

Women's Legal Rights over 50 Years

What Is the Impact of Reform?

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Abstract

This study uses a newly compiled database of women's property rights and legal capacity covering 100 countries over 50 years to test for the impact of legal reforms on employment, health, and education outcomes for women and girls. The database demonstrates gender gaps in the ability to access and own property, sign legal documents in one's own name, and have equality or non-discrimination as a guiding principle of the country's constitution. In the initial period, 75 countries had gender gaps in at least one of these areas and often multiple ones. By 2010, 57 countries had made reforms that strengthened women's economic

rights, including 28 countries that had eliminated all of the constraints monitored here. In the cross-section and within countries over time, the removal of gender gaps in rights is associated with greater participation of women in the labor force, greater movement out of agricultural employment, higher rates of women in wage employment, lower adolescent fertility, lower maternal and infant mortality, and higher female educational enrollment. This paper provides evidence on how the strengthening of women's legal rights is associated with important development outcomes.

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Women's Legal Rights over 50 Years: What Is the Impact of Reform?

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Introduction

Rights matter. They matter in themselves. The question here is what is the evidence that they matter for other outcomes of interest – namely the ability to pursue economic opportunities, and health and education outcomes? Existing research shows that strengthening women’s economic and legal rights has a real and positive impact on women’s labor force participation, investment and agricultural productivity. However, most of the literature focuses on a particular country, examining differences in property rights across groups of individuals or looking at a particular reform episode. The “50 Years of Women’s Legal Rights Database” offers an opportunity to expand the analysis – with comparable indicators across 100 countries and covering 50 years.

The legal rights focused on here can be grouped into three broad categories. The first regards the ability to access and own property. This can mean land, but it also means other types of assets more generally. The second is legal capacity, whether women have the same ability as men to enter into legal agreements in their own name. The last is the approach to principles of equality and non-discrimination within the constitution. Such principles can be recognized in general, or with enumerated groups (e.g. non-discrimination based on gender or sex). But in some countries laws governing property, marriage and inheritance can be explicitly exempt from these principles in the constitution.

The database highlights the extent to which gender gaps in these three areas have been widespread, recognized in all regions and across all income groups. But the time dimension also shows that there has been change. Not only countries, but entire regions have eliminated the constraints examined here. Today’s rich countries of the OECD had their share of gender gaps in the 1960s and 1970s. However, today, they have removed all of the ones covered in this

study. In the countries of Eastern Europe and Central Asia, only Turkey had some gender gaps in these laws; it no longer does. In Latin America, there are now only two exceptions to the laws on legal capacity and property rights. And Sub-Saharan Africa, the region with the highest rates of gender gaps in the initial period, has removed more than half of them by 2010. Progress towards women's equal rights is possible (see companion paper for a more detailed discussion of legal reforms and the factors that help trigger reforms).

At the same time, there are still countries with gender gaps in these rights. And some countries have increased the number of constraints since the 1960s. On net, both in South Asia and the Middle East & North Africa, the net number of constraints has remained fairly stable, with both some reforms and some new constraints being introduced.

Given the variation in the legal rights both across countries and over time, how are they correlated with outcomes? We focus on employment, health and education as these are traditionally areas where women and girls have not enjoyed the same benefits and access as men and boys. They are also key indicators of well-being.

The paper begins by looking at comparisons across countries. This has the advantage of allowing a wider range of outcome variables to be examined. Unfortunately, gender disaggregated data are not available for many of the indicators except in recent years. However, there are indicators for employment that go back 30 years, and there are some health and education indicators that cover the entire 50 years.

For those indicators for which we have sufficient time variation that straddle reform episodes, we look at the impacts of the law within countries over time. Finally, we examine whether the effects of legal reforms vary either by level of development or by the strength of the rule of law. Is it that having formal recognition of rights is only important once countries reach a

certain level of development, or do de jure rights have little benefit in a society that does not uphold the law? This is important in understanding where reforms are likely to have the greatest impact and where the lack of reform can be the most costly.

The following section reviews the literature on rights and women's empowerment outcomes. The next section describes the data in more detail. The methodology is explained and then the results are discussed. The final section concludes.

Review of the Literature

Interest in the importance of property rights stretches back centuries. Adam Smith was one of the first to argue forcefully about the economic benefits that come from securing people's incentive to invest and exert effort. The extent to which it is formal rights that matter, however, is still a matter of debate, particularly in countries with larger rural populations, lower levels of education and pluralist systems for resolving disputes. However, what laws are on the books does determine the rules and whose interests will be protected. They send important signals as to what is acceptable or not, even if parties never make it to a court. And as arms-length transactions become more common, the formal legal system plays a larger role.

Many cross-country studies aimed at analyzing how laws and regulations affect employment, including entrepreneurship, look at business regulations. Botero et al. 2004, Klapper et al. 2006 and Djankov et al. 2003 point to the importance of these regulations in explaining cross-country patterns of employment, firm start-ups and use of courts. But they do not look at gender disaggregated results.

Indeed, legislation to register property, enforce contracts or access credit is largely gender neutral. However, these laws presuppose one can own property or enter contracts in the first

place. The law that determines who has control over assets and thus affects the types of economic opportunities that are available is family law. Family law covers issues of marriage, but also of marital property and who can control it – within the marriage and at its end, whether through divorce or inheritance. And it is here that gender gaps can be—and still too often are—explicit.

There are also several country specific studies that find significant impacts of the reforms to family law. In studies that analyze the impact of the Hindu Succession Act Amendment of 2005, equal inheritance rights for girls and women are shown to be correlated with increased educational attainment, higher household investment in girls as well as higher age at marriage (Deininger, Goyal, and Nagarajan, 2010). Equal inheritance rights for women are also associated with higher women's autonomy (Roy 2008).

Assessments of changes in divorce laws in the United States show that women were more likely to initiate a divorce in states where women's position was strengthened. Also the changes in divorce laws were correlated with a fall in domestic violence in these states. As illustrated by Gray (1998) and Stevenson and Wolfers (2006), part of the effect may come from shifts in intra-household bargaining power.

Similarly, changes in the family law in Ethiopia were associated with a substantial shift in women's economic activities (Hallward-Driemeier and Gajigo, 2013). As of 2000, Ethiopia requires both spouses' consent in managing marital property, enabled women to work outside the home without needing permission from their spouse and raised the minimum marriage age for women. The reform, which is now applicable across the country, was initially rolled out in select regions and cities. Using two nationally representative household surveys, one in 2000 just before the reform and one five years later, Hallward-Driemeier and Gajigo (2013) find that

women's participation in occupations which require work outside the home, full-time hours, and higher skills rose more where the reform had been enacted (controlling for time and location effects).

Property rights can be set out in family law as well as in land law. Here too the literature has found significant gender impacts from differences in the strength of rights to land. Secure property rights to land are fundamental to agriculture and rural economic activity. Without secure rights, the incentive to invest is diminished, as it is not clear the rewards of the investment can be enjoyed. In addition, the lack of such rights undermines the land owner's ability to use it as collateral, leading to credit constraints. Besley (1995) demonstrates that individuals in Ghana vary their investment across plots depending on the security of their rights. Goldstein and Udry (2008) show that in a society where land rights are not secure, it is those at the top of the local hierarchy—those with the more tenured rights—that benefit the most.

A number of other empirical studies point to increased agricultural productivity as a result of women controlling larger shares of resources (Saito, Mekonnen, and Spurling 1994; Udry and others 1995; Quisumbing 1996; Besley and Ghatak 2009). More resources in women's hands is also associated with a decline in poverty (World Bank 2001). And the benefits can transfer across generations. Duflo's work in South Africa showed that when women received additional resources, the spending on education and food, particularly for girls, went up (Duflo 2003). Indeed, many of the conditional cash transfer programs, inspired by the results of Progresa in Mexico, now specifically target women as recipients (Skoufias and McClafferty 2001).

Beyond general principles that give everyone equal access to own property, how property rights are implemented can be important. Even when a household has secure property rights,

titling has too often been under a single name, that of the male head of household. As a consequence, many women have been excluded from ownership. Some countries, such as Ethiopia, have tried to address this unbalance by mandating joint titling of land, thus increasing women's control over land. (Deininger et al. 2008). The benefit of such policies is apparent from Field's (2007) study of a titling program in the slums of Peru, where she finds a strong impact on labor supply, especially for women. Without the need to physically protect plots and dwellings, women have more time to work away from their home.

Thus the literature shows that economic rights can affect women's employment, health and education outcomes in particular countries and for particular reforms. This paper contributes to the literature by expanding both the country coverage and time dimension of legal indicators available for analysis. It also broadens the set of outcome variables analyzed. It provides further evidence of the scope for legal reforms to expand women's wellbeing and empowerment. But it also shows that benefits are not automatic. This is true both as rising country incomes is not necessarily associated with closing gender gaps in these economic rights, and because the impact of giving women and girls equal rights is shown to vary by level of development and rule of law. Ensuring women and girls obtain and benefit from stronger protections of the property rights and legal capacity is an active agenda.

Data and Methodology

The paper uses the newly compiled "50 Years of Women's Legal Rights" database. The methodology is explained in more detail in the appendix. It draws on the constitutions as well as family, succession and land laws to look at three sets of legal rights for women. The indicators are based on an assessment of de jure rights based on the reading of the constitutions and

statutes. There may well be a gap between what is on the books and what happens in practice, but this database focuses on the former as the measures are objective and provide an easy way to benchmark countries across issues, countries and time. The indicators are generally 0-1 measures of whether women and men have the same right. They do not attempt to measure the degree of the inequality, nor are the indicators weighted or aggregated into an index.

Access to and control of assets is examined between unmarried men and women and between married men and women. In addition, indicators include whether sons and daughters are treated equally in inheritance, and another whether wives and husbands are treated the same in determining their inheritance shares when the other spouse dies.²

A second set of indicators concerns legal capacity. These largely stem around 'head of household' statutes, both in terms of recognizing a head and who the head can be, and the rights the head can exercise. Gender gaps include the inability of women to be recognized as the head of household. And statutes can give the husband, as head of household, the right to deny permission to his wife to work or pursue a trade or profession. His signature may be required for her to open a bank account, to sign a contract or to initiate legal proceedings.

