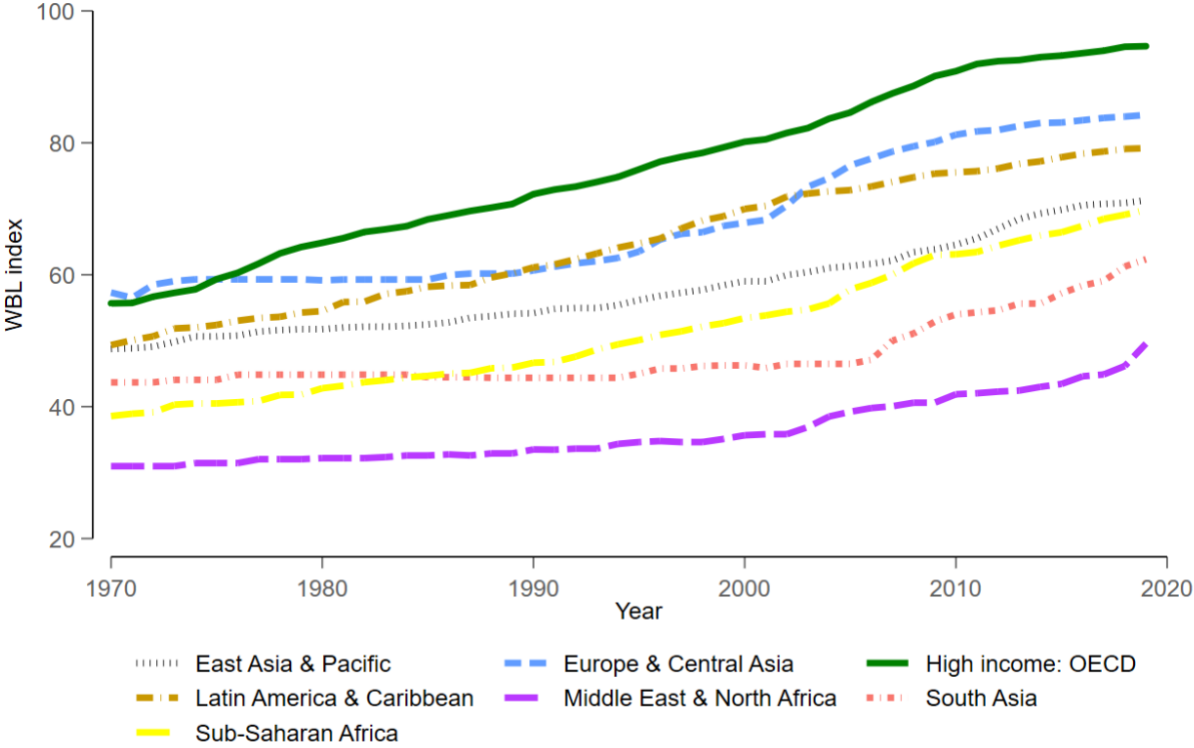


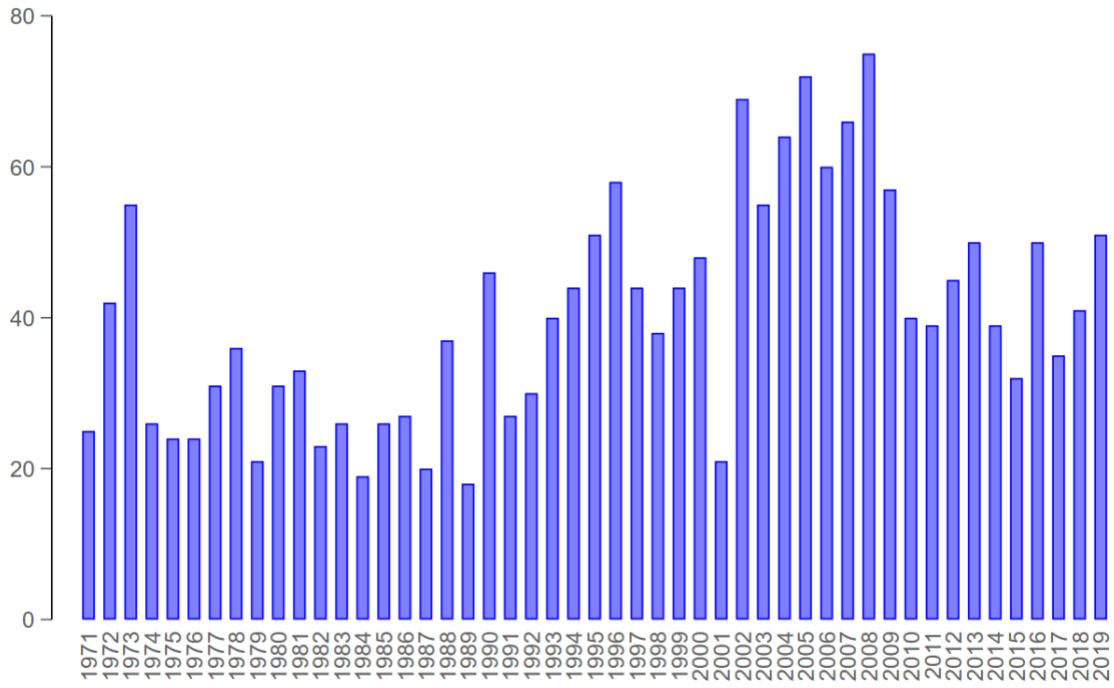
Figure 2: Charting the progress of legal gender equality over time

