

# Strengthening Economic Rights and Women's Occupational Choice

## The Impact of Reforming Ethiopia's Family Law

*Mary Hallward-Driemeier*

*Ousman Gajigo*

The World Bank  
Development Research Group  
Finance and Private Sector Development Team  
November 2013



## Abstract

This paper evaluates the impact of strengthening legal rights on the types of economic opportunities that are pursued. Ethiopia changed its family law, requiring both spouses' consent in the administration of marital property, removing the ability of a spouse to deny permission for the other to work outside the home, and raising women's minimum age of marriage. Thus both access to resources and the removal of restrictions on employment served to strengthen women's bargaining position within the household and their ability to pursue economic opportunities. Although this reform now applies nationally, it was initially rolled out in the two chartered cities and three of Ethiopia's nine regions.

Using nationally representative household surveys from just prior to the reform and five years later allows for a difference-in-difference estimation of the reform's impact. The analysis finds that women were relatively more likely to work in occupations that require work outside the home, employ more educated workers, and in paid and full-time jobs where the reform had been enacted, controlling for time and location effects. As the relative increase in women's participation in these activities was 15–24 percent higher in areas where the reform was carried out, the magnitude of the impact is significant too.

---

This paper is a product of the Finance and Private Sector Development Team, Development Research Group. It is part of a larger effort by the World Bank to provide open access to its research and make a contribution to development policy discussions around the world. Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. The authors may be contacted at [mhallward@worldbank.org](mailto:mhallward@worldbank.org).

*The Policy Research Working Paper Series disseminates the findings of work in progress to encourage the exchange of ideas about development issues. An objective of the series is to get the findings out quickly, even if the presentations are less than fully polished. The papers carry the names of the authors and should be cited accordingly. The findings, interpretations, and conclusions expressed in this paper are entirely those of the authors. They do not necessarily represent the views of the International Bank for Reconstruction and Development/World Bank and its affiliated organizations, or those of the Executive Directors of the World Bank or the governments they represent.*

# **Strengthening Economic Rights and Women's Occupational Choice The Impact of Reforming Ethiopia's Family Law**

Mary Hallward-Driemeier\* and Ousman Gajigo<sup>++</sup>

**JEL Codes:** J16; J24; K36

**Key words:** property rights, women's empowerment, occupational choice, family law

---

\* Lead Economist, World Bank, <sup>++</sup> African Development Bank. The views expressed here do not necessarily represent those of the World Bank or the African Development Bank or their Boards of Executive Directors. Financial support from the BNPP Trust Fund and the UK's Department for International Development is gratefully acknowledged. Correspondence can be addressed to [mhallward@worldbank.org](mailto:mhallward@worldbank.org), or Mary Hallward-Driemeier, The World Bank, 1818 H Street NW, Washington DC, 20433; tel: 1(202) 473-9102; fax: 1(202)522-0087.

## **I. Introduction**

Economists have long propounded the benefits of being able to make choices in pursuing economic opportunities. Restrictions on choices can simply reflect limited options available, but constraints can also stem from a lack of resources and from rules that differentially give access to opportunities to some parts of the population but not all. This paper examines whether changes in laws that gave women greater control over property and removed restrictions in seeking employment expanded the opportunities women successfully pursued.

Family law is the area of law that shapes who can make various decisions and who controls assets within a household. And these laws often differentiate rights by gender and marital status. So to understand how legal rights can affect women's economic opportunities, understanding the impact of family law is an important area of analysis. This paper examines the impact of changes in Ethiopia's family law that strengthened women's economic rights. The reforms were rolled out across a subset of regions and autonomous cities in Ethiopia, providing an identification strategy for testing the importance of the strengthening of women's economic rights in women's relative ability to pursue economic opportunities.

In recent years, there has been increased focus on expanding economic opportunities by arguing for the importance of addressing regulatory restrictions, red tape and frictions in the economy that can limit the ability of businesses to grow and be more productive (Djankov et al 2002; Botero et al. 2004; Hsieh and Klenow 2009). Existing work looks at how well variations in these regulations (mostly across countries, but in a few countries, over time) help explain entrepreneurship, labor mobility and growth (Blanchard and Giavazzi 2003; Klapper et al 2006; Mwase 2003). However, they presuppose that the same rules governing economic opportunities apply to everyone. But this is not true, particularly by gender. It is not because business

regulations themselves differentiate by gender, but rather that the underlying ability to own and control property, and even one's legal capacity to enter into agreements in one's own name, can vary by gender and marital status. These are not part of the business regulations, but part of family law. Business laws determine the requirements for a property owner to register the property or to open a business; family law determines who can own or control that asset in the first place. This work looks at changes in family law that increase the bargaining power of women and tests for their impact on women's economic opportunities. The changes in bargaining power result from the expansion of women's control over assets, the removal of the ability of a spouse to deny permission to work outside the home and changes in the minimum age of marriage on the economic opportunities women pursue.

There has also been an increased push on the part of the international community for women's economic empowerment, the third of the Millennium Development Goals (UN 2000, Duflo 2005, World Bank 2011). The three indicators for this goal are the closing of gender gaps in education, the share of women in wage employment and the proportion of political seats held by women. These are indeed worthy measures. However, they do not put much focus on gender gaps in formal economic rights themselves, nor have they been linked to the broader agenda of identifying regulatory or legal constraints to women's economic empowerment. There has been some attention on legal reforms, but the focus has tended to be on broader issues of human-rights, such as gender-based violence (addressing domestic violence, rape, etc.) rather than on family laws and their economic impact on the control over assets (UNIFEM 2009). This work expands the evidence that addressing gender inequalities in family laws has significant economic benefits for women.

While many gender-sensitive policies have been enacted across numerous African countries, there is not an abundance of results that empirically assess their actual effect on women.<sup>1</sup> In trying to assess the importance of legal reforms, a pre-post comparison suffers from an inability to sort out the relative contribution of the reform from other changes during the time period being examined. A strength of this paper is that the legal reform being evaluated occurred in the two chartered cities and three of the nine regions in Ethiopia, allowing a difference-in-difference comparison of changes in geographic areas with the reform to those that did not adopt the reform. Regional characteristics can be controlled for, as can a general time trend. The identification comes off the differences in trends between geographic areas with and without the reforms. We also confirm that the timing of the reform being rolled out in a geographic area is not driven by the share of women working outside the home or our other outcomes of interest. The one significant difference across reforming and non-reforming geographic areas is the age of first marriage. However, the effect is a level effect; there is no trend across age cohorts.