A third set looks at the approach to equality before the law. By 2010 all the countries with a constitution have this principle enshrined in it. Many further have a non-discrimination clause that explicitly enumerates discrimination based on gender or sex as something that is protected against.³ However, the principle is not universally applied across all areas of the law in some countries. The two most common exceptions come from the formal recognition of

² Additional measures of the default marital property regime and whether joint titling is allowed are included in the database. As these indicators remain almost unchanged for countries, they are not included in the time series analysis.

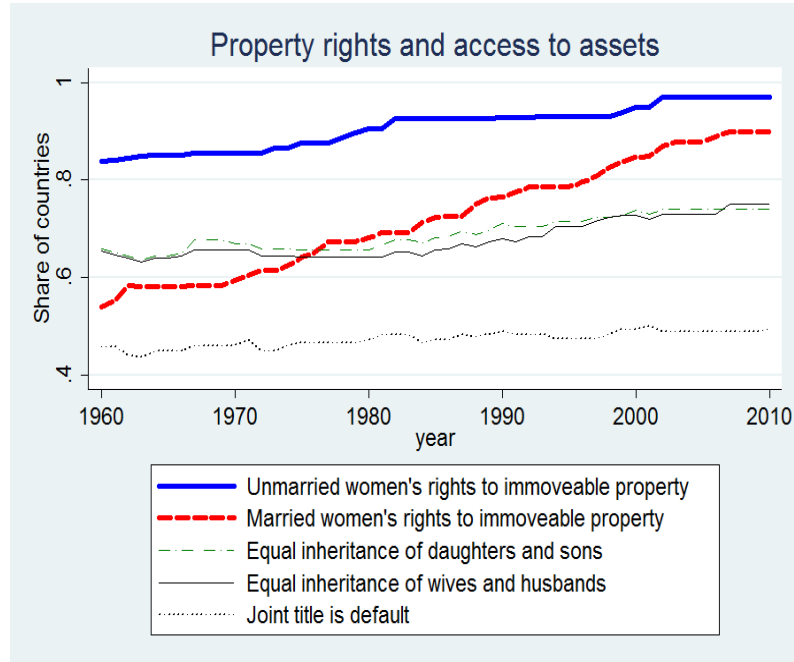
³ It should be noted that it is not necessary to enumerate gender or sex if the constitution already has an equality provision. In fact, its presence can sometimes be an indicator of perceived weakness of women's rights that such a clause was deemed necessary.

religious and customary law as prevailing in matters of marriage, property, inheritance – and explicitly exempting religious or customary law from the non-discrimination requirement in the constitution.

One lesson that comes out clearly is that ‘women’ are not a homogenous group. In particular, marital status matters. Many of the gender constraints come upon marriage, with the head of household rules the most common example. The formal status of the marriage matters too (e.g. whether it is registered with the state or is a customary marriage) in determining whether statutes, customary or religious law applies to any dispute within that marriage. Another lesson is that there are strong patterns by legal tradition. Those with civil law traditions are more likely to have the head of household rules codified on their books. While those with common law traditions tend not to have those rules, but rather are more likely to recognize customary law and exempt it from constitutional principles of non-discrimination. There can also be differences by religious affiliation, particularly with regard to the formal recognition of religious law, with implications for property statutes too.

Figure 1 shows each of the indicators and how it has evolved over time. The indicators are grouped by theme. The height of the line indicates the share of countries that do not have a gender gap on this dimension; the higher the line the more countries treat men and women equally.

Figure 1A.



One pattern that is striking is that the rights of unmarried women to immoveable property were recognized before those of married women. The difference is also there, but only mildly, for inheritance. The bottom line covers whether joint titling is the default (i.e. whether it automatically applies) in marriage. This has benefits for both spouses. It is more commonly a feature of civil law traditions and not something that changes much over time. It is displayed here, but is not considered in the analysis of reforms.

There has been progress in closing gender gaps with regard to legal capacity (figure 1B). Restrictions on women being the head of household are still the most common, with almost one in four countries not recognizing women in this role. On the other hand, restrictions to initiate legal proceedings, or the need for permission to open bank accounts or to enter contracts are now only on the books in 5-10% of the countries in our sample. The ability of a husband to deny his wife permission to work outside the home was in 1960 and still is more common. And progress in the last decade has flattened off.

Figure 1B.

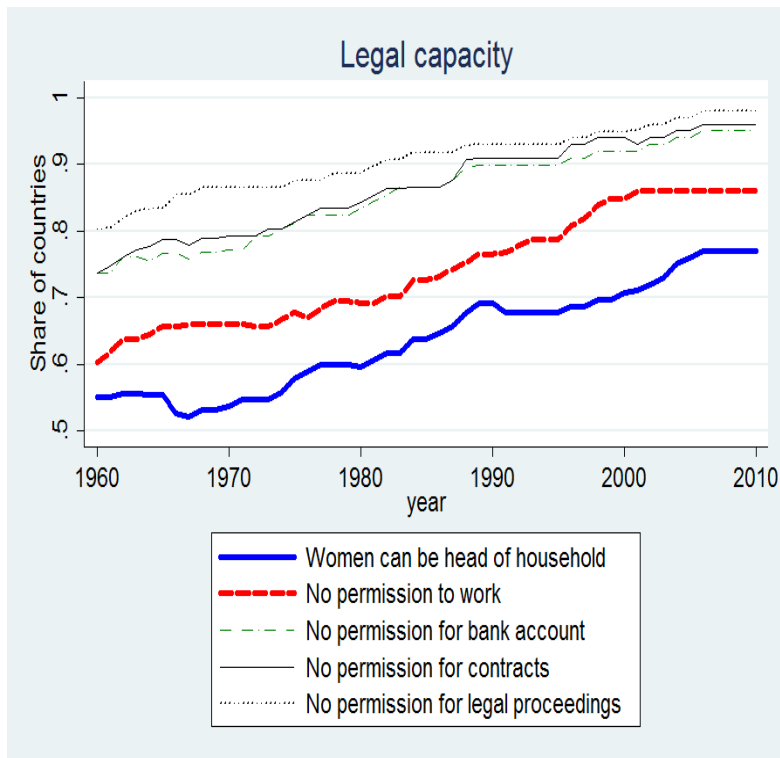
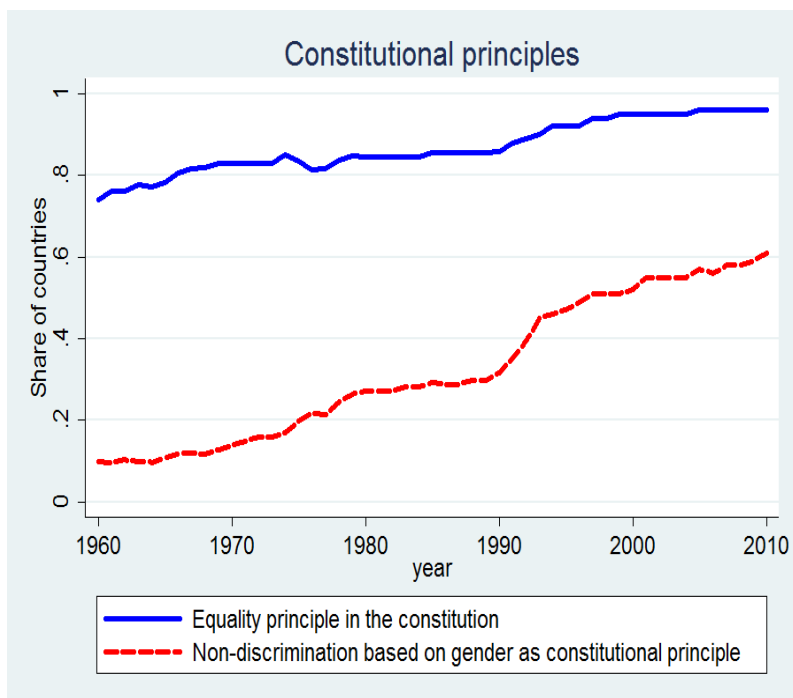


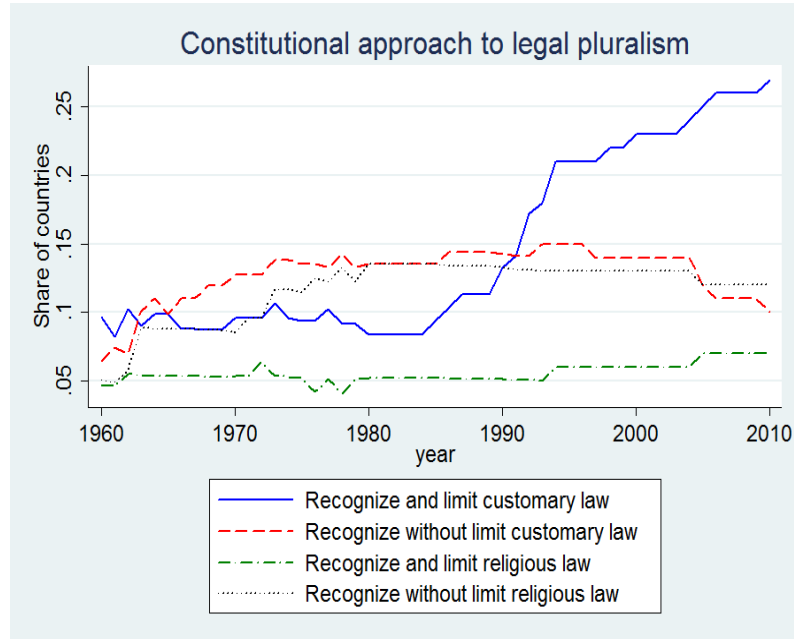
Figure 1C.