An alternative way of charting progress towards gender equality is to count the number of changes that have been made to the laws in each economy. Looking at the 35 individual aspects of gender equality covered by WBL, we count a reform as each time a legal restriction formerly placed upon women is removed. For example, in Afghanistan, the response to the question “Can a woman apply for a passport in the same way as a man?” changed from “No” to “Yes” between 2015 and 2016. Thus, this is counted as one positive reform in Afghanistan in 2016. When all such changes across the globe are aggregated for each year, the data show that the peak year for reform was 2008 (see Panel A of Figure 3 below). In this year, 76 reforms were made across the world. The top reforming region was Sub-Saharan Africa where 28 reforms were implemented. This partly reflects the fact that it is the region with greatest number of economies. The years 2005 and 2008 were particularly reformatory. A likely driver of African reform around this period was the adoption of the Maputo Protocol by the African Union (AU). The Maputo Protocol guarantees wide-ranging equal rights to women; of the 35 aspects covered by the WBL index, 30 are included in the Maputo Protocol. Other potential drivers of cross-country reform include international treaties and conferences, such as the Convention on the Elimination of all Forms of Discrimination Against Women (CEDAW) in 1979 and the United Nation’s Fourth Conference on Women in 1995.

Other factors may drive reform on an economy-by-economy basis. Agarwal (2005) notes that various parties were behind the passage of India’s 2005 Hindu Succession (Amendment) Act, which reformed several gender inequalities that had existed under the 1956 Act. In an explanation of how a Bill incorporating more limited reform was passed into a more significant Act, she states that “Concerted efforts made by individuals and groups committed to women’s rights, land rights, and human rights, through memorandums, deposition and lobbying; the openness of the Standing Committee on Law and Justice to Civil Society inputs; the support of some lawyers and MPs, all contributed to the shift from the limited 2004 Bill to the wide-ranging 2005 Act.”

The push to reform can also come from bilateral organizations. For example, the Millennium Challenge Corporation worked with the government of Lesotho to introduce legislation allowing married women to make their own economic decisions. The United States Agency for International Development worked with the Egyptian government to develop legislation that would designate sexual harassment as a crime, and the European Bank for Reconstruction and Development supported reform that lifted certain job-related restrictions that had been placed on women in Kazakhstan. These reforms are discussed in World Bank, 2019.