Our paper therefore contributes to the literature by analyzing some labor market consequences of a new law recently implemented in Ethiopia called the Revised Family Code 2000 (Federal Democratic Republic of Ethiopia, 2000). This new legislation improved upon the earlier Family Code (drafted in the 1960s) in numerous ways that improved the position of women in marriage. Among of the key changes by this new law are: (i) women were given the authority to administer common marital property; (ii) a spouse could no longer deny permission

---

<sup>1</sup> It should be noted that “women” are not a uniform group before the law; marital status matters too. In the case of Ethiopia, the ability of women to control assets or to pursue a profession was not inherently limited based on gender, but rather for *married* women under the original Family Code of 1961. Given that most adult women in sub-Saharan Africa are married, policies aimed at reducing gender discrimination within marriage are important steps towards achieving overall gender equality.

for the other to work outside the home;<sup>2</sup> (iii) more authority has been given to courts in settling disputes arising in cases of divorce and inheritance (and correspondingly less to traditional arbitrators), which allows more agency for women; and (iv) the marriage age was increased to 18 years.

The first and third changes strengthen women's ability to control assets. This would be helpful in starting a business – or in having collateral to gain access to finance to start or expand that business. The second change addressed a clause in the law, that while gender neutral in the wording, was not gender neutral in practice. The previous law allowed either spouse to object to the other spouse pursuing a trade or profession. However, in practice, this was only ever applied when a husband wanted to deny permission for his wife to do so. Thus, removing this clause was seen as a benefit for women. Removing this clause could affect the ability of women to join the labor force – and in particular to pursue a profession that required work outside of the home itself.<sup>3</sup> Of particular interest is whether labor force participation rates increased – particularly in those occupations that require people to work outside the home, work full time, and have higher human capital or educational requirements for hiring.

While the decision of whether to work outside the home is directly affected by the law, there is another channel through which the reform could affect women's decisions, namely, in raising her bargaining position in intra-household decision making. The family law effectively improves the bargaining power of women by increasing their "voice" and "exit" within the household. This has an empowerment effect that is likely to extend to most socio-economic

---

<sup>2</sup> To clarify, it is not that a spouse actively needed permission to work. Rather, if there was a dispute over whether or not the spouse should be working or pursuing a particular trade or profession, the other spouse could object and 'deny permission' if they could claim it was against the interests of the family. Where there was no dispute, the law did not affect labor force decision; it only applied where there were disputes, i.e. precisely when who got to make the decision mattered most.

<sup>3</sup> Unfortunately we do not have data on women's access to finance or whether or not they are running a business, additional dimensions for which it would have been interesting to test for the impact of the legal reforms.

activities. As shown in Hallward-Driemeier and Gajigo (2010), higher levels of empowerment can influence the economic opportunities women pursue. The increase in legal age of marriage is particularly relevant here. When marriage age is delayed, the future bargaining position of these young women would be significantly improved through higher education and/or an increase in own resources accumulated in the intervening years.

Thus, supporting hypotheses that are tested are that the reform would also give relatively greater encouragement for women to work full-time and that as their economic opportunities increased, so too would investments in their education such that their participation in higher educated occupations would rise. The effects are likely to be larger for younger women who are better positioned to adapt to the change than older women, particularly if in longstanding marriages, that have already made choices that make shifting occupations more difficult.

We use two rounds of DHS data that were collected in 2000 and 2005. In 2000, no region or chartered city in the country had implemented the law, but by 2005, five regions and chartered cities<sup>4</sup> had done so. The reforms now apply across all regions and chartered cities. These surveys contain detailed demographic and labor market information at the individual level that makes them ideal for this topic. Using the difference-in-difference estimation technique, we found that this reform in family code has a strong effect in increasing women's share in occupations that are non-home based, paid work, year-round employment, and those with average higher educational requirement, though the strength of the law's effect is heterogeneous across different age and marital categories. The effect of the reform is particularly strong for young, unmarried women. It appears that the provision of the law that increases the legal age of

---

<sup>4</sup> To include both regions and chartered cities together, we refer to 'geographic areas'.

marriage had a much bigger labor market impact by delaying marriage and increasing the participation of women in occupations across several dimensions.

We also provide evidence that our results are not driven by pre-existing trends in the geographic areas that implemented the new Family Law. For example, there was no pre-existing increase in education, increase in age at marriage, or higher rural-urban migration that was more pronounced for the geographic areas that implemented the reforms over those that did not initially. Furthermore, our results were not confounded by the simultaneous implementation of other reforms (such as the land registration reforms) in areas where the new Revised Family Code took effect. The land registration reforms were largely a rural scheme and our results hold in urban areas as well.

The rest of the paper is organized as follows. Section II gives a brief literature review of analyses of changes in marriage-related laws on individual outcomes. Section III gives some background on Ethiopia in general and the labor market in particular. This section also provides a description of the new Ethiopia Revised Family Code. This section is followed by a description of the data set used. Section V presents the estimation results. Section VI concludes the paper.

## **II. Literature Review**

This paper draws on several strands of literature. It builds on the growing evidence that stronger property rights, largely focused on rights to land, impact women's economic opportunities, extending it to examine changes in family law. It also is relevant to the literature on intra-household bargaining and women's labor force participation decisions, as the legal reform served to shift women's bargaining power within the family.

Papers that have tested the impact of strengthening economic rights have tended to focus on strengthening rights to land. Empirical work suggests that increasing resources controlled by

women will promote increased agricultural productivity (Saito, Mekonnen, and Spurling 1994; Udry et al. 1995; Quisumbing 1996, Besley and Ghatak 2009). Insecure property rights over land have multiple ramifications for agriculture and the organization of rural economic activity. The risk that land will be expropriated deters investment. Insecure property rights reduce the ability of borrowers to pledge land as collateral, and thus tighten credit constraints. Ill-defined property right over land can inhibit land transactions – rentals or sales – and potential gains from trade are lost (Aryeetey and Udry 2010). Besley (1995) and Udry and Goldstein (2008) have examined these effects in Ghana, looking at both formal and customary property rights.

A number of studies have also looked at the impact of formal land titling programs. Studies have confirmed an increase in agricultural productivity and a (weak) increase in access to credit (Pande and Udry 2005). The weak increase in access to credit has been attributed to the limited ability of creditors to foreclose on land titles (Field and Torero, 2008) and because the availability of collateral is not necessarily the only constraint to accessing finance (Besley and Ghatak, 2009).

Deininger et al. (2010) also demonstrate the importance of the process of providing land certification itself in ensuring women are able to gain rights to land. Unless the process specifically required that married couples jointly title their land, certificates were rarely given in both names and thereby limited women's formal rights to land.<sup>5</sup>

In addition to the effects on investment and access to credit, there can also be effects on labor supply. Erica Field evaluates the impact of titling program in the slums of Peru.<sup>6</sup> Rather

---

<sup>5</sup> This work is done in Ethiopia. As discussed below, the land certification programs were largely introduced after the period being analyzed in this paper. Our results are robust to excluding the region where the land program was already underway at the time of our evaluation.