The constitutional principle of equality is now recognized everywhere, except for the countries in our sample that do not have a constitution (e.g. UK and Jamaica). The principle of non-discrimination has climbed to over 60% (figure 1C). The interpretation of this latter variable, however, is not always straightforward. Some legal scholars argue it is not necessary if a constitution already has an equality clause; many high-income countries do not have a non-discrimination clause. Indeed, the need to enumerate gender could even be interpreted as a sign of weakness; that doubts about the strength of the equality provisions in safeguarding women's rights are what led to its inclusion. On the other hand, having this principle included provides additional legal tools to argue against statutes seen as potentially discriminatory.

The last figure (figure 1D) depicts countries' approaches to legal pluralism. Recognition of customary law has been growing since 1960 and to a lesser extent so has recognition of religious law. Some of this reflects the inclusion of new countries post-1960 that included such a provision in their constitution at the time of independence. However, the emphasis here is whether customary and/or religious law – recognized as prevailing over issues of property, marriage and inheritance – is exempt from non-discrimination protections.

Figure 1D.



Country Coverage

One hundred countries were selected to ensure a good regional and income representation. Table 1 shows the distribution across regions, divided into initial income quartiles. In terms of 2010 income categories set by threshold levels of income, there is a disproportionate number of low-income countries included, in part because these are countries where some of the legal constraints for women remain more prevalent and where progress is still needed on employment, health and education outcomes. But there is a good representation of higher-income countries too. This allows for comparisons across the income distribution and to test how the role of income affects the probability of reform (the relationship is very weak; Hallward-Driemeier, Hasan and Rusu 2013) and whether the impact of having a certain protection on the books varies with development.

One selection issue did arise. Certain countries had to be excluded as it was not possible to find the relevant statutes, not only historically but even today – itself a powerful indicator of

the state of rights in those countries. Of the 100 countries that are included, there are some gaps in early years or pre-independence. However, by 2010, only Niger’s laws regarding property rights to unmarried men and women could not be located.

Table 1 : Regional and Income Representation of Countries (1960)

Region	Number of Countries	Quartiles of Initial Income Levels			
		Lowest	Lower Middle	Upper Middle	Upper
EAP	12	5	3	3	1
ECA	10	0	4	6	0
LAC	15	0	1	11	3
MENA	8	0	5	3	0
OECD	17	0	0	2	15
SAR	5	5	0	0	0
SSA	33	16	14	2	1
Total	100	26	27	27	20

Approach

The legal indicators cover the period 1960-2010. The aim is to look at how changes in these indicators affect outcomes in women’s and girls’ economic opportunities, education, health, and empowerment. However, before analyzing the time dimension, we first start with the cross-country relationships between a large set of outcomes and each of the legal indicators.

Table 2 presents the cross-country variation in the legal indicators and their association with outcomes. In each regression, each country appears once, generally in the year of its most recent household survey. Each of the legal indicators is entered in a separate regression, so each cell in Table 2 represents the results of different estimations.

A number of country characteristics are controlled for, including GDP per capita and the sectoral composition of the economy. The size of the agricultural, industry or service sectors can

have an independent impact on the prevalence of employment categories (e.g. wage employment tends to rise as the service sector expands; natural resource sectors often do not employ as many workers), and may also indicate the range of opportunities that are available in an economy.⁴ Another control used is whether a country was in a recent conflict and the intensity of the conflict. Conflicts disrupt economic, health and education outcomes, particularly if they are on a large scale. However, the post-conflict era could mark an opportunity for reforms if there is a new constitution or as statutes are reformed. Whether this opportunity is taken by reformers to address gender gaps is an empirical question. The measures of conflict also have the benefit of covering the entire sample period. The rule of law is another control used, but not in all specifications as it is only available since 1985.⁵

It is recognized that the probability of reform itself is not necessarily exogenous from all the outcomes of interest. Greater participation of women in paid employment may contribute to political pressures to reform laws, which then may further enable more women to pursue employment opportunities. More women in parliament may be associated with reforming statutes that give women greater property rights and legal capacity. The specification thus lags country characteristics; they are thus predetermined.

We examined different lag structures of one, five and ten years. The five-year lag is our preferred specification; all the legal indicators and country characteristics in the regression tables are lagged by five years. Some reforms are unlikely to lead to immediate large-scale responses. In many cases it may take a few years – for the information to become widely known and for

⁴ These measures of sectoral composition are available for all countries but Switzerland and Niger since 1994. In the 1960s coverage is not complete as some of the countries had not yet gained independence. By 1970, almost 85% of the countries have the data available.

⁵ There are two sources for ‘rule of law’ indicators. The one from ICRG goes back to 1985, but only covers up to 84 of the countries in our sample. There is another source, the Global Governance Indicators, that covers all the countries, but only back until 1996. In the cross-section results, we use the GGI version to maximize coverage, but with the longer time series we use both to test for the importance of either greater time or country coverage.

people to then change their behavior. At the same time, too long a lag is likely to dilute the findings, particularly if other changes are also happening. Given many gender disaggregated outcome variables are only available in the 1990s and onwards, such a long lag structure would also restrict the ability to construct a meaningful panel for the analysis.

We then turn to the impact of changes in the legal indicators over time. Our preferred specification is a panel regression with country fixed effects that looks at how reforms within a country are associated with changes in the various outcomes. This approach holds all time-invariant characteristics constant, decreasing the concern about omitted variable bias. We also include additional controls for country characteristics that do change over time, such as GDP per capita and whether the country is in a conflict, and we include a trend variable. Each of the legal indicators are then entered one at a time to test for the significance of strengthening women's legal rights in that area on each of the outcomes. With the country fixed effect, the coefficient on the legal indicator is identified by changes in its value, i.e. by reforms, rather than by differences across countries. This provides the strongest test of the importance of these legal rights.

$$\begin{aligned}
 Y_{it} = & \alpha + \beta_1 \text{Legal_indicator}_{i,t-5} + \beta_2 \text{GDPper_capita}_{i,t-5} + \beta_3 \text{agri_GDP}_{i,t-5} + \\
 & \beta_4 \text{services_GDP}_{i,t-5} + \beta_5 \text{conflict}_{i,t-5} + \beta_6 \text{conflict_intensity}_{i,t-5} + \beta_7 \text{trend} + \\
 & \beta_8 \text{Country_dummies} + v_{i,t-5} \quad (1)
 \end{aligned}$$

This approach is taken for at least one key variable in each of the outcome categories. For economic opportunities, we look at women's labor force participation. For education, we look at the ratio of girls to boys in primary, secondary and tertiary education. For health, we look at infant mortality and women's life expectancy. And for empowerment, we look at the age of first marriage and adolescent fertility.

There are other outcome measures that can also be examined over time. However, the time-series coverage of these variables is not as extensive. Data may only be available for the last 20 years rather than closer to 50 years. This restricts the ability to identify some of the reforms, particularly with country fixed effects, as there are simply fewer reform episodes covered in 20 years versus 50 years. So, for the wider set of outcome variables we look at shorter panels using random effects. We also aggregate the legal indicators. We combine the individual legal indicators according to their group, resulting in three measures: property rights, legal capacity and constitutional rights. These measures capture more reform episodes, making it easier to identify impacts – although the results cannot tell which sub-component is driving the results.

It is also possible that the effectiveness of legal reforms varies across countries. It may be that the benefit of having equal property rights or legal capacity is only realized if a country is already reasonably developed, or where the rule of law is sufficiently established. Alternatively, it may be that having some rights formally recognized is particularly important when the rule of law is otherwise weak. We explore if the impact of legal reforms is non-linear, whether the strength of the rule of law or a country's level of development affects how the legal rights translate into outcomes.

Results

Cross-country analysis

Table 2 provides the basic cross-country results for each of the legal variables separately, for each of 25 outcome variables. The outcome variables are grouped by theme, with the definitions and sources used listed in the appendix. Looking at the first category, 'employment' it

is striking the association between equal property rights, particularly with regard to inheritance and joint titling, with increased labor force participation, greater employment outside of agriculture and into wage work. Particularly in low-income countries, women are disproportionately underrepresented in wage employment, a gap that tends to close with income. Stronger property rights appear to reinforce this transition into wage employment. Measures of greater legal capacity are also associated with improved employment outcomes, both for labor force participation more generally and for wage work more specifically. The correlations for the self-employed are generally the same but of the opposite sign than for wage employment. As these are two largest categories of the employed, it is natural that there is some substitution between the two types of work.

On the other hand, somewhat surprisingly, unmarried and married property rights are negatively associated with women being employers. However, with a small number of countries in the cross-section that do not recognize equal rights to immovable property for unmarried men and women, the result is not necessarily generalizable to historical relationships.

Regarding constitutional principles, non-discrimination (as a clause in the constitution, and for limiting religious law) is associated with higher labor force participation, non-agricultural employment and being an employer.

The second category includes the education outcomes. There are fewer significant associations here; not needing permission to work is positively associated with three of the four outcomes and property rights with two. Limiting religious law to conform to non-discrimination principles is associated with higher primary school enrollment, but lower tertiary enrollment. This is due in part from the contribution of countries in the Middle East and North Africa that

have very high rates of women in tertiary education and are more likely to recognize religious law without restricting it.

There are many beneficial health outcomes that are significantly associated with smaller gaps in gender rights. Measures of women's life expectancy – as a level and relative to men – are significantly related to all three categories of rights. The negative associations are where either customary or religious law is formally recognized. Another outcome strongly associated with women's legal rights is access to contraceptives. As much as any particular reform may contribute, this is likely reflects a more open view of women's roles in society.

Among the outcomes where lower values indicate better outcomes (i.e. the shaded columns), both maternal and infant mortality fall with better property rights and greater legal capacity. Recognition of customary law, however, has a positive sign, indicating that mortality rates are higher where customary law prevails. Recall, the results cannot be interpreted as causal; they are associations in the data, controlling for a number of other explanatory variables.

The fourth set of outcomes provides additional measures of women's empowerment. Indicators from all three sets of legal rights are significantly associated with higher rates of women in parliament. Similar patterns hold for the share women among senior officials and managers, although there are some negative associations with some of the legal capacity indicators, driven again by the smaller number of countries with this outcome variable that also have these constraints on the books. Again, the variables that come in strongly negative are ones represented in the cross section by very few countries. In terms of women's access to finance, whether simply to a bank account or to a loan, legal capacity matters, as do measures of property rights.