Panel A: Total reforms by year, unweighted



Panel B: Reforms by region and year, population weighted

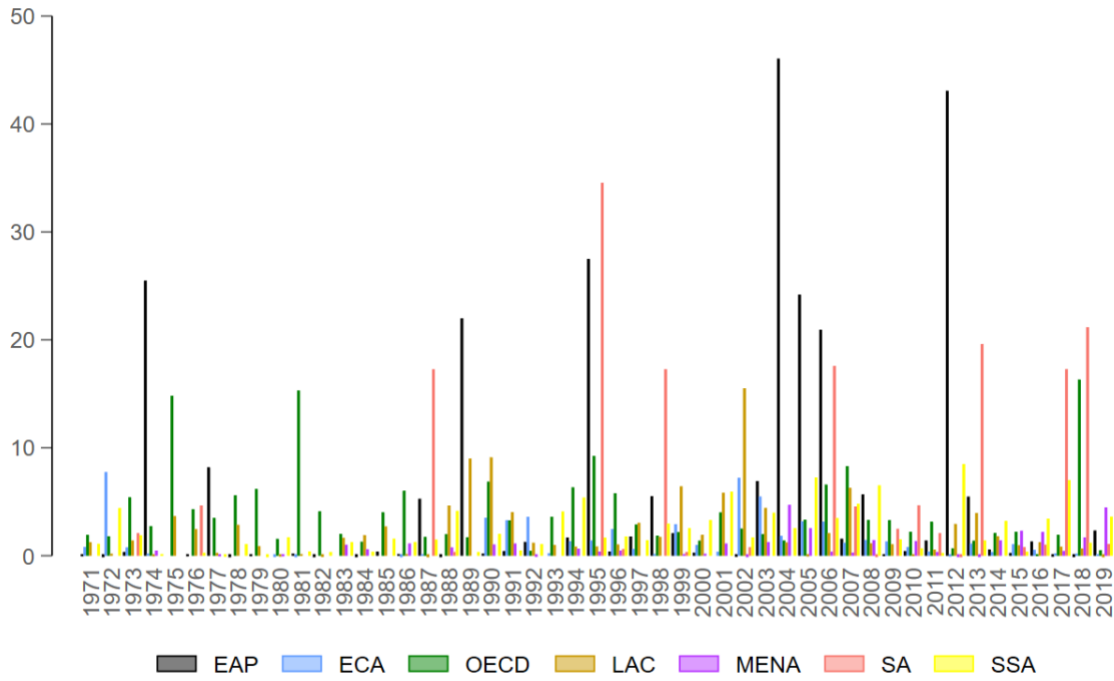


Figure 3: A total count of reforms, globally (unweighted) and regional totals (weighted by population)

When charting progress in gender equality, an interesting question to consider is the number of people affected by legal reforms. Progress in terms of population-weighted reforms is shown in Panel B of Figure 3. When reforms are counted in this way, reforms in the East Asia and Pacific (EAP) and South Asia (SA) regions stand out. There is a large spike in EAP in 1974 – a result of seven changes that were made in Indonesia in that year. Large spikes also appear in the EAP region in years in which China implemented at least one reform. Spikes emerge in South Asia in years in which one or more reforms were implemented in India. The spike that appears in 1995 in South Asia (Panel B of Figure 3) is notable in terms of what was reformed. In this year, the WBL data captures two important changes that were made in India: new legislation equalized property inheritance rights between sons and daughters and between surviving spouses.¹⁰ Equalizing property rights between men and women in the South Asia region may have important implications – Agarwal (1994) highlights the role of land rights in determining gender ideologies, the balance of power within the household and women’s ultimate well-being in the region.

Stylized Fact 4: The pace of reform varies not only across countries, but also across the individual indicators.

As Figure 4 below illustrates, the *Workplace* indicator displays the fastest pace of reform, both when reforms are unweighted (Panel A) and when they are weighted by population (Panel B). The *Mobility* and *Assets* indicators, both of which start from a relatively high base, display the slowest pace of reforms. The *Pay* indicator also displays a slow pace of reform, despite starting from a relatively low base. Legal reform also progressed at a slow pace in the *Pension* indicator. In fact, when the scores are weighted by population share, we see some regression of the laws that impact the size of a woman’s pension in the latter half of the 2000s (Panel B of Figure 3). This drop in the *Pension* indicator, which is only evident when global averages are weighted by population, reflects a negative reform that was made in China in 2008, whereby mandatory retirement ages that differed by gender were introduced. Prior to this, there was no mandatory retirement age.¹¹

The differing pace of reforms across the indicators suggests that countries may display differing degrees of resistance to granting women equal rights under the law in different areas, and that economic factors

¹⁰ This reflects a reform that was made via the Maharashtra Amendment to the Hindu Succession Act; the state of Maharashtra is where Mumbai, the main business city, is located.

¹¹ Labor Contract Law of the People's Republic of China of 29 June 2007, Art. 44(2) http://www.gov.cn/flfg/2007-06/29/content_669394.htm [accessed November 11th, 2019]

may motivate reforms. For example, the fast pace of reforms in *Workplace* indicates that the progress in this area may have been motivated by the desire to better integrate women in the labor force during a time of rising demand for labor. Goldin (1991a) discusses how, in the United States, demographic changes in the 1920's and 1930's caused a "labor market squeeze" and contributed to the decline of the marriage bar in the 1950s, which had previously restricted married women's employment opportunities. In relation to the same, Goldin (1991b) notes that the attitudes towards and policies on women's work changed when the supply of labor from younger unmarried women dropped, and that of educated, older, married women increased.