<sup>6</sup> Field, Erica. 2007. Entitled to Work: Urban Property Rights and the Labor Supply in Peru. *Quarterly Journal of Economics* 122: 1561-1602.

than finding much impact on decisions to invest in the home or plot of land, she finds being granted a title raised the labor supply, particularly for women. The primary effect of securing the title was that it freed members of the household from having to remain on the plot to ensure claim over it.

Deininger, Goyal and Nagarajan (2010) provide evidence on the impact of changing a broader set of laws that affect property rights. The authors examine changes in the Hindu Succession Act that occurred in some southern Indian states which gave equal rights to females in inheriting property. They found that amendments to this law increased families' investments in their daughters. The new law raised the likelihood of women inheriting land (but did not fully eliminate the gender difference), increased age at marriage for girls, and raised their educational attainment. Their results are consonant with the findings of Roy (2008) who also analyzed the effects of the same policy change in southern India and found that it had a significant effect on women's autonomy.

This paper builds on these results, but focuses on how the change in the family law affected the decisions of women to enter the labor force,<sup>7</sup> rather than on investments in the future generation (although there is some corroborating evidence that this was affected too). This brings in the literature on marriage and intra-household bargaining.

Marriage-related literature took off in the economics field starting with Becker (1981). Methodological advances since then have highlighted the importance of intra-household dynamics, especially along the gender dimension. The advances beyond unitary household models such as the cooperative (McElroy and Horney 1981) and non-cooperative models (Lundberg and Pollak 1993; Browning, Chiappori and Lechene 2009) have helped to clarify how

---

<sup>7</sup> See Hallward-Driemeier, forthcoming, for broader discussion of impact of gender gaps in economic rights on entrepreneurship in Africa.

power imbalances can translate into command of joint household resources and consequently result in differential individual welfare. In virtually all non-unitary household models, institutions and policies that address gender inequalities have welfare-enhancing effects.

Alongside the above advances in formal modeling is the documentation of the relevance of gender in intra-household welfare analysis especially from developing countries. In the case of Ethiopia, Fafchamps and Quisumbing (2002) found significant gender power asymmetries in Ethiopia. Within most households, the head (almost always male) alone administers key decisions on major expenditures. More importantly, the differences in decision-making power are often determined at the start of marriage. The authors found that the average value of assets brought by the groom is ten times more than the average brought by the bride. This difference in power has consequences for welfare not only because of the role of the household head as the administrator, but also because of the fact that disposition of assets upon divorce reflects the value of what each spouse brought into the marriage. Such an arrangement has adverse consequences for gender equality. To the extent that bargaining power within the household is partly a function of fall-back options in the event of a divorce, the distribution of assets that is positively correlated with what marriage partners brought into the union perpetuates gender inequality.

The analysis of the impact of legal reforms on intra-household bargaining has also increasingly received attention but most of the focus has been on advanced countries. Changes in US divorce laws were an especially scrutinized reform given the research opportunities provided by the variations in the timing of implementations across states. Stevenson and Wolfers (2006) examine the effects of reforms towards unilateral divorce laws on household bargaining position. They found that the adoption of unilateral divorce laws significantly reduced domestic violence

not only because it led to the dissolution of violent marriages, but also the prevalence of violence among existing marriages. In effect, by reducing the cost of divorce, exit threats became credible. So focusing on the rates of divorce only would underestimate the impact of the introduction of unilateral divorce since it likely changed bargaining positions among extant marriages. Partly for this reason, divorce rates initially increased following the adoption of unilateral divorce laws but tapered off over time.

Some papers have analyzed the labor market consequences of marriage or gender related reforms. However, most of these papers have focused on developing countries. Ruhm (1998) examined the labor market consequences of paid parental leave in nine European countries between 1969 and 1993. He found that paid parental leave of about three months increased the employment-to-population ratio of females by 3% to 4%, and this increase in employment rate is not significantly driven by reclassification of non-working as employed. A similar effect has also been found for the US. Gray (1998) found that the introduction of unilateral divorce laws had heterogeneous impact among women within states that implemented it. The law increased the bargaining power of women in some states while adversely affecting it in others. However in states where the law strengthened the bargaining power of women, it led to increase in labor supply. Moreover, the additional labor supply did not lead to a fall in leisure but rather a significant reduction in domestic work.

This paper builds on this strand of literature by testing the impact of the change in family law as it impacted married women's economic rights and thus bargaining position within the household. The measure of interest is not simply the change in labor supply, but also its composition, whether it affected the types of occupations women were likely to enter, i.e.,

whether women were more likely to work outside the home, in full-time occupations and in those with higher requirements for participation.

### **III. Ethiopia**

Ethiopia is one of the poorest countries in the world, although it has made progress in reducing poverty and achieving other Millennium Development Goals in recent years. It had an estimated GDP per capita of \$400 in 2012 (IMF 2012). Ethiopia ranked 171 of 182 countries in the UNDP's Human Development Index in 2009 (UNDP 2009) and 89 of 102 on its Social Institutions and Gender Index (SIGI 2009). Ethiopia is the second most populous country in Sub-Saharan Africa, and also among the most ethnically diverse. The country is a federal republic, with nine regions and two city councils.<sup>8</sup>

Table 1 provides some information on differences across geographic areas in the country. While there are similarities between areas in recent rates of population growth, there are significant differences in urbanization rates as well as population density. Given the correlation between urbanization and education, there is also high geographic variation in education. In our analysis, it is important to capture the effects of these differences across geographic areas. We do so by including dummies for the various regions and chartered cities. We also repeat our results excluding the large cities to be sure they are not driving the results and the findings hold.

Ethiopia's labor market is characterized by significant gender gaps in participation and in remuneration. Gender differences in the labor market are also present. In a 2004 survey report on urban employment, there is a significant gender difference in the employment-to-population ratio in the urban areas of all regions (CSA 2004). For women, the employment-to-population ratio is

---

<sup>8</sup> In our analysis, we treat the two city councils (Addis Ababa and Dire Dawa) as their own geographic areas since they are administered separately from the other regions. As a result, we end up 11 geographic areas in our analysis.

about 35% and for men about 52%. The well-documented gender occupational segregation is also prevalent in the country. Specifically, women are underrepresented among professionals and skilled workers but overrepresented among clerks. Partly as a result of this gender occupational segregation, there are significant pay differences. Women's pay is only about half of that of men (ETB500<sup>9</sup> versus ETB266) in urban areas of the country (CSA 2004). What is of interest here is to capture differences in the changes in the relative rate of women's participation in occupations with more non-home based work, paid work and full-time work in the areas with and without the reform.