The final column is shaded, to indicate that for this outcome, lower values reflect better outcomes. Thus negative signs should be interpreted as reforms helping improve the outcome. The indicator is drawn from DHS surveys regarding domestic violence and the share of women who could face a beating for arguing, refusing sex or burning the food. The country coverage is low, but both equal inheritance and non-exemption of customary law are associated with lower rates of women fearing being beaten.

Time series analysis

For the series with the longest time series dimension, Table 3 looks at the effect of reforms of each legal indicator.⁶ The same set of controls is again included. We also allowed for non-linear effects by income. It should be noted that some of the coefficients are quite large, with offsetting interaction effects. This reflects that there is a sizeable variation in the outcome variables across countries – including those with and without reforms. The claim is not that strengthening women’s rights on its own will automatically lead to large improvements in outcomes; but there are significant differences on average between countries with and without gender gaps in rights, controlling for a number of time-varying and non-varying country characteristics.

In terms of women’s labor force participation, there are differential effects by level of income; the effect of the reforms in raising labor force participation is almost always stronger in middle- and upper-level-income countries. The inflection point comes in close to the median of the sample; so the beneficial impacts are relevant for a large number of countries. At the median

⁶ There is no time series dimension available on the variables measuring women’s access to bank accounts or loans; the coverage of the share of women as senior officials and managers is likewise thin and there is no repeating information on the measure of domestic violence. The coverage of female infant mortality is less extensive than of infant mortality overall, so we look at the latter measure in the panel analysis. The same is true of ‘the age of first marriage’ compared to ‘the share of 18 year olds who are married.’

income, an increase of income of one standard deviation would raise women's labor force participation 2.1 percentage points higher for countries with equal inheritance for wives and husbands than countries where wives do not have the same inheritance rights. Or, for countries at the 75th percentile of income, those that do not require permission for wives to open bank accounts on average have women's labor force participation that is 2.62% higher. For employment in the non-agricultural sector, the more limited time dimension means that only the regressions on inheritance spanned a sufficient number of reforms. For both indicators, the impact of closing the gender gap in inheritance is associated with an increase in the share of women working outside of agriculture. The effect is positive, with only a very small interaction term that would reduce the effect only at the very upper end of the income distribution.

For education, the effects are strongest for primary enrollment, particularly regarding property and inheritance rights. The effects of reform are generally positive, with a negative interaction term indicating the effect is lower as incomes rise. Expanding women's legal capacity and protecting non-discrimination principles are also generally associated with higher ratios of girls enrolled; again with the effect the strongest in lower-income countries. For example, at the 25th percentile of income, countries that give sons and daughters equal inheritance rights on average have a 6.4 percentage point higher ratio of girls to boys in primary enrollment. The pattern for secondary enrollment is similar, although not always statistically significant. However, for tertiary education the interaction terms with income often flip signs. Whereas legal reforms tend to have the most impact in raising primary education in lower-income countries, they tend to contribute to higher rates of women in tertiary education in higher-income countries. For the age of first marriage, the effect of legal reforms in raising the age of marriage is greater in higher-income countries. This is true for property rights and legal

capacity, as well as safeguards that invalidate customary and/or religious law that discriminate based on gender. For health, we look at infant mortality (overall, not gender disaggregated). The impacts of reforms helping lower infant mortality are most significant with indicators of property rights and inheritance. And the effects of closing the legal gender gaps are more beneficial at lower levels of income. At the 25th percentile of income, recognizing women as the head of household is associated on average with a decline in infant mortality of 9.3 deaths per 1000 live births; at the 10th percentile the decline is 12.3.

Table 4 then looks at whether there are also differential impacts of reforms by the strength of the rule of law. As this measure is only available for 83 of the 100 countries, it reduces the sample and thus the potential number of reforms spanned by the data. As a result, the list of outcomes is shorter, as is the number of legal indicators with sufficient changes in the time period covered. For women's labor force participation, the variables that have non-linear impacts by rule of law are unmarried women and men's property rights, and the recognition and limitations on customary and religious law. In all three cases, the greater equality of rights appears to have a stronger association with women's labor force participation where the rule of law is otherwise weak. For education, the non-linear effects are most apparent in secondary school. Property rights measures are associated with higher girls' enrolment where the rule of law is stronger; but the effect is the opposite for inheritance rights where the effect of reforms seems stronger where the rule of law is stronger. The signs are often the same for primary and tertiary education, but the coefficients are not significant. For infant mortality, the effects are also most beneficial where the rule of law is stronger. The same pattern also holds for life expectancy (note: the signs are actually opposite as improvements in infant mortality imply

declining rates, while improvements in life expectancy imply rising rates), although often not at statistically significant levels.

Table 5 then looks at additional outcome variables that have a sufficient time dimension to span legal reform periods. One of the challenges here is that the data on the outcomes of interest are not always available going back more than 10-20 years, depending on the series, and some, e.g. infant mortality, are not gender disaggregated until relatively recently. For those series with a relatively short time span, they often span an insufficient number of reforms to be able to identify an effect. As a solution, we group the legal indicators into the three categories of property rights, legal capacity and constitutional principles of non-discrimination. Each outcome is again run separately on each of the three sets of legal rights. The same controls (lagged 5 years) are included, GDP per capita, the sectoral composition of the economy, whether it had been in a conflict and the conflict's intensity, and a year dummy as the same indicator is not necessarily available for all countries in the same year. As the lengths of the panels vary by outcome variable, the regressions will cover different numbers of reforms, so the comparisons across outcomes should take into account the length of reform periods being examined.

For employment, equal property rights are associated with more women working outside of agriculture. However, it is the measure of stronger legal capacity that is most associated with a higher share of women in wage work, and lower shares of women in vulnerable and self-employment. As one of the sub-indicators within legal capacity is whether a husband can deny his wife permission to work, this correlation makes sense. However, the results on non-discrimination are more surprising, being associated with lower wage work and more vulnerable employment and self-employment.

For health outcomes, female wasting is lower where property rights are stronger. There are also some non-linear effects at work; both stronger property rights and legal capacity have a stronger association with lower female wasting in lower-income countries. The same is true for maternal mortality, with rates falling the most in lower-income countries with stronger rights for women across all three categories. For access to contraceptives, stronger property rights and legal capacity are associated with greater access, particularly in lower-income countries. However, for non-discrimination, the effect is greater in higher-income countries.

All three sets of legal rights are highly significantly associated with the share of women in parliament. Greater legal rights can help empower women to run for office and to have more of the population recognize women as leaders. It is also true that the share of women in parliament is also associated with more reforms to close gender gaps. The relationship thus appears to run both ways, and there are no apparent non-linear effects by income.

Conclusion

Over the past 50 years, there has been tremendous progress made in closing many of the gender gaps in formal property rights and legal capacity. Change is possible. But it is not complete. And progress has been uneven – across countries and across types of legal constraints to give women equal legal capacity and property rights as men.

Enshrining equal rights for women in the law is heralded as having intrinsic value. But there is also a case to be made that there is instrumental value too, that removing gender gaps in these rights will enable women to pursue greater opportunities thereby raising incomes and productivity. The paper examines the evidence on the strengthening of women's economic legal rights on girls' education, health outcomes, women's employment (particularly in wage

employment and as employers), and women's participation in elected office. While the effects cannot be interpreted as causal, the correlations are often strong – both across countries and within countries over time. The benefits of the reforms show signs of having differential effects by income and rule of law across different types of legal indicators. For raising girls' primary and secondary education, and for lowering infant mortality, the benefits of reforms appear strongest for lower-income countries with relatively weaker rule of law. For employment outcomes, reforms are associated with greater women's labor force participation and employment outside of agriculture in higher-income countries.

More work needs to be done to provide women with equal legal protections in more countries; this paper provides evidence that the benefits can be realized not just by individuals, but in contributions to broader development outcomes too.

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Appendix:

Methodology for “50 Years of Women’s Legal Rights Database”

The objective of the database is to track legal reforms affecting women’s property rights and legal status, starting with the law applicable in 2010 and tracking changes backwards in time to 1960⁷. For economies that came into existence after 1960, the coding general begins with the economy’s independence in its current form. However, for countries that divide over time (e.g. countries of the former Soviet Union), the individual countries are included over the whole period, each with the laws that governed the initial single country for the relevant years, and then with the country-specific laws and constitutions after independence or separation. For economies that became re-united or unified (i.e. Yemen and Vietnam) within the period between 1960 and 2010, applicable legislation is analyzed and coding is done separately for the individual economies that eventually became one, covering that entire period.

The process of data collection consists of desk research using written legislation, such as Constitutions, Personal Status laws, Civil Codes, Family Codes, and Inheritance laws, applicable in the main business city of the economies covered. Online sources of legislation such as the World Bank’s Gender Law Library⁸, Lexadin⁹, the United Nations’ Human Rights Treaties database¹⁰, the law library of the US Congress¹¹, ILO’s NATLEX database¹², the Notarius International Foreign law database¹³, as well as legislation and secondary sources accessed through universities’ databases and virtual libraries such as Harvard Law School’s Law Library¹⁴, NYU Law’s Globalex¹⁵, and HeinOnline¹⁶, among others, are used. Also, hard copies of historical legislation not available online were obtained through the Library of Congress Georgetown Law Library and the Jacob Burns Law Library at George Washington University.

The 50 Years of Women’s Legal Rights Database analyzes the evolution of gender parity within the legislation of the covered economies through a set of 17 questions in the following areas:

⁷ This data collection was performed with the guidance of Mary Hallward-Driemeier, Lead Economist Development Research Group, and carried out under the supervision of Sarah Iqbal, Program Officer of Women, Business and the Law, and Tazeen Hasan, Development Economics and PRMGE. Team members from the Women, Business and the Law who contributed are: Garam Dexter, Khrystyna Kushnir, Lourdes Lizarraga Ortega, Nayda Almodovar Reteguis, Paula Tavares, Thibault Meilland and Yasmin Klaudia bin Humam. In addition, Abhinav Goel, Ashley S. Zohar, Erin F. Rogers, Lindsey Scannell, Sarah Knapp, Shazia Akhter, Tatyana Chursova, Yulia Dovgaya and Zachary Walter conducted research for the database as part of their internships with the World Bank Group.