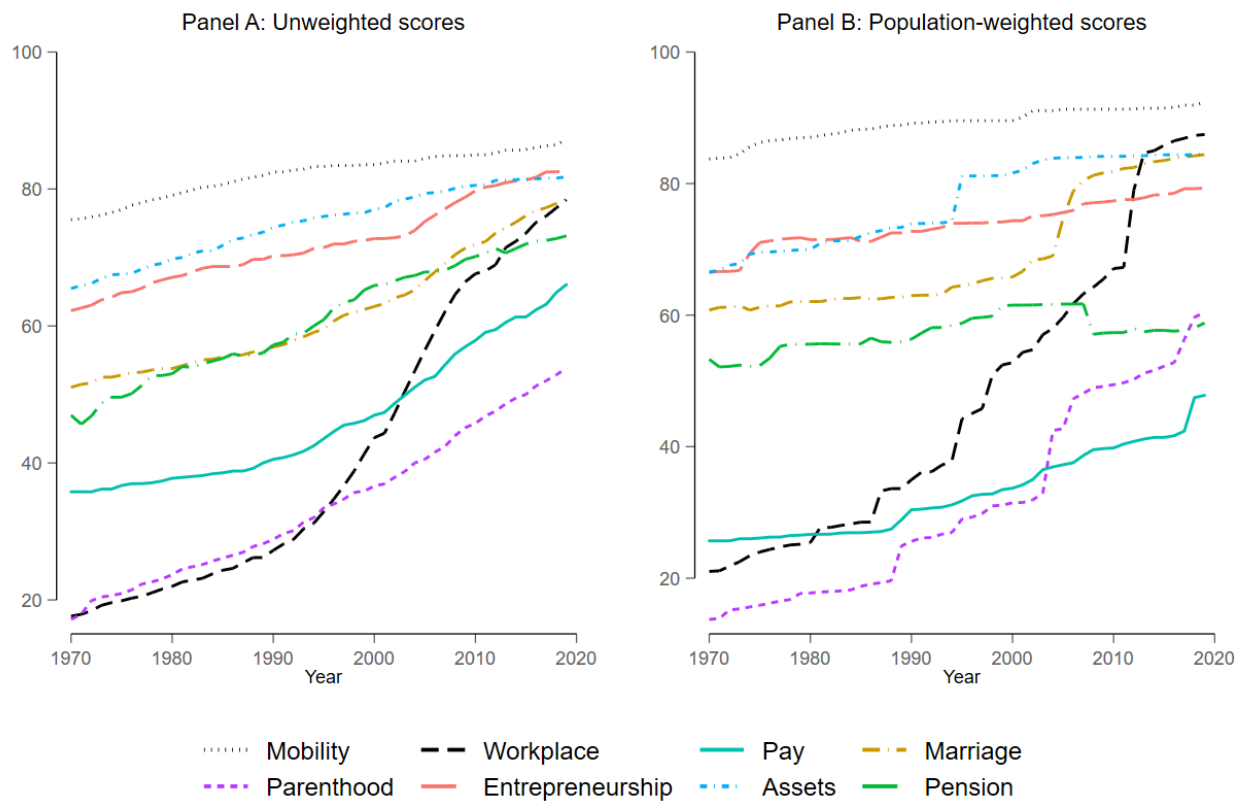


Figure 4: Charting the progress of the indicators over time

The WBL data do not consider the implementation of these evolving laws, and we acknowledge that for some of the areas covered by the index, women's circumstances and decisions may be strongly influenced by social norms. The role of social norms in the expansion of women's economic rights and opportunities is discussed by Doepke, Tertilt and Voena (2012). The authors note that traditions that discriminate against women may be rooted in economic motivations. For example, they cite the work of Cheung (1972) and Bossen et al. (2011) who discuss the economic rationales that may be behind the traditional practice

of binding women’s feet in China. They also highlight research by Alesina, Giuliano, and Nunn (2011a, 2011b) showing the long-term impact of historical agricultural practices in shaping attitudes towards gender roles.