**Table 1: Ethiopian Regions and Chartered Cities**

<b>Region/ Chartered City</b>	<b>Population in 2007</b>	<b>Annual Pop. Growth (1994-2007)</b>	<b>% Female in 2007</b>	<b>% Urban in 2007</b>	<b>Pop. Density 2007 (km<sup>2</sup>)</b>
Addis Ababa <sup>§</sup>	2,738,248	2.0%	52.4	100	5167
Afar	1,411,092	2.2%	44.3	13.4	15
Amhara	17,214,056	1.6%	49.8	12.6	108
Benishangul Gumuz	670,847	3.0%	49.3	13.5	14
Dire Dawa <sup>§</sup>	342,827	2.4%	49.8	67.5	283
Gambella	306,916	4.6%	48	25.2	12
Harari	183,344	2.7%	49.7	50.5	590
SNNP <sup>‡</sup>	15,042,531	3.0%	50.3	10	134
Somali	4,439,147	2.6%	44.4	13.9	16
Oromiya	27,158,471	3.0%	49.6	12.2	77
Tigray	4,314,456	2.5%	50.8	19.5	86

<sup>‡</sup>SNNP stands for Southern Nations, Nationalities and People.

<sup>§</sup>City councils.

## Revised Family Code

Ethiopia's new Revised Family Code (Federal Democratic Republic of Ethiopia 2000) came into effect in July 2000, updating the 1960 Family Code. The new law covers most areas of

<sup>9</sup> ETB stands for Ethiopian Birr.

family relations, such as marriage, divorce, inheritance, paternity, adoption and child welfare.

We focus on aspects of the law that are relevant to this paper because of their likely connection to individual empowerment over economic opportunities and control over assets – and consequently on intra-household bargaining.

As discussed above, one of the central changes that were seen to benefit women was the removal of a spouse's ability to keep the other spouse from pursuing a trade or profession. While the language was gender neutral, in practice only husbands ever appealed to the law to deny their wives from pursuing employment opportunities. Removing the ability of a spouse to do this was thus seen as a clear benefit for women, giving them greater ability to control their labor force participation decisions.

While the previous law gave the husband the sole responsibility of administering property, the new Family Code gives that responsibility to both husband and wife. Divorce now requires the consent of both the wife and the husband, unlike before. The new code also redefines betrothal as an individual decision between spouses rather than a transaction between households or parents. Another significant change is the increase in the legal age of marriage to 18 years from 15 years. The role of family arbitrators has also significantly changed. Previously, family arbitrators (mostly men) continued to apply old customary traditions when it came to reconciling couples or adjudicating divorce cases (Fafchamps and Quisumbing 2002; Gopal and Salim 1999). This practice ensured that customary practices that favored men persisted despite progressive provisions in the 1960 family code. For example, while the 1960 Family Code gave women equal rights to property acquired during marriage, it also gave the head of the household (almost always the man) the power to administer the property upon divorce. This fact, combined with the central role of traditional family arbitrators, ensured that women did not fully realize the

rights codified in the 1960 family code. While the new Revised Family Code allows family arbitrators to mediate, only courts are allowed to adjudicate divorce cases, marking a shift towards greater consistency, transparency and scrutiny of decisions made, and a shift towards rules that give women greater rights to property.

An important aspect of this new family code concerns the timing of its implementation across geographic areas, which is central to our identification strategy. The new Family Code was not initially implemented uniformly across all areas of the country. This is due to the fact that the Ethiopian constitution gives considerable autonomy to regions and chartered cities. Thus the new code took effect in some areas but not in others between 2000 and 2005. The regions and chartered cities that allowed the new family code to take effect during this period are Addis Ababa, Amhara, Dire Dawa, Oromiya and Tigray. The later-implementing areas (as of 2004/2005) are Afar, Benishangul Gumuz, Gambella, Harari and SNNP. Currently, all areas have now implemented the new Family Code.

What is important for this study is that the selection of regions and chartered cities into those that implemented the reform earlier and those that implemented it later is not driven by the outcomes of interest. As Table 2 shows, the differences in the means of key variables across early and late reforming areas are not statistically different.

**Table 2: Comparisons of means across early and later reforming regions before reforms in 2000**

	Early Reformers	Late Reformers	t-test probability difference is significant
Work outside the home	0.776 (0.056)	0.763 (0.059)	0.887
Work all year	0.584 (0.066)	0.651 (.077)	0.469
Paid work	0.693 (0.105)	0.649 (0.097)	0.76
Occupations with higher human capital	0.211 (0.070)	0.197 (0.045)	0.79
Years of education	1.34 (0.277)	1.27 (0.124)	0.898
Age of first marriage	15.84 (0.807)	16.48 (0.395)	0.27

Standard errors are in parentheses. None of the differences are statistically significant.

#### IV. The Data

The data set we use comes from the Demographic and Health Survey data collected in Ethiopia in 2000 and 2005. In both years, the data set covers all regions and chartered cities in the country. The 2000 and 2005 surveys covered 15,367 and 14,070 15-49 year old women, respectively. Averaged across both years, about 23% were single (never married), 60% were married, 7% divorced, 3% separated, 5% widowed and 1% cohabiting.

Educational attainment in the sample is low. The average years of schooling of women in the sample in 2000 and 2005 are 1.3 and 3.4, respectively. This variable varies significantly across geographic areas (mainly because of varying level of urbanity) and by marital status (younger age cohorts are more likely to have attended school and for a longer period of time). However, there is no systematic difference across early and late reforming areas.

A significant number of women in the sample are participants in the labor market (defined as currently working). However, measures of women's labor force participation rates declined somewhat between 2000 and 2005. Most of this decline is registered in rural areas. Labor force participation rates between 2000 and 2005 stayed roughly the same for men. There is little variability in labor force participation across marital status, although the divorced, separated and widows are more active in the labor market than married women. Nor was there much shift across education or age groups, except in the youngest cohort where education did rise. We control for geographic trends in education to be sure differential trends in education do not account for our results.