⁸ <http://wbl.worldbank.org/WBLLibrary/elibrary.aspx?libid=17>

⁹ <http://www.lexadin.nl/wlg/legis/nofr/legis.php>

¹⁰ <http://www.bayefsky.com/>

¹¹ <http://www.loc.gov/law/>

¹² http://www.ilo.org/dyn/natlex/natlex_browse.country?p_lang=en&p_country=COL

¹³ http://212.63.69.85/en/Links/links_international_en.htm

¹⁴ http://www.law.harvard.edu/library/research/guides/int_foreign/web-resources/foreign-law_c.html

¹⁵ <http://www.law.nyu.edu/global/researchtools/globalex/index.htm>

¹⁶ <http://home.heinonline.org/>

property ownership, marital regimes, inheritance, property titling, status and capacity, access to the judicial system, and constitutional rights.

For all questions concerning the ability of married women to carry out activities independently of their husbands, the key concern is reciprocity. Therefore, where a married man is unable to carry out the same activity without the permission of his wife, the question is not triggered because the provision is reciprocal. It is only triggered where a married man is able to carry out the activity and his wife cannot do so.

To make the data comparable across economies, the following assumptions are being used¹⁷:

Assumptions about the woman

- Resides in the main business city of the economy being examined;
- Has reached the legal age of majority and is capable of making decisions as an adult. If there is no legal age of majority, please assume the woman is 30 years old;
- Is sane, competent, in good health, and has no criminal record;
- Is a lawful citizen of the economy being examined;
- Where the question assumes the woman (or man) is married, the marriage is monogamous and registered with the authorities;
- Where the question assumes the woman (or man) is married, the marital property regime she (or he) is married under is assumed to be the default marital property regime.
- Where the question assumes the woman (or man) is unmarried, she (or he) has never been married.
- Customary law is not being used to answer the questions. The only questions examining customary law are the ones that specifically address it. E.g. examining the place of customary law under the Constitution.
- The year recorded in the “Year” column is the year the legislation or amendment was enacted, not the year in which it entered into force.
- Where the answer differs according to the legal system applicable to the woman in question – as may be the case in economies where legal plurality exists – the answer used is the one applicable to the majority of the population.

¹⁷ For more details about the assumptions used to answer the particular questions under each sub-section, please refer to the Data Notes section of the 2012 Women Business and the Law report, pages 34 – 50, that can be accessed by visiting our website: wbl.worldbank.org.

List Of Questions Tracked From 1960 To 2010

Category	Question	Variable name
Access to Assets	Do unmarried men and unmarried women have equal ownership rights over immoveable property?	Unmarried property
	Do married men and married women have equal ownership rights over immoveable property?	Married property
	Do sons and daughters have equal inheritance rights over immoveable property from their parents?	Sons-daughters inheritance
	Do female and male surviving spouses have equal inheritance rights over immoveable property?	Husband-wife inheritance
	What is the default marital property regime?	Default regime
	If joint titling exists for married couples, is it the default for marital property?	Joint titling
Restrictions on Agency and Mobility for Married Women	Can an adult married woman legally be designated as "head of household" or "head of family" in the same way as an adult married man?	Head of household
	Does an adult married woman legally need permission from her husband in order to get or keep a job or pursue a trade or profession; or can a husband legally stop his wife from working?	Work without permission
	Can an adult married woman legally open a bank account in the same way that an adult married man can?	Bank account without permission
	Are there any legal provisions that prevent an adult married woman from signing any type of contract in the same way that an adult married man would?	Contract without permission
	Do adult married women need permission from their husbands in order to initiate legal proceedings in court in civil cases?	Legal proceedings without permission
Constitutional Approach to Gender Equality and Plural Legal Systems	Does the Constitution guarantee all citizens equality before the law?	Constitutional equality
	Is there a non-discrimination clause covering gender or sex in the Constitution?	Constitutional non-discrimination
	Are customary law and/or religious law a valid source of law under the Constitution?	Customary law / Religious law valid
	Are customary and/or religious law invalidated if they violate Constitutional provisions on equality and/or nondiscrimination?	Customary law / Religious law invalidated by non-discrimination

Countries Covered in the Database

EAP	ECA	LAC	MENA	OECD	SAR	SSA
China	Bulgaria	Argentina	Algeria	Australia	Bangladesh	Angola
Fiji	Belarus	Bolivia	Egypt, Arab Rep.	Austria	India	Benin
Indonesia	Georgia	Brazil	Iran, Islamic Rep.	Belgium	Sri Lanka	Burkina Faso
Cambodia	Kazakhstan	Chile	Jordan	Switzerland	Nepal	Botswana
Lao PDR	Kyrgyz Republic	Colombia	Morocco	Germany	Pakistan	Central African Republic
Mongolia	Russian Federation	Costa Rica	Syrian Arab Republic	Spain		Côte d'Ivoire
Malaysia	Tajikistan	Dominican Republic	Tunisia	France		Cameroon
Philippines	Turkey	Guatemala	Yemen, Rep.	United Kingdom		Ethiopia
Papua New Guinea	Ukraine	Honduras		Hungary		Gabon
Singapore	Uzbekistan	Jamaica		Italy		Ghana
Thailand		Mexico		Japan		Kenya
Vietnam		Nicaragua		Korea, Rep.		Liberia
		Peru		Netherlands		Lesotho
		Paraguay		Norway		Madagascar
		Venezuela, RB		Portugal		Mali
				Sweden		Mozambique
				United States		Mauritania
						Malawi
						Namibia
						Niger
						Nigeria
						Rwanda
						Sudan
						Senegal
						Sierra Leone
						Swaziland
						Togo
						Tanzania
						Uganda
						South Africa
						Congo, Dem. Rep.
						Zambia
						Zimbabwe

Source of outcome and explanatory variables

- **World Development Indicators (WDI)** is the primary World Bank collection of development indicators, compiled from officially recognized international sources. It presents the most current and accurate global development data available, and includes national, regional and global estimates. WDI was the source for indicators regarding GDP, GDP/capita, maternal and infant health, life expectancy, sectors value added to GDP and exports of natural resources. (databank.worldbank.org)
- **International Country Risk Guide (ICRG)** - is generated by the PRS group. Updated monthly, ICRG monitors 140 countries. ICRG's statistical tables assign values to the 22 indicators underlying ICRG's business-oriented model for quantifying risk, examining such country-specific elements as currency risk, political leadership, the military and religion in politics, and corruption. The present study employs the Law and Order indicator. Law and Order are assessed separately, with each sub-component comprising zero to three points. The Law sub-component is an assessment of the strength and impartiality of the legal system, while the Order sub-component is an assessment of popular observance of the law. Thus, a country can enjoy a high rating – 3 – in terms of its judicial system, but a low rating – 1 – if it suffers from a very high crime rate of if the law is routinely ignored without effective sanction (for example, widespread illegal strikes). The maximum score is 6. (<http://www.prsgroup.com/ICRG.aspx>)
- **International Income Distribution Database (I2D2)** – database of disaggregated labor market indicators derived from a large set of surveys from developing countries. The database presently includes more than 700 datasets from the period between 1984 and 2011. Ninety-one countries are covered by data from this source.
- **Gender Statistics** includes data on key gender topics. Themes included are demographics, education, health, labor force, and political participation. The data was launched together with the World Bank's World Development Report 2012 on Gender Equality and Development. Gender Statistics was the sources for indicators such as the ratio of female to male educational enrollment and young adult literacy. (databank.worldbank.org)
- **Inter-Parliamentary Union (IPU)** - The data on percentage of women in parliament is compiled by the on the basis of information provided by National Parliaments by 1st May 2013. The percentages do not take into account the case of parliaments for which no data was available at that date. (www.ipu.org)
- **Armed Conflict Database** - This dataset is a collaborative project between the Department of Peace and Conflict Research at Uppsala University and the Centre for the Study of Civil War at PRIO. The database includes armed conflicts, both internal and external, in the period 1946 to the present. (<http://www.prio.no/Data/Armed-Conflict/UCDP-PRIO/>)

Variables sources and definitions		
	Source	Definition
Employment		
Women's labor force participation	WDI	Labor participation rate, female (% of female population ages 15+). Labor force participation rate is the proportion of the population ages 15 and older that is economically active: all people who supply labor for the production of goods and services during a specified period.
Share of women in non-agricultural employment	WDI	Share of women employed in the nonagricultural sector (% of total nonagricultural employment). Share of women employed in the nonagricultural sector is the share of female workers in the nonagricultural sector (industry and services), expressed as a percentage of total employment in the nonagricultural sector.
Share of women who are employers	WDI	Employers, female (% of employment). Employers refers are those workers who, working on their own account or with one or a few partners, hold the type of jobs defined as a "self-employment jobs" i.e. jobs where the remuneration is directly dependent upon the profits derived from the goods and services produced), and, in this capacity, have engaged, on a continuous basis, one or more persons to work for them as employee(s).
Share of women who are wage workers	WDI	Wage and salaried workers, female (% of females employed) . Wage and salaried workers (employees) are those workers who hold the type of jobs defined as "paid employment jobs," where the incumbents hold explicit (written or oral) or implicit employment contracts that give them a basic remuneration that is not directly dependent upon the revenue of the unit for which they work.
Share of women in vulnerable employment	WDI	Vulnerable employment, female (% of female employment). Vulnerable employment is unpaid family workers and own-account workers as a percentage of total employment.
Share of women in self-employment	WDI	Self-employed, female (% of females employed). Self employed workers are those workers who, working on their own account or with one or a few partners or in cooperative, hold the type of jobs defined as a "self-employment jobs" (i.e. jobs where the remuneration is directly dependent upon the profits derived from the goods and services produced).
Share of wage workers who are women	WDI / I2D2	Share of wage workers who are women calculated as a percentage of all wage workers.
Share of self-employed who are women	WDI/I2D2	Share of self-employed who are women calculated as a percentage of all self-employed workers.
Share of employers who are women	WDI/I2D2	Share of employers who are women calculated as a percentage of all employers.