While tracking changes in social norms is beyond the scope of the WBL index, there is grounds for believing that the changes captured by the index may have some success in changing social norms. The interplay of social norms and the formal legal system is discussed by Aldashev et al. (2012) who present a model in which progressive changes in the law can change customs in the same direction by exerting what the authors term a “magnet effect”. The authors provide examples from Senegal of how an existent law changed behavior in the presence of a changing economic climate, and from India of how a change in the law resulted in a change in custom because community elders wanted to be seen as “fair and just”. They also illustrate, using an example from the Cote d’Ivoire, how moderate changes in the law can be successful in changing behavior by avoiding the backlash that can be caused by more radical changes.

Stylized fact 5: Legal gender equality is positively correlated with women’s outcomes in the labor market

Results from OLS regressions show that a higher score in the WBL index is correlated with better labor-market outcomes, as measured by the participation of women in the non-agricultural labor market and the wage gap between men and women (columns 1 and 2 of Table 1 below). While we cannot attribute causality to these results, they do suggest that where women are faced with less discrimination under the law, they also enjoy more favorable outcomes in the labor market.

	<i>Labor market outcomes</i>	
	(1) Labor force participation ⁱ	(2) Gender wage gap ⁱⁱ
WBL Index	0.0414	-0.0670
	(0.0096)	(0.0321)
Constant	36.7923	12.8421
	(0.7818)	(3.2074)
_N	5,321	1,016

Notes: All regressions include economy and year fixed effects; standard errors are reported in parentheses.

ⁱThe outcome variable is the female labor force participation rate in the non-agricultural sector. We focus on the non-agricultural sector because almost all employment in agriculture in developing economies is informal, and hence not directly influenced by legislation. Data come from two sources – national estimates and modeled ILO estimates, both of which are available via the World Bank’s World Development Indicators database (World Bank, 2020c). While national estimates have the advantage of spanning a longer time horizon, for some economies national estimates are unreliable and have many gaps in the series. For this reason, we use national estimates only for the 32 high-income OECD economies and use modeled ILO estimates for all others.

ⁱⁱData on the gender wage gap are from two sources – International Labor Organization (2020) and the Organisation for Economic Cooperation and Development (2019). The International Labor Organization (ILO) data measure the difference between the mean earnings of men and the mean earnings of women, expressed as a percentage of the earnings of men; the Organisation for Economic Cooperation and Development (OECD) data are similarly calculated but use median, as opposed to mean, earnings. We use the OECD data where possible, and the ILO figures in countries and years where OECD data are not available.

Table 1: Correlation between the WBL Index and women’s outcomes in the labor market

IV. Conclusions

While individual studies have illustrated how legal gender discrimination is related to economic outcomes in specific contexts, the literature has been missing a global picture of legal inequalities – contrasting the experience of countries where women are given the same rights under the law as men, with that of countries where the legal gender gap is large, and examining the evolution of gender equality over time. To address this gap, we present an overview of the recently compiled, 50-year panel WBL database, highlight the differences between countries and regions, and chart the development of gender equality over time. We find that, across the world, women are still faced by legal gender discrimination across multiple domains. The level of legal discrimination is particularly onerous in some highly populated countries and, therefore, restricts economic opportunities for a very large number of women.

We hope our study will serve as the first step towards a rich agenda on the impact of laws on women’s economic opportunity. Many questions come to mind. While our paper provides a picture of global *de jure* discrimination, it does not speak to *de facto* discrimination. Future research could try to relate our measures of legal inequalities to measures of actual women’s empowerment. Further, while our study documents positive correlations between the legal reforms and labor market outcomes, the causation could go either way. In this regard, one could systematically examine the origins of laws and causes for reforms at a global scale. What factors lead to more equal laws: growing enlightenment, pressure from the international community, demand for labor or a combination of the above? Our descriptive results suggest that countries are relatively quick to pass laws that are associated with higher female labor force participation. But countries are substantially more resistant to enacting reforms related to equal pay, suggesting that economic motives may play an important role in the treatment of women by the law. Conversely, what is the causal impact of legal reform on women’s economic empowerment and wellbeing? We leave such questions to future research.