One change between the surveys was that in 2005 the question regarding women's current employment referred to 'the last seven days,' whereas there was no time limit in 2000. The inclusion of the dummy for 2005 will capture any level effect this would have. It should also be noted that all respondents in 2005 were also asked about their occupations in the last 12 months, not just those who indicated they were currently working. Thus it is possible to infer who worked in the last year. There is little decline in women's labor participation using this 12 month measure. It is also reassuring that in the 2000 data, only 6% of respondents change their response on their employment status based on whether they are 'currently working' versus 'if they have worked in the past 12 months'. Still, we present a number of robustness checks to show that the change in wording is not likely to be driving our results. One potential concern is whether there could be differential effects of the different wording on our variable of interest, namely female participation by occupations across geographic areas. If some occupations are more open to seasonal or part-time work, they could potentially have a greater drop-off in response rates. However, such a shift would be true across geographic areas; it is hard to see

why this would differ across areas according to the pattern of reforms. We do include occupation dummies to control for this. Also, as a robustness check, we include the share of the occupation in an area, allowing it to vary over time. If certain occupations were affected relatively more, this should control for this effect. We also allowed for differences in the time trend across the regions and chartered cities; the results are robust to this too. A final potential concern is that the second survey was run a couple of months later in the year than the first survey, with the last weeks potentially overlapping with the beginning of the planting season. As robustness checks we exclude all agricultural workers from the regressions, and we also look only at the urban areas and find our results to be robust.

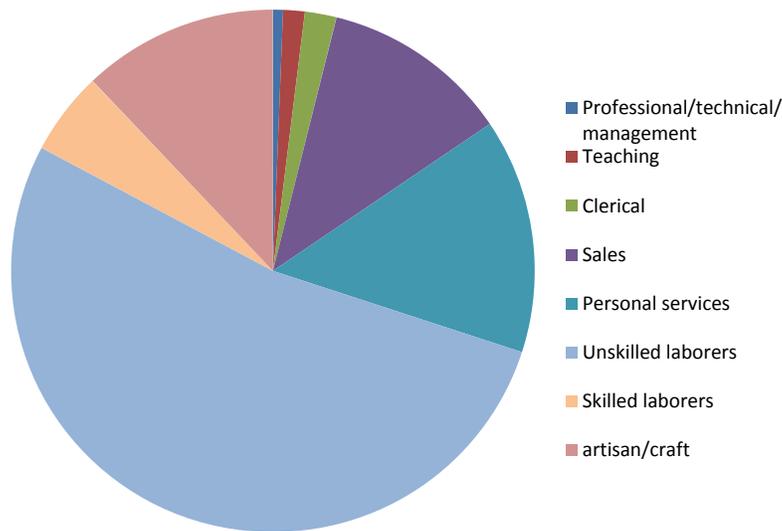
### ***Occupations***

Our data set has 8 occupational categories.<sup>10</sup> Figure 1 shows the distribution of women's shares in each of these occupations. Similar to other labor market studies of Ethiopia, women are most under-represented among the professional/technical/management group followed by skilled laborers. At the other extreme, women are highly over-represented among artisan/crafts.

---

<sup>10</sup> Professional/technical/management, teaching, clerical, sales, unskilled laborers, skilled laborers, and artisan/craft workers.

**Figure 1: Distribution of women's occupations, 2000**



In this analysis, we use four occupational characteristics that capture some key dimensions: non-home based employment, paid work, seasonality of work (whether full-year or not) and average educational attainment in occupation (that captures both the requirements to enter that occupation and differences in likely remuneration of jobs). These characteristics provide important information since they are correlated with returns to being employed in that sector. And given the fact of gender occupational segregation, these occupational characteristics have some correlation with gender.

1. *Market rather than home-based activities*: Traditional gender roles cause women to spend relatively more time at home than men. This arrangement tends to have effects both on the rate of participation and the nature of economic activities taken by gender. And consequently, the location of work has implication for returns. For example, home-based economic activities are common and are usually characterized by a high degree of informality (Strassmann 1987). So the

proportion of workers who work from home is an important distinguishing characteristic and an important indicator of requirements for labor market skills.<sup>11</sup>

2. *Paid work*: A key defining attribute about labor market participation is receiving a wage for one's labor services. However, a large number of women perform non-paid work not only in Ethiopia but also in other parts of Africa. This phenomenon is partly a consequence of gender division of labor where women tend to specialize in mostly household-related work. But non-paid could also result from working on a non-farm enterprise of other household members. Whatever the ultimate cause, occupations that feature a relatively high share of non-paid workers are likely to be unattractive.
3. *Seasonality of work*:<sup>12</sup> Seasonality of occupations is also an important characteristic of occupations in terms of the ability to indicate relative returns (Rubery, Horrell and Burchell, 1994). While it is true that seasonality may be an inherent characteristic of the nature of the job, such as tourism-related work, more likely than not it is the result of non-market demands on women's time.
4. *Human capital intensity (education)*: this is measured as the average level of education in the occupation. Among human capital variables, education is probably the most important and most analyzed variable (Psacharopoulos 1985). It is an important determinant of returns to jobs across all occupations and industries. Furthermore, the educational requirements for entry into various occupations differ significantly. Consequently, the average level of education of

---

<sup>11</sup> del Mel, McKenzie and Woodruff (2009) found that women entrepreneurs in Sri Lanka are more likely to operate from their homes and have a higher proportion of customers who are within 1 km from location.

<sup>12</sup> Whether on average, individuals work all year around in those occupation or part of the year.

an occupation is highly predictive of the returns available to workers in that occupation.

The under-representation of women in certain occupations has been well documented in the literature. This uneven distribution of women is usually attributed to discrimination, either through taste-based discrimination by employers and customers (Becker 1971) or statistical discrimination (Arrow 1972). Becker (1985) also attributes occupational sorting by gender to differences in human capital. Taking gender division of labor as given, this view claims that observed uneven representation of women across occupation is an efficient outcome of lower female investment in human capital. Both of the above sets of theories do not connect female under-representation to within-household power asymmetries, and consequently have little to say about how gender-relevant policy changes could increase women's share in occupations through their effects on household bargaining positions.

As indicated above, it is important for the identification strategy to establish that the results are not based on a selection issue; that regions and chartered cities that reformed earlier did not have systematically different rates of women working outside the home, full time, for pay and in occupations with more educated workers. Table 2 shows mean values of our key variables across early and later reforming areas and gives the results of the t-test of means. None of the differences are significant.