Education		
Ratio of girls to boys in primary education	Gender Statistics	Ratio of female to male primary enrollment is the percentage of girls to boys enrolled at primary level in public and private schools
Ratio of girls to boys in secondary education	Gender Statistics	Ratio of female to male primary enrollment is the percentage of girls to boys enrolled at secondary level in public and private schools
Ratio of girls to boys in tertiary education	Gender Statistics	Ratio of female to male primary enrollment is the percentage of girls to boys enrolled at tertiary level in public and private schools
Ratio of young literate females to young literate males (% age 15-24)	Gender Statistics	Ratio of young literate females to males is the percentage of females to males ages 15-24 who can, with understanding, read and write a short, simple statement on their everyday life
Health		
Life expectancy (female)	WDI	Life expectancy at birth indicates the number of years a newborn female infant would live if prevailing patterns of mortality at the time of its birth were to stay the same throughout its life.
Access to contraceptives	Gender Statistics	Contraceptive prevalence rate is the percentage of women who are practicing, or whose sexual partners are practicing, any form of contraception. It is usually measured for married women ages 15-49 only.
Maternal mortality	WDI	Maternal mortality ratio is the number of women who die during pregnancy and childbirth, per 100,000 live births.
Infant mortality	WDI	Infant mortality rate is the number of infants dying before reaching one year of age, per 1,000 live births in a given year.
Infant mortality (female)	WDI	Female infant mortality rate is the number of female infants dying before reaching one year of age, per 1,000 live births in a given year.
Malnutrition of children 0-5 (female)	Gender Statistics	Prevalence of child malnutrition is the percentage of children under age 5 whose weight for age is more than two standard deviations below the median for the international reference population ages 0-59 months. The data are based on the WHO's new child growth standards released in 2006.
Wasting (female)	Gender Statistics	Wasting prevalence is the proportion of children under five whose weight for height is more than two standard deviations below the median for the international reference population ages 0-59.
Empowerment		
Age of first marriage	Gender Statistics	Mean age at first marriage shows the average length of single life expressed in years among those who marry before age 50
Share of 18 year olds who are married	Gender Statistics	Women who were first married by age 18 refers to the percentage of women ages 20-24 who were first married by age 18.
Adolescent fertility	Gender Statistics	Adolescent fertility rate is the number of births per 1,000 women ages 15-19

Women in parliament	IPU	Women in parliaments are the percentage of parliamentary seats in a single or lower chamber held by women.
Share senior officials and managers who are women	Gender Statistics	Female legislators, senior officials and managers (% of total) refers to the share of legislators, senior officials and managers who are female.
Domestic violence/Beating	Gender Statistics	Proportion of women aged 15-49 subjected to physical or sexual violence in the last 12 months by an intimate partner (%)
Share of women with access to a bank account	FINDEX	Percentage of women who have an account with a formal financial institution out of all women aged 15+
Share of women with access to a bank loan	FINDEX	Percentage of women who have a loan from a formal financial institution out of all women aged 15+
Control variables		
GDP per capita	WDI	GDP per capita is gross domestic product divided by midyear population.
Industry, value added to GDP (%)	WDI	Industry corresponds to ISIC divisions 10-45 and includes manufacturing (ISIC divisions 15-37). It comprises value added in mining, manufacturing, construction, electricity, water, and gas. Value added is the net output of a sector after adding up all outputs and subtracting intermediate inputs. It is calculated without making deductions for depreciation of fabricated assets or depletion and degradation of natural resources. The origin of value added is determined by the ISIC revision 3.
Services, value added to GDP (%)	WDI	Services correspond to ISIC divisions 50-99 and they include value added in wholesale and retail trade (including hotels and restaurants), transport, and government, financial, professional, and personal services such as education, health care, and real estate services. The industrial origin of value added is determined by the International Standard Industrial Classification (ISIC), revision 3.
Conflict	UCDP/PRIO Armed Conflict Dataset, version 4-2009	UCDP defines conflict as: “a contested incompatibility that concerns government and/or territory where the use of armed force between two parties, of which at least one is the government of a state, results in at least 25 battle-related deaths.
Conflict intensity	UCDP/PRIO Armed Conflict Dataset, version 4-2009	Takes into account the temporal dimension of the conflict. It is a dummy variable that codes whether the conflict since the onset has exceeded 1,000 battle-related deaths. A conflict is coded as 0 as long as it has not over time resulted in more than 1,000 battle-related deaths. Once a conflict reaches this threshold, it is coded as 1.
Rule of law	ICRG	ICRG data: Law and Order are assessed separately, with each sub-component comprising zero to three points. The Law sub-component is an assessment of the strength and impartiality of the legal system, while the Order sub-component is an assessment of popular observance of the law. Thus, a country can enjoy a high rating – 3 – in terms of its judicial system, but a low rating – 1 – if it suffers from a very high crime rate or if the law is routinely ignored without effective sanction (for example, widespread illegal strikes). The maximum score is 6.

Table 1: Summary statistics

	Number of countries	Average	Standard deviation	Minimum	Maximum	First year available	Last year available
Employment							
Women's labor force participation	100	40.55	9.33	11.00	56.00	1990	2010
Share of women in non-agricultural employment	100	38.06	11.49	6.00	56.00	1990	2010
Share of women who are employers	83	2.07	1.34	0.00	8.00	1980	2010
Share of women who are wage workers	90	67.38	24.66	0.00	96.00	1980	2010
Share of women in vulnerable employment	87	31.59	25.01	1.00	99.00	1980	2010
Share of women in self-employment	90	32.36	24.35	3.00	99.00	1980	2010
Share of wage workers who are women	91	37.37	10.14	6.76	55.12	1970	2010
Share of self-employed who are women	90	40.84	14.87	2.04	78.17	1970	2010
Share of employers who are women	84	23.53	10.03	0.58	81.24	1977	2010
Education							
Ratio of girls to boys in primary education	99	89.46	15.66	17.24	149.19	1970	2010
Ratio of girls to boys in secondary education	99	85.69	26.05	17.26	309.97	1970	2010
Ratio of girls to boys in tertiary education	99	75.54	41.36	4.07	228.77	1970	2010
Ratio of young literate females to young literate males	86	63.53	44.76	0.30	115.58	1975	2010
Health							
Life expectancy (female)	100	62.48	12.63	28.53	86.44	1960	2010
Ratio of women's life expectancy to men's	100	1.07	0.04	0.95	1.57	1960	2010
Access to contraceptives	100	47.89	23.81	0.80	96.00	1968	2010
Maternal mortality	96	215.01	286.15	1.00	1800.00	1961	2010
Infant mortality	100	66.99	49.21	2.00	273.00	1960	2010
Infant mortality (female)	67	43.24	37.79	1.00	232.00	1986	2009
Malnutrition of children 0-5 (female)	87	32.65	16.44	1.10	77.30	1968	2010
Wasting (female)	86	6.91	5.22	0.00	26.40	1968	2010
Empowerment							
Age of first marriage	99	23.15	3.33	14.40	33.20	1980	2010
Share of 18 year olds who are married	70	32.34	17.33	1.80	83.30	1986	2010
Adolescent fertility	100	68.56	51.34	2.20	242.04	1997	2010
Women in parliament	100	14.76	10.21	0.00	56.30	1990	2010
Share senior officials and managers who are women	64	27.20	10.12	2.10	64.23	1985	2010
Domestic violence/Beating	34	41.91	21.06	3.56	75.59	2003	2009
Share of women with access to a bank account	93	37.90	30.29	1.09	99.01	2010	2010
Share of women with access to a bank loan	93	8.48	5.99	0.49	30.28	2010	2010
Control variables							
GDP per capita	100	7.72	1.53	4.01	10.64	1960	2010
industry share of GDP	100	29.59	10.87	1.88	72.72	1960	2010
services share of GDP	99	48.04	12.25	4.14	79.34	1960	2009
conflict	100	0.19	0.39	0.00	1.00	1960	2010
conflict intensity	100	0.13	0.34	0.00	1.00	1960	2010

Cross-sectional results: Each column represents a different outcomes as the dependent variable

Table 2a		Employment						Education			
		Women's labor force participation	Non-agricultural employment	Share of women who are employers	Share of women who are wage workers	Share of women who are self-employed	Share of employers who are women	Share of wage workers who are women	Ratio of girls to boys enrolled in primary education	Ratio of girls to boys enrolled in secondary education	Ratio of girls to boys enrolled in tertiary
Access to and control of assets	Unmarried property			._**			._**				
	Married property				*	._*	._**				
	Sons-daughters inheritance	***	***				*	***			*
	Husband-wife inheritance	***	***					***		**	**
	Joint titling	***	***					***			
Legal capacity	Head of household	**	*		**	._*		***		*	
	Work without permission	**		*				***	*	**	*
	Bank account without permission	._*									
	Contract without permission										
	Legal proceedings without permission										._***
Constitutional principles and legal pluralism	Constitutional equality	._***		**			._**		*		
	Constitutional non-discrimination	**	**						**		
	Costomary law is valid	**			._*	*	***				
	Customary law invalidated by non-discrimination										
	Religious law is valid			._*					**	._***	
	Religious law invalidated by non-discrimination	***	***				**		**	._**	
	Countries	98	98	81	88	88	89	90	96	96	95

*** p<0.01, ** p<0.05, * p<0.1

Note: Shaded columns indicate that lower numbers are desirable; so a "-" effect is a sign of improvement

Each cell represents a separate regression. Country controls, lagged five years, were included (GDP per capita, the share of industry value added in GDP, the share of services value added in GDP, whether there was a conflict and its intensity.)