References

- Agarwal, Bina. 1994. *A Field of One's Own: Gender and Land Rights in South Asia*. Cambridge: Cambridge University Press.
- Agarwal, Bina. 2005. "Landmark step to gender equality." *The Hindu*, Sunday Magazine, 25 September.
- Aldashev, Gani, Imane Chaara, Jean-Philippe Platteau, and Zaki Wahhaj. 2012. "Using the law to change the custom." *Journal of Development Economics* 97(2): 182-200.
- Alesina, Alberto F., Paola Giuliano, and Nathan Nunn. 2011a. "Fertility and the Plough." *American Economic Review Papers and Proceedings* 101 (3): 499-503.
- Alesina, Alberto F., Paola Giuliano, and Nathan Nunn. 2011b. *On the Origins of Gender Roles: Women and the Plough*. Working paper 17098, National Bureau of Economic Research.
- Amin, Mohammad and Asif Islam. 2015. "Does Mandating Non-discrimination in Hiring Practices Influence Women's Employment? Evidence using Firm-level Data." *Feminist Economics* 21(4): 28-60.
- Atalay, Kadir, and Garry F. Barrett. 2015. "The impact of age pension eligibility age on retirement and program dependence: evidence from an Australian experiment." *Review of Economics and Statistics* 97(1): 71-87.
- Bailey, Martha J., Tanya S. Byker, Elena Patel, and Shanthi Ramnath. 2019. *The Long-Term Effects of California's 2004 Paid Family Leave Act on Women's Careers: Evidence from US Tax Data*. National Bureau of Economic Research, Working Paper No. w26416.
- Barlas, Asma. 2019. *Believing women in Islam: Unreading patriarchal interpretations of the Qur'an*. University of Texas Press.
- Berger, Lawrence M., and Jane Waldfogel. 2004. "Maternity Leave and Employment of New Mothers in the US." *Journal of Population Economics* 17(2): 331-349
- Bossen, Laurel, Wang Xurui, Melissa J. Brown, and Hill Gates. 2011. "Feet and Fabrication: Footbinding and Early Twentieth-Century Rural Women's Labor in Shaanxi." *Modern China* 37 (4): 347-383.
- Cheung, Steven N. S. 1972. "The Enforcement of Property Rights in Children, and the Marriage Contract." *The Economic Journal* 82(326): 641-657.
- Cribb, Jonathan, Carl Emmerson, and Gemma Tetlow. 2016. "Signals matter? Large retirement responses to limited financial incentives." *Labour Economics* 42: 203-212.
- Demirguc-Kunt, Asli, Leora Klapper, and Dorothe Singer. 2013. *Financial inclusion and legal discrimination against women: evidence from developing countries*. World Bank Policy Research Working Paper Series 6416.
- Doepke, Matthias, and Michele Tertilt. 2009. "Women's Liberation: What's in It for Men?" *Quarterly Journal of Economics* 124(4):1541-1591.
- Doepke, Matthias, Michele Tertilt, and Alessandra Voena. 2012. "The economics and politics of women's rights." *Annual Review of Economics* 4:339-372.

- Fernández, Raquel. 2014. "Women's rights and development." *Journal of Economic Growth* 19: 37-80.
- Geddes, Rick, and Dean Lueck. 2002. "The Gains from Self-Ownership and the Expansion of Women's Rights." *American Economic Review* 92(4): 1079-1092.
- Goldin, Claudia. D. 1988. "Marriage Bars: Discrimination Against Married Women Workers, 1920's to 1950's." NBER Working Papers 2747
- Goldin, Claudia D. 1991b. "The Role of World War II in the Rise of Women's Employment." *American Economic Review* 81 (4): 741-56.
- Goldin, Claudia, D., and Claudia Olivetti. 2013. "Shocking labor supply: A reassessment of the role of World War II on women's labor supply." *American Economic Review* 103(3): 257-62.
- Gonzales, Christian, Sonali Jain-Chandra, Kalpana Kochhar, and Monique Newiak. 2015. *Fair Play: More Equal Laws Boost Female Labor Force Participation*. IMF Staff Discussion Note SDN/15/02.
- Hallward-Driemeier, Mary, and Ousman Gajigo. 2015. "Strengthening Economic Rights and Women's Occupational Choice: The Impact of Reforming Ethiopia's Family Law", *World Development* 70: 260–273.
- Htun, Mala, Francesca R. Jensenius, and Jami Nelson-Nuñez. 2019. "Gender-discriminatory laws and women's economic agency." *Social Politics: International Studies in Gender, State & Society* 26(2): 193-222.
- Htun, Mala, and S. Laurel Weldon. 2011. "State Power, Religion, and Women's Rights: A Comparative Analysis of Family Law", *Indiana Journal of Global Legal Studies*, Vol. 18(1): 145-165.
- International Labor Organization. 2020. "Gender wage gap by occupation (%)." ILOSTAT. <https://www.ilo.org/shinyapps/bulkexplorer44/session/6e586e6e78d1723085aea76bdfb7d29c/download/download?w=> (accessed April 6, 2020).
- Islam, Asif, Silvia Muzi, and Mohammad Amin. 2019 "Unequal Laws and the Disempowerment of Women in the Labour Market: Evidence from Firm-Level Data." *The Journal of Development Studies* 55(5): 822-844.
- Lee, Hyun, Kai Zhao, and Fei Zou. 2017. *Does the Early Retirement Policy for Women Really Benefit Women?* Working Paper, Department of Economics, The University of Connecticut, Storrs.
- Mashhour, Amira. 2005. "Islamic law and gender equality: Could there be a common ground? A study of divorce and polygamy in Sharia Law and contemporary legislation in Tunisia and Egypt." *Human Rights Quarterly*: 562-96.
- Ogloblin, Constantin G. 1999. "The Gender Earnings Differential in the Russian Transition Economy." *ILR Review* 52(4): 602-627.
- Ogloblin, Constantin G. 2005. "The Gender Earnings Differential in Russia after a Decade of Economic Transition." *Applied Econometrics and International Development* 5(3): 5-26
- Organisation for Economic Cooperation and Development. 2019. "Decile Ratio of Gross Earnings – Gender Wage Gap at Median." OECD.Stat. https://stats.oecd.org/viewhtml.aspx?datasetcode=DEC_I&lang=en# (accessed February, 15 2019).