## **V. Estimation and Results**

To estimate the impact of the new family law on labor market outcomes, we use difference-in-difference estimation to take advantage of the implementation of the reform in some but not all of the geographic areas. The data set covers two time periods: 2000 and 2005. At the time of the first survey, none of the regions or chartered cities had implemented the

reforms, while by 2005 three regions and two chartered cities had done so. The estimated equation is:

$$W_{ijt} = \text{CONSTANT} + \varphi * \text{GEO AREA} * \text{YEAR DUMMIES}_{it} + \theta * \text{OCCUPATION DUMMIES}_j + \beta * (\text{REFORM}_{it} * X_j) + \vartheta * \text{OCC\_SHARE}_{ijt} + \varepsilon_{ijt} \quad (1)$$

where  $W_{ijt}$  is the share of women in geographic area  $i$  in occupation  $j$  at time  $t$ ,  $\text{GEO AREA} * \text{YEAR DUMMIES}_{it}$  control for time effects, level differences between geographic areas, and geographic area-specific trends over time.  $\text{OCCUPATION DUMMIES}_j$  control for level differences across occupations.  $\text{REFORM}_{it}$  is the dummy which equals one if the region or chartered city implemented the Revised Family Code in 2005 and  $X_j$  is the occupation specific characteristic (share working in non-home based occupations, paid work, year-around employment and the average education level of occupation).  $\text{OCC\_SHARE}_{ijt}$  represents the share of occupation  $j$  in geographic area  $i$  at time  $t$ , and  $\varepsilon_{ijt}$  is the error term. The occupation characteristics ( $X_j$ ) used values from year 2000 – before the Revised Family Code was implemented in any region or chartered city.<sup>13</sup>

The parameter of interest is  $\beta$ , which indicates the effect of the Revised Family Code on women’s share in occupations along the above four occupational dimensions. In other words, assuming the absence of other policies that have similar effect on women’s labor market outcomes,  $\beta$  identifies the causal impact of the Revised Family Law reform on  $W$ .

The main results are presented in Table 3. We found that the reform brought by the new family law had a statistically significant effect in increasing women’s share in occupation in two of the four dimensions of occupations: the share of non-home employment and paid work, and it has a close to significant effect for work in occupations with higher reliance on educated

---

<sup>13</sup> In all regression results, we cluster standard errors at the level of the geographic areas.

workers. The magnitudes of the effects are large; with the relative change in women’s participation in non-home based work 24 percent higher in reforming areas than non-reforming areas.

Table 4 then divides the sample into younger and older women – using the sample median age of 27. We would expect the effects to be greater for younger women as younger women are less likely to be married or their marriages are relatively new and so roles are more flexible. The results confirm this. The impact on older women is not significant. But, the effects are significant across all four outcome measures for younger women. The effect is smallest regarding the educational composition of occupations, while ranging between 15 and 24 percent for non-home-based work, paid work and all-year-round work.

**Table 3: Basic specification**

	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
Reform* Non-homework	0.237** (2.01)			
Reform* Paid-work		0.288** (2.14)		
Reform* All-year-work			0.278 (1.28)	
Reform*Education				0.011 (1.54)
Constant	0.702*** (17.7)	0.707*** (18.67)	0.700*** (18.24)	0.680*** (15.73)
N	172	172	172	172
R sq.	0.72	0.72	0.72	0.72

The result from estimating equation 1 for all occupations, all geographic areas and all women. The dependent variable is women share in occupation and t-stats are in parentheses. Occupation share in the geographic area, the geographic area-time and occupation dummies were controlled for but omitted from table. Standard errors are clustered at the level of the geographic areas.

\*\*\*significant at 1%, \*\*significant at 5%, \*significant at 10%.

**Table 4: By age**

	Below Median Age (27) Women				Above Median Age Women			
	1	2	2	4	5	6	7	8
Reform* Non-homework	0.154** (2.02)				0.082 (1.01)			
Reform* Paid-work		0.177* (1.84)				0.112 (1.23)		
Reform* All-year-work			0.242* (1.76)				0.036 (0.19)	
Reform*Education				0.009* (1.91)				0.002 (0.31)
Constant	0.231*** (8.66)	0.234*** (9.2)	0.227*** (7.91)	0.200*** (5.52)	0.471*** (11.61)	0.473*** (11.89)	0.473*** (11.86)	0.479*** (15.46)
N	172	172	172	172	172	172	172	172
R sq.	0.45	0.44	0.45	0.45	0.55	0.55	0.55	0.55

The result from estimating equation 1 for all occupations, all geographic areas. The dependent variable is women share in occupation and t-stats are in parentheses. Occupation share in the geographic area, the geographic area-time and occupation dummies were controlled for but omitted from table. Standard errors are clustered at the level of the geographic areas

\*\*\*significant at 1%, \*\*significant at 5%, \*significant at 10%.

**Table 5: By marital status**

	Married Women				Single Women			
	1	2	3	4	5	6	7	8
Reform* Non-homework	0.040 (0.56)				0.145** (2.11)			
Reform* Paid-work		0.166** (2.04)				0.126* (1.77)		
Reform* All-year-work			-0.068 (-0.47)				0.252* (1.95)	
Reform*Education				-0.001 (-0.16)				0.009** (2.18)
Constant	0.409*** (12.49)	0.407*** (12.76)	0.414*** (11.88)	0.467*** (8.95)	0.081*** (3.2)	0.085*** (3.56)	0.076** (2.77)	-0.021 (-0.74)
N	172	172	172	172	172	172	172	172
R sq.	0.48	0.48	0.48	0.48	0.45	0.44	0.45	0.45

The result from estimating equation 1 for all occupations, all geographic areas. T-stats are in parentheses. The dependent variable is women share in occupation. Occupation share in the geographic area, the geographic area-time and occupation dummies were controlled for but omitted from table. Standard errors are clustered at the level of the geographic areas.

\*\*\*significant at 1%, \*\*significant at 5%, \*significant at 10%.

Given the above results, we next examine the effect along marital status. In Table 5, we found that the law has a different effect based on marital status. Specifically, Table 5 shows that for single women, the effect of the family law has a positive effect in increasing the share of women in occupations with higher non-home employment, higher year-around employment and higher than average education of occupation. For married women, the family law has a significant effect in increasing women's share only along one dimension: paid work. Regressions that look at both marriage and age confirm that the effects are strongest for young single women; with the positive effects on paid-work evident for both younger and older married women.<sup>14</sup>

These results are initially puzzling given that women most likely to be affected by the new Family Code are women in marriage. But it is also true that the law changes the bargaining power of all women – and in some cases, unmarried women the most. They are not in an existing marriage, with prior agreements and arrangements. And they know that their prospects for economic opportunities have changed. Indeed, that they are delaying marriage and pursuing these economic opportunities demonstrates this; the law would seem to change single women's expectations of their role within marriage.