Cross-sectional results: Each column represents a different outcomes as the dependent variable

Table 2b		Health							Empowerment						
		Life expectancy - female	Access to contraceptives	Maternal mortality	Infant mortality	Infant mortality - female	Malnutrition of children (age 0-5) -female	Wasting-females	Adolescent fertility	Age of first marriage	Share 18 married	Women in parliament	Women - share of senior officials and managers	Access to a bank account	Access to a bank loan
Access to and control of as	Unmarried property	***			_*		_-***		_*		**				
	Married property	***	***	_-***	_-***	_*	_*	_-***	_*				*	**	
	Sons-daughters inheritance		***				_*	_-***				**	**	*	
	Husband-wife inheritance		**				_	_-***			*	***	**		_*
	Joint titling		*					_*			**				
Legal capacity	Head of household	*	***	_-**	_-***	_-**			*				*	**	
	Work without permission	**	**		_-***	_-**					**	**			
	Bank account without permission	***		_-**	_*	_*	_*					_-***			
	Contract without permission	***	***	_*	_-***							_-***			
	Legal proceedings without permission							**	*	**		_-***		**	
Constitutional principles and legal pluralism	Constitutional equality	*			_-**				*	***			_-***		
	Constitutional non-discrimination	_*									*		**		
	Customary law is valid	_-***		***		***	***	*	**						
	Customary law invalidated by non-discrimination					**					***		_-***		_-**
	Religious law is valid		_-**						*	**					
	Religious law invalidated by non-discrimination		_*						*	**		***			
	Countries	97	97	94	98	65	87	86	97	98	70	97	63	91	91

*** p<0.01, ** p<0.05, * p<0.1

Note: Shaded columns indicate that lower numbers are desirable; so a "-" effect is a sign of improvement

Each cell represents a separate regression. Country controls, lagged five years, were included (GDP per capita, the share of industry value added in GDP, the share of services value added in GDP, whether there was a conflict and its intensity.)

Table 3: Panel regressions: testing for non-linear effects by level of development (GDP per capita)

		Employment	Education			Health		Empowerment		
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
		Women's labor force participation	Ratio of girls to boys in primary school	Ratio of girls to boys in secondary school	Ratio of girls to boys in tertiary education	Infant mortality	Life expectancy (women)	Adolescent fertility	Age of first marriage	
Property Rights, Access to and Control over Assets	Unmarried property rights	-9.373*** (3.066)	-8.661 (28.30)	1.585 (12.15)	-27.81 (22.50)	-15.81 (15.36)	-9.498 (11.62)	-9.125 (23.38)	-7.533*** (1.411)	
	Unmarried prop* GDPpc	1.581*** (0.483)	1.047 (3.770)	-0.475 (1.820)	4.842* (2.704)	3.117 (2.302)	1.123 (1.956)	0.997 (3.225)	1.121*** (0.203)	
	Married property rights	-3.225 (2.342)	17.31** (8.066)	3.437 (10.04)	-41.55*** (10.69)	-25.63* (13.50)	-3.519 (5.222)	-34.62*** (12.04)	-5.762*** (1.654)	
	Married PR* GDPpc	0.575 (0.372)	-2.435** (1.024)	-1.650 (1.479)	5.182*** (1.326)	3.635** (1.709)	0.489 (0.716)	4.257*** (1.597)	0.729*** (0.235)	
	Sons-daughters inheritance	-8.988** (3.527)	35.01** (14.27)	54.84*** (17.68)	0.497 (20.72)	-72.58*** (25.95)	-3.964 (9.500)	-19.55 (18.77)	-4.148** (1.715)	
	Sons-daughters inherit*GDPpc	1.332** (0.575)	-4.866** (2.242)	-7.863*** (2.861)	-1.997 (3.325)	11.89*** (4.058)	0.246 (1.643)	2.352 (2.882)	0.538** (0.252)	
	Husband-wife inheritance	-8.644*** (2.880)	33.34* (17.41)	53.53*** (19.71)	8.663 (19.64)	-76.33*** (28.69)	-4.913 (9.755)	-24.80 (20.26)	-2.897* (1.554)	
	Husband-wives inherit*GDPpc	1.237** (0.480)	-5.271** (2.397)	-8.414** (3.232)	-2.678 (3.179)	12.51*** (4.364)	0.234 (1.639)	3.184 (3.165)	0.353 (0.239)	
	Joint titling	-6.392** (2.723)	7.812 (10.57)	12.16 (13.75)	-0.0991 (27.58)	1.499 (24.63)	1.178 (6.603)	-13.41 (14.17)	-4.927** (2.093)	
	Joint titling*GDPpc	1.022** (0.422)	-1.128 (1.402)	-1.281 (2.237)	-0.363 (3.818)	-0.428 (3.412)	-0.361 (1.046)	1.834 (2.049)	0.609** (0.304)	
	Legal Capacity	Women head of household	-3.764 (3.146)	22.95*** (8.647)	-0.714 (11.90)	-28.76** (14.39)	-46.87*** (17.13)	0.827 (5.007)	-38.65*** (13.19)	-3.688** (1.477)
		Women head*GDPpc	0.566 (0.481)	-3.084*** (1.074)	-0.716 (1.526)	3.949** (1.821)	6.394*** (2.053)	-0.186 (0.612)	5.008*** (1.845)	0.445** (0.221)
No permission needed to work		-6.515** (2.932)	-5.104 (18.85)	-1.390 (16.83)	-17.54 (22.89)	5.683 (14.78)	-9.316 (7.281)	-6.698 (19.03)	-1.196 (2.407)	
No perm work *GDPpc		0.910** (0.432)	0.347 (2.445)	-0.637 (2.662)	2.697 (3.085)	0.137 (2.116)	0.969 (1.012)	0.626 (2.469)	0.173 (0.340)	
No permission bank account		-8.700** (3.406)	19.95** (7.818)	7.524 (7.427)	-45.86*** (10.12)	-17.17 (13.10)	-4.950 (5.293)	-17.81 (13.80)	-4.611** (2.230)	
No perm bank*GDPpc		1.388*** (0.517)	-2.640** (1.062)	-1.267 (0.940)	5.206*** (1.369)	2.981* (1.754)	0.496 (0.717)	1.592 (1.795)	0.587* (0.327)	
No permission to sign contracts		-8.795** (3.662)	15.51 (9.992)	-4.834 (10.79)	-6.133 (20.47)	-20.21 (18.53)	-7.272 (5.692)	-18.65 (14.93)	-7.224** (3.004)	
No perm contract *GDPpc		1.347** (0.557)	-2.033 (1.284)	0.429 (1.437)	0.990 (2.493)	2.982 (2.286)	0.776 (0.744)	1.942 (2.036)	0.918** (0.393)	
No permission for legal proceedings		-2.136 (3.297)	8.847 (9.494)	-14.29 (12.51)	-3.455 (20.07)	-3.740 (21.13)	-4.281 (6.642)	-29.91* (15.63)	-1.838 (3.132)	
No perm legal*GDPpc		0.371 (0.504)	-1.381 (1.259)	1.370 (1.690)	0.917 (2.596)	0.602 (2.867)	0.322 (0.893)	3.399 (2.154)	0.171 (0.477)	

Table 3 con't: Panel regressions: testing for non-linear effects by level of development (GDP per capita)

	Employment	Education			Health		Empowerment		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
	Women's labor force participation	Ratio of girls to boys in primary school	Ratio of girls to boys in secondary school	Ratio of girls to boys in tertiary education	Infant mortality	Life expectancy (women)	Adolescent fertility	Age of first marriage	
Constitutional Principles of Equality and Non-Discrimination	Constitutional equality	-11.79*** (2.615)	-6.203 (10.89)	-31.88** (15.34)	-29.03 (17.99)	-30.49 (20.88)	2.789 (7.569)	-33.93*** (10.21)	1.093 (2.897)
	Const equality *GDPpc	1.971*** (0.436)	0.154 (1.585)	4.064* (2.302)	4.359 (2.805)	4.949 (3.060)	-0.635 (1.148)	4.468*** (1.588)	-0.354 (0.418)
	Constitutional non-discrimination	-8.340*** (2.570)	23.18*** (6.390)	4.429 (13.27)	-12.48 (9.791)	-16.38 (15.52)	-2.356 (3.365)	19.58 (16.80)	-2.955** (1.259)
	Const. non-disc *GDPpc	1.173*** (0.445)	-3.518*** (0.830)	-1.144 (1.906)	1.823 (1.402)	2.300 (2.198)	0.143 (0.505)	-2.499 (2.286)	0.310 (0.199)
	Recognition of customary law	-6.174** (2.632)	34.27*** (7.968)	46.05* (24.02)	-1.783 (14.73)	-51.29** (20.00)	9.796 (6.305)		0.592 (1.390)
	Limits on customary law	-3.540 (5.795)	-12.38 (27.98)	13.60 (32.27)	79.48* (43.43)	-45.47 (36.12)	-12.30 (12.74)		-5.822 (3.744)
	Customary law *GDPpc	1.151** (0.451)	-5.050*** (1.192)	-7.048* (3.979)	0.0743 (2.406)	6.711** (3.016)	-1.482 (1.054)		-0.254 (0.191)
	Limits cust law *GDPpc	0.674 (1.027)	1.850 (4.856)	-2.621 (5.304)	-13.89** (6.991)	5.057 (5.635)	2.364 (2.289)		1.175* (0.665)
	Recognition of religious law	17.49** (6.943)	-18.03 (20.98)	-71.86*** (26.62)	39.21 (32.91)	-8.551 (40.28)	1.755 (8.018)		-0.628 (2.234)
	Limits on religious law	14.98 (11.61)	31.34 (22.40)	-19.94 (35.43)	74.31 (87.77)	-52.83 (45.53)	8.443 (7.286)		-12.64*** (3.247)
	Religious law *GDPpc	-3.687** (1.450)	4.489 (3.461)	11.29** (4.629)	-8.110 (6.039)	0.793 (7.423)	0.156 (1.460)		-0.0676 (0.467)
	Limits rel law *GDPpc	-2.321 (2.011)	-5.297* (3.116)	0.880 (5.237)	-12.59 (13.82)	10.40 (7.052)	-1.575 (1.206)		2.364*** (0.512)
	Observations	463	618	546	485	733	739	290	278
	R-squared	0.301	0.327	0.356	0.723	0.726	0.592	0.648	0.587
	Number of countries	99	98	98	97	99	99	99	96

Robust standard errors in parentheses; ***p<0.01, ** p<0.05, * p<0.1

Control variables are all lagged 5 years. They include GDP per capita, the share of industry in GDP, the share of services in GDP, conflict, conflict intensity, a trend and country fixed effects.