- Ross, Michael. L. 2008. "Oil, Islam, and women." *American Political Science Review* 102(1): 107-23.
- Roy, Sanchari. 2019. "Discriminatory Laws Against Women: A Survey of the Literature." *World Bank Policy Research Working Paper* 8719.
- Staubli, Stefan, and Josef Zweimüller. 2013 "Does raising the early retirement age increase employment of older workers?" *Journal of Public Economics* 108: 17-32.
- World Economic Forum, 2019. *Global Gender Gap Report 2020*.
- World Bank. 2019. *Women, Business and the Law 2019: A Decade of Reform*. Technical Report, The World Bank.
- World Bank. 2020a. "Women Business and the Law data for 1971-2020."
<http://pubdocs.worldbank.org/en/506381582842200909/WBL50YearPanelData2020.xlsx> (accessed April 4, 2020)
- World Bank. 2020b. *Women, Business and the Law 2020*. Technical Report, The World Bank.
- World Bank. 2020c. "World Development Indicators."
http://databank.worldbank.org/data/download/WDI_csv.zip (accessed April 6, 2020)
- Zabalza, Antoni, and Zafiris Tzannatos. 1985. "The effect of Britain's anti-discriminatory legislation on relative pay and employment." *The Economic Journal* 95(379): 679-699.
- Zveglich, Jr, Joseph E., and Yana van der Meulen Rodgers. 2003. "The impact of protective measures for female workers." *Journal of Labor Economics* 21(3): 533-555.

Online appendix

GENDERED LAWS AND WOMEN IN THE WORKFORCE

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Additional data details

Table A1: The eight indicators and 35 legislative topics covered by the WBL index

1. Mobility
1. Can a woman choose where to live in the same way as a man?
2. Can a woman travel outside her home in the same way as a man?
3. Can a woman apply for a passport in the same way as a man?
4. Can a woman travel outside the country in the same way as a man?
2. Workplace
5. Can a woman legally get a job or pursue a trade or profession in the same way as a man?
6. Does the law mandate nondiscrimination in employment based on gender?
7. Is there legislation on sexual harassment in employment?
8. Are there criminal penalties or civil remedies for sexual harassment in employment?
3. Pay
9. Does the law mandate equal remuneration for work of equal value?
10. Can women work the same night hours as men?
11. Can women work in jobs deemed hazardous, arduous or morally inappropriate in the same way as men?
12. Are women able to work in the same industries as men?
4. Marriage
13. Is a married woman not legally required to obey her husband?
14. Can a woman legally be “head of household” or “head of family” in the same way as a man?
15. Is there legislation specifically addressing domestic violence?
16. Can a woman obtain a judgment of divorce in the same way as a man?
17. Do women have the same rights to remarry as men?
5. Parenthood
18. Is there paid leave of at least 14 weeks available to women?
19. Does the government pay 100% of maternity leave benefits, or parental leave benefits (where maternity leave is unavailable)?
20. Is there paid paternity leave?
21. Is there paid parental leave?
22. Is dismissal of pregnant workers prohibited?
6. Entrepreneurship
23. Does the law prohibit discrimination by creditors based on sex or gender in access to credit?
24. Can a woman legally sign a contract in the same way as a man?
25. Can a woman legally register a business in the same way as a man?
26. Can a woman legally open a bank account in the same way as a man?