For young single women, the effect of the new Family Law also seems to affect them through the increase in age of marriage (from 15 to 18). We found that the age at first marriage increased relatively more among areas that implemented the new Family Code earlier than the later-implementing areas. Specifically, for women between the ages of 15 and 19, average age at marriage increased by 0.26 years for the early implementing regions and chartered cities and fell by 0.48 for the later-implementing areas. And for women between 20 and 24 years old, the

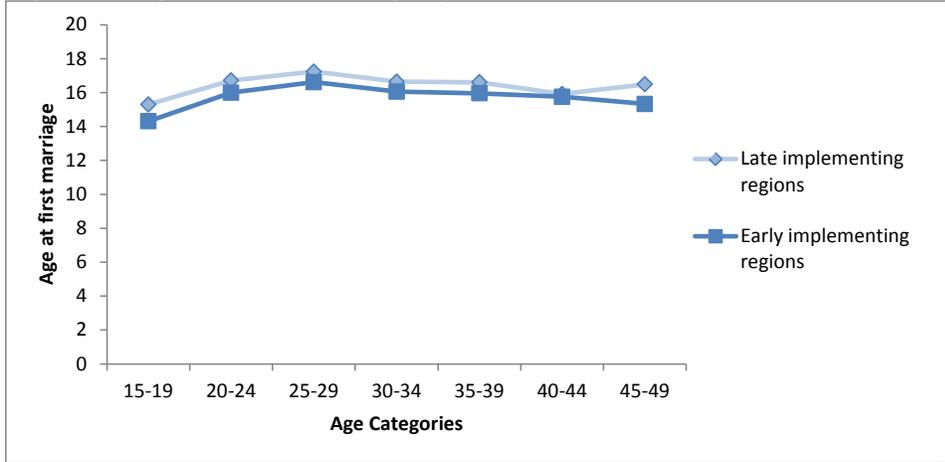
---

<sup>14</sup> For the younger women, we also found that the effect of the reform is relatively higher in Christian than Muslim geographic areas.

average at marriage in increased by 0.13 years for early implementing areas, while also falling in the later-implementing areas. And this difference cannot be attributed to pre-existing trends in age at first marriage. As Figure 2 shows, not only was age at first marriage higher among later-implementing areas, but the trends were similar by age cohorts as well. So the difference in age at first marriage is most likely responding to the new provision in the new Family Law that increased the legal marriage age from 15 to 18 years.<sup>15</sup>

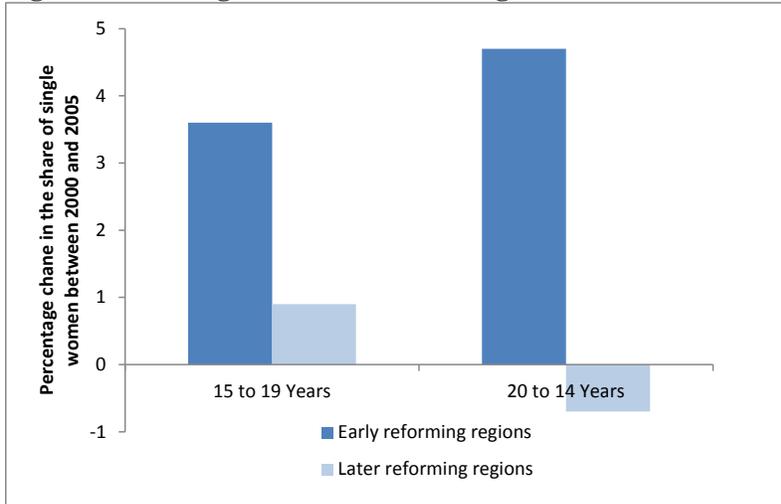
The above point is further illustrated in Figure 3, which shows that the average share of single (never married) women increased significantly more among early implementing areas than later-implementing areas between 2000 and 2005. If the average age at marriage has gone up in the early-reforming areas, this is what we should expect in the share of women who are single.

**Figure 2: Age at first marriage by cohort in 2000.**



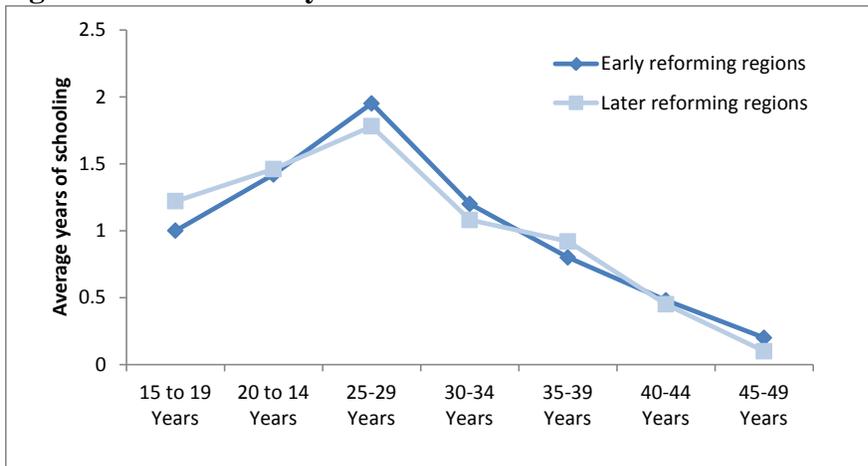
<sup>15</sup> However, the average age at first marriage in 2005 is still significantly below 18 years, meaning that there is a long way to go before the new law fully takes effect.

**Figure 3: Change in the share of single (never married women) among younger females.**



It would be difficult to attribute the above effect to the new Family Law if there was a preexisting trend is another variable, such as education, that could potentially cause marriage to be delayed for younger women. There does not seem to be much difference in education trends between the early-implementing-areas and the later-implementing areas. This is visible in Figure 4, which shows the educational attainment of women across age cohorts between the early implementing and later-implementing areas are similar prior to the new Family Law coming into effect.

**Figure 4: Education by cohort in 2000.**



## ***Robustness***

It is possible that changes in education and other socio-economic variables could affect our results. For example, an expansion of educational opportunities (whether or not targeted specifically at girls) could also cause a delay in the age of marriage by increasing time spent in school. Similarly, differential economic growth across areas could result in marriage delays. While we do not have per capita income at the sub-national level in Ethiopia, we have data on households' asset ownership. Wealth data are actually relatively less likely to undergo high fluctuation over a five-year period. In addition, we explore whether the effects are robust to different geographic areas, including differentiating between urban and rural areas in regions.

To examine whether our results are robust to the above changes, we estimate equation (2), which augments equation (1) by including average female education ( $EDUC_{it}$ ) for both years, as well as average wealth in the region or chartered cities<sup>16</sup>.

$$W_{ijt} = CONSTANT + \varphi * GEO\_AREA * YEAR\_DUMMIES_{it} + \theta * OCCUPATION\_DUMMIES_j \\ + \beta * (REFORM_{it} * X_j) + \vartheta * OCC\_SHARE_{ijt} + \varepsilon_{ijt} + \gamma * EDUC_{it} + \xi * WEALTH_{it} + \varepsilon_{ijt} \quad (2)$$

What we find, however, is that the inclusion of the wealth and education variables does not significantly affect the results, nor are they significant in themselves. As such they are not reported, but are included in the other robustness checks performed here.