Shaded columns indicate that lower numbers are desirable for these outcomes.

Table 4: Panel regressions: testing for non-linear effects by rule of law

		Employment	Education			Health	
		(1)	(2)	(3)	(4)	(5)	(6)
		Women's labor force participation	Ratio of girls to boys in primary school	Ratio of girls to boys in secondary school	Ratio of girls to boys in tertiary education	Infant mortality	Life expectancy (women)
Property Rights, Access to and Control over Assets	Unmarried	6.832***	-1.356	-10.11**	-26.18**	35.79***	-6.615
	property rights	(1.307)	(3.385)	(4.811)	(10.28)	(5.755)	(16.89)
	Unmarried prop*	-1.802***	-0.903	0.229	11.73***	-10.94***	0.453
	Rule_of_Law	(0.441)	(1.052)	(1.691)	(2.235)	(2.197)	(4.402)
	Married	1.148	-4.849	-13.51***	-1.823	7.757	-3.770
	property rights	(1.127)	(3.717)	(4.904)	(15.08)	(6.755)	(3.388)
	Married PR*	-0.0785	1.211	2.170*	1.333	-3.428**	0.635
	Rule_of_Law	(0.302)	(0.861)	(1.220)	(3.745)	(1.398)	(0.653)
	Sons-daughters inheritance	0.00166	7.800	9.292	-1.877	11.15*	-6.810**
		(1.119)	(4.701)	(7.848)	(13.70)	(6.386)	(2.715)
	Sons-daughters inherit*Rule_of_Law	-0.251	-1.100	-3.003**	-1.445	-2.801*	0.460
		(0.317)	(1.028)	(1.325)	(3.945)	(1.452)	(0.390)
	Husband-wife inheritance	-0.317	8.959**	15.68**	-2.793	2.344	-5.385**
		(1.029)	(4.033)	(7.679)	(13.66)	(8.226)	(2.385)
Husband-wives inherit*Rule_of_Law	-0.276	-1.512	-3.503***	-0.848	-2.485*	0.281	
	(0.312)	(0.980)	(1.259)	(4.030)	(1.377)	(0.379)	
Joint titling	0.626	5.568	15.19*	22.15	7.143	-4.210	
	(1.081)	(3.686)	(9.073)	(14.09)	(4.859)	(2.872)	
Joint titling*Rule_of_Law	-0.0462	-1.437	-2.796**	-6.656	-0.322	-0.00290	
	(0.276)	(1.009)	(1.146)	(4.026)	(1.342)	(0.359)	
Legal Capacity	Women head of household	1.894	1.888	0.118	6.645	1.259	-1.942
		(1.176)	(4.035)	(6.596)	(13.71)	(6.251)	(2.574)
	Women head *Rule_of_Law	-0.439	-0.0132	-0.396	-2.405	-2.947**	0.540
		(0.307)	(0.797)	(1.347)	(3.388)	(1.258)	(0.406)
	No permission needed to work	0.395	-2.761	-1.743	6.715	10.71**	-1.594
		(1.147)	(3.710)	(5.758)	(11.71)	(4.158)	(1.905)
	No perm work *Rule_of_Law	-0.309	1.074	1.130	-0.177	-3.419***	0.219
		(0.397)	(0.877)	(1.339)	(2.305)	(1.096)	(0.334)
	No permission bank account	-1.182	-2.404	-16.63**	-4.237	2.655	-8.253*
		(1.955)	(6.386)	(7.169)	(13.78)	(15.48)	(4.939)
	No perm bank *Rule_of_Law	0.734	0.378	5.224**	0.669	-2.632	1.748**
		(0.525)	(1.650)	(2.020)	(3.363)	(3.304)	(0.871)
	No permission to sign contracts	-0.263	2.414	-2.860	2.097	-3.429	-3.824
		(1.432)	(5.710)	(5.545)	(15.35)	(8.338)	(3.804)
No perm contract *Rule_of_Law	0.223	-0.867	0.824	-0.169	-0.700	0.787	
	(0.456)	(0.957)	(0.890)	(3.366)	(1.544)	(0.698)	
No permission for legal proceedings	0.779	2.317	-5.920	6.604	-13.67	-3.369	
	(1.331)	(3.901)	(6.571)	(10.02)	(12.79)	(4.734)	
No perm legal*Rule_of_L	-0.0833	-1.528	1.214	-2.189	2.482	0.167	
	(0.279)	(0.919)	(1.278)	(2.361)	(2.903)	(0.993)	

Table 4: Panel regressions: testing for non-linear effects by rule of law

	Employment		Education			Health	
	(1)	(2)	(3)	(4)	(5)	(6)	
	Women's labor force participation	Ratio of girls to boys in primary school	Ratio of girls to boys in secondary school	Ratio of girls to boys in tertiary education	Infant mortality	Life expectancy (women)	
Constitutional Principles of Equality and Non-Discrimination	Constitutional equality	5.658** (2.278)	-9.509** (4.137)	-7.970** (3.405)	-2.604 (8.638)	4.375 (8.470)	-2.048 (3.053)
	Const equality	-0.903 (0.772)	1.269 (0.954)	0.872 (0.681)	-0.538 (2.050)	-1.676 (3.186)	0.753 (1.028)
	*Rule_of_Law						
	Constitutional non-discrimination	0.843 (1.719)	-0.931 (4.234)	-2.007 (4.829)	-12.56 (15.26)	1.417 (4.302)	-2.679* (1.388)
	Const. non-disc	-0.494 (0.398)	0.356 (1.123)	-0.726 (1.319)	1.845 (4.124)	-2.196* (1.255)	0.412 (0.367)
	*Rule_of_Law						
	Recognition of customary law	2.960* (1.664)				-1.468 (5.265)	0.185 (1.657)
	Limits on customary law	2.896*** (1.008)				-4.204 (6.713)	0.838 (1.925)
	Customary law	-0.726* (0.433)				-2.578 (1.692)	0.114 (0.407)
	*Rule_of_Law						
	Limits customary law	-0.181 (0.446)				-1.896 (2.559)	0.0343 (0.927)
	*Rule_of_Law						
	Recognition of religious law	2.319** (1.123)				-13.63** (5.866)	4.738*** (1.674)
	Limits on religious law	2.975*** (0.817)				12.86*** (3.080)	2.168** (0.972)
	Religious law	-0.629** (0.279)				-2.068 (1.549)	-0.00138 (0.457)
	*Rule_of_Law						
	Limits religious law	-1.118** (0.458)				-3.254** (1.589)	-0.488 (0.408)
	*Rule_of_Law						
Observations	377	327	292	251	377	377	
R-squared	0.359	0.380	0.347	0.564	0.630	0.444	
Number of countries	83	82	81	81	83	83	

Robust standard errors in parentheses; ***p<0.01, ** p<0.05, * p<0.1

Control variables are all lagged 5 years. They include GDP per capita, the share of industry in GDP, the share of services in GDP, conflict, conflict intensity, a trend and country fixed effects.

Shaded columns indicate that lower numbers are desirable for these outcomes.

Table 5a: Impact of legal reforms on additional outcomes (panel)

	Employment				Health		Empowerment
	Share of women in non-agricultural employment	Share of women in wage employment	Share of women in vulnerable employment	Share of women in self-employment	Wasting (female)	Access to contraceptives	Women in parliament
Property rights	0.783** (0.392)	1.452 (1.139)	0.234 (1.263)	-1.201 (1.153)	-0.920*** (0.260)	3.630*** (0.902)	1.955*** (0.632)
Legal capacity	0.00872 (0.158)	2.644*** (0.676)	-2.127** (0.899)	-2.537*** (0.626)	-0.109 (0.240)	1.970*** (0.644)	0.762** (0.377)
Non-discrimination	0.544 (1.091)	-7.266** (2.825)	6.416*** (2.448)	6.836*** (2.379)	-1.191 (0.726)	0.918 (1.616)	3.512*** (0.868)
Observations	294	265	234	265	213	383	356
R-squared	98	88	85	88	86	99	99

Robust standard errors in parentheses; ***p<0.01, ** p<0.05, * p<0.1

Control variables are all lagged 5 years. They include GDP per capita, the share of industry in GDP, the share of services in GDP, conflict, conflict intensity and a trend.

Note: Shaded columns indicate that lower numbers are desirable for these outcomes.

Table 5b: Testing for non-linear impacts by GDP per capita

	Health		
	Access to contraceptives	Maternal mortality	Wasting (female)
Property right	10.46** (4.622)	-17.1* (9.41)	-3.288** (1.338)
PropRights*GDPpc	-1.071 (0.706)	2.36* (1.30)	0.377* (0.204)
Legal capacity	8.675** (3.595)	-16.94** (7.21)	-2.451** (1.136)
LegCap*GDPpc	-0.957* (0.520)	2.11** (1.16)	0.364** (0.183)
Non-discrimination	-11.04 (6.865)	-64.9*** (21.5)	-3.244 (3.696)
Non-discrim*GDPpc	1.806* (1.062)	8.62*** (2.97)	0.319 (0.524)
Observations	383	174	213
R-squared	99	95	86

Robust standard errors in parentheses; ***p<0.01, ** p<0.05, * p<0.1

Control variables are all lagged 5 years. They include GDP per capita, the share of industry in GDP, the share of services in GDP, conflict, conflict intensity and a trend.

Note: Shaded columns indicate that lower numbers are desirable for these outcomes.