7. Assets
27. Do men and women have equal ownership rights to immovable property?
28. Do sons and daughters have equal rights to inherit assets from their parents?
29. Do female and male surviving spouses have equal rights to inherit assets?
30. Does the law grant spouses equal administrative authority over assets during marriage?
31. Does the law provide for valuation of nonmonetary contributions?
8. Pension
32. Are the ages at which men and women can retire with full pension benefits equal?
33. Are the ages at which men and women can retire with partial pension benefits equal?
34. Is the mandatory retirement age for men and women equal?
35. Does the law establish explicit pension credits for periods of childcare?

Additional details of how the WBL data are coded:

The coding is done by a team of two dozen World Bank legal analysts, based on uniform questionnaires concerning family, labor and criminal law.¹² The questionnaires were built with the assistance of legal experts from the United States Library of Congress and covers all relevant laws and regulations pertaining to the stature of women in the workforce. These include the Constitution, the Labor Code, the Commercial Code, family law, pension law, as well as myriads of regulations.

The coding starts with a desk review by World Bank legal analysts, who code laws available online, in the US Library of Congress, and through World Bank country offices in the official language of the country. Based on this desk review, initial county questionnaires are filled in.

As a second step, the filled-in questionnaires are sent to legal experts in every country, using World Bank country offices, as well as law firms who provide information on labor law and pension law to the World Bank's Doing Business project. In total, 2,100 lawyers from private law firms and non-governmental organizations complete the questionnaire each year. These in-country lawyers look for gaps in the desk-review analysis, provide missing or newly-adopted laws, and comment on existing interpretations in the questionnaires.

¹² The three questionnaires used by the WBL team can be downloaded from the WBL website. They cover family (<http://pubdocs.worldbank.org/en/358681576005481315/WBL-Family-Survey-2020.pdf>), labor (<http://pubdocs.worldbank.org/en/512981576005478930/WBL-Labor-Survey-2020.pdf>) and criminal law (<http://pubdocs.worldbank.org/en/812251576005483131/WBL-Violence-Against-Women-2020.pdf>) [Accessed: May 17th, 2020].

As a third step, the World Bank’s Women Business and the Law team compiles a full questionnaire taking into account the contributions of in-country lawyers. In this completion process, a number of conference calls clarify outstanding issues. The contents of these calls are transcribed and serve as additional coding information.

The final coding step involves senior members of the Women Business and the Law team spot-checking the work of the legal analysts. These checks are recorded and presented to the manager of the team for final review.

Table A2: Average regional score in 2019 for each WBL indicator

	Mobility	Workplace	Pay	Marriage	Parenthood	Entrepreneurship	Assets	Pension
East Asia & Pacific	89.00 (16.27)	68.00 (34.25)	67.00 (21.31)	86.40 (20.59)	35.20 (32.29)	82.00 (11.46)	76.80 (27.50)	66.00 (25.90)
Europe & Central Asia	99.00 (5.00)	85.00 (22.82)	66.00 (31.36)	96.80 (7.48)	80.00 (16.33)	93.00 (11.46)	100.00 (0.00)	54.00 (23.58)
High-income OECD	100.00 (0.00)	97.66 (9.75)	89.84 (18.90)	95.00 (11.36)	90.00 (12.44)	95.31 (9.91)	98.75 (7.07)	90.63 (16.50)
Latin America & Caribbean	92.19 (13.38)	76.56 (30.41)	69.53 (20.80)	88.75 (14.31)	45.00 (26.88)	82.81 (13.38)	98.13 (5.92)	80.47 (20.80)
Middle East & North Africa	52.50 (37.96)	58.75 (39.96)	37.50 (27.51)	33.00 (26.97)	33.00 (25.36)	80.00 (10.26)	43.00 (13.42)	58.75 (28.42)
South Asia	90.63 (18.60)	84.38 (18.60)	46.88 (38.82)	70.00 (26.19)	30.00 (10.69)	71.88 (16.02)	55.00 (20.70)	50.00 (23.15)
Sub-Saharan Africa	82.29 (21.85)	76.04 (30.05)	62.50 (30.07)	67.50 (30.49)	44.58 (22.69)	72.40 (21.41)	73.33 (24.87)	80.21 (24.71)