Table 6 restricts the sample solely to urban women and excluding agricultural occupations. This facilitates extrapolating from other changes that may have happened in rural land rights and tests for how widespread the effects were in the economy. For non-agricultural urban women in particular, the law has a significant interactive effect with three of the four

---

<sup>16</sup> We use principal component analysis to construct a wealth index from households' ownership of assets. The assets used are: radio, TV, bicycle, motorbike, car, telephone and floor materials (earth, vinyl, ceramic, cement and carpet). These are all dummy variables. The first principal component, explaining the largest variance, was used.

occupational dimensions (and the fourth is close to being statistically significant). Furthermore, the effect of the law seems particularly robust to increasing women's share along occupation with more non-home-based employment. It is therefore unlikely that our initial results are driven by simultaneous changes in education<sup>17</sup> and/or income between 2000 and 2005.

**Table 6: Restricting sample to urban areas and non-agricultural occupations**

	Urban women & non-agricultural occupations			
Reform* Non-homework	0.307** (2.00)			
Reform* Paid-work		1.184 (1.58)		
Reform* All-year-work			0.349* (1.81)	
Reform* Education				0.014* (1.81)
Constant	0.544*** (11.41)	0.552*** (11.40)	0.545*** (11.59)	0.954*** (19.38)
N.	151	151	151	151
Rsqr	0.67	0.67	0.67	0.67

The result from estimating equation 2 for urban women and non-agricultural occupations. The dependent variable is women share in occupation in that location and time period and t-stats are in parentheses. Occupation share in the geographic area, the geographic area-time and occupation dummies were controlled for but omitted from table. Standard errors are clustered at the level of the geographic areas. The coefficients for wealth and geographic area-education are also not reported in the table as they were not significant.

\*\*\*significant at 1%, \*\*significant at 5%, \*significant at 10%.

Our results are consistent with the proposition that the changes in the Revised Family Code increased the bargaining power of women. These changes are unambiguous ameliorations of existing gender inequalities in Ethiopian marriages. Consequently, they are likely to have a positive effect on women's empowerment. Just as favorable changes in US divorce laws led to positive labor market outcomes, our results indicate that these progressive changes in Ethiopia's Family Code increased women's representation in occupations with higher returns.

<sup>17</sup> Our results do not change if we also use either overall average education in an area or the gap between male and female education.

### *Rural-Urban Migration and Land Certification Reforms*

The identification of the effect of the new Family Law in the preceding estimations depends on the critical assumption that there had not been any other reforms between 2000 and 2005 in the areas that implemented the revised family law. This assumption is complicated by the fact that there had actually been some land certification reforms in several areas of Ethiopia between 2000 and 2005 (Deininger, Ali, Holden and Zevenbergen 2008; Holden and Tefera 2008; Kumar and Quisumbing 2010). Furthermore, these land reforms are likely to have some labor market implications.

However, we can show that the land certification reforms are not driving our results for at least two reasons. First, the land certification reform was confined to rural areas and we saw in our preceding results that the identified effect is present even within the urban sample. So even if land certification reform has had labor market implications that could confound our results, the effects are unlikely to be present in urban areas. This argument depends on the assumption that the family law did not induce high rural-urban migration within geographic areas.<sup>18</sup> While it is true that urbanization rates are increasing in almost all Ethiopian areas, it is unlikely that this movement is driving our results. As Table 7 shows, the average increase in urbanization is not higher among areas that decided to implement the Revised Family Code. In fact, the average percentage point increase in urbanization rates by areas is higher among the later-implementing regions (2.5) than among the early-implementing areas (1.6).

---

<sup>18</sup> Migration between regions and chartered cities in Ethiopia is well regulated. This regulation is also reinforced by the fact the geographic boundaries are ethnic in nature, which limits inter-regional migration.

**Table 7: Changes in urbanization rates in Ethiopian Regions and Chartered Cities**

	<b>% Urban 1994</b>	<b>% Urban 2007</b>
<i>Early Implementing Geographic Areas</i>		
Addis Ababa	98.7	100
Amhara	9.1	12.6
Dire Dawa	68.8	67.5
Oromiya	10.5	12.2
Tigray	14.9	19.5
<i>Later Implementing Geographic Areas</i>		
Afar	8.1	13.4
Benishangul Gumuz	7.8	13.5
Gambella	15.1	25.2
Harari	58.2	50.5
Somali	15.4	13.9
SNNP	6.8	10

Source: Population and Housing Census (1994 & 2007): Ethiopian Central Statistical Agency

Another important fact about the land reforms is that only the first stage of the land certification reforms had been implemented by 2005. The first stage of the reforms involved registration, and not the actual issuing of the certificates of ownership. The only exception in this regard is Amhara region, where some progress had been made in handing out certificates by 2005.

In Table 8, we re-estimate equation 1 and exclude Amhara given its relative progress in implementing the land certification reforms. Like most of our preceding results, the family law has a significant effect in increasing women's share in occupations with more non-home-based employment. The reform also has a significant interactive effect with paid work. In the urban areas outside Amhara, the law seems to have a more limited effect. However, this reduced effect is partly driven by loss of statistical power from the smaller degrees of freedom.

**Table 8: Robustness: Excluding Amhara Region**

	Excludes Amhara Region				Urban Only & Excludes Amhara Region			
	1	2	3	4	5	6	7	8
Reform* Non-homework	0.200* (1.74)				0.257* (1.91)			
Reform* Paid-work		0.183* (1.82)				-0.189** (-1.99)		
Reform* All-year-work			0.184 (0.76)				0.159 (0.91)	
Reform*Education				0.008 (0.96)				0.004 (0.76)
Constant	0.696*** (17.07)	0.701*** (17.77)	0.697*** (17.33)	0.677*** (14.6)	0.566*** (11.49)	0.579** (11.33)	0.570** (11.73)	0.256* (1.87)
N	157	157	157	157	157	157	157	157
R sq.	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71

The result from estimating equation 1 for all occupations and all geographic areas but Amhara. The dependent variable is women share in occupation and t-stats are in parentheses. Occupation share in the geographic area, the geographic area-time and occupation dummies were controlled for but omitted from table. Standard errors are clustered at the level of the geographic areas.

\*\*\*significant at 1%, \*\*significant at 5%, \*significant at 10%.

Another land reform related issue is that the Tigray region started the land registration on a limited scale in 1998 (Haile et al 2005; Deininger et al 2008), much earlier than other areas. So we examined the robustness of our results by excluding this region from our analysis. Table 9 shows that our results are indeed robust to excluding Tigray, as well as restricting the sample to only urban areas and further excluding Tigray. In all areas outside Tigray, the effect of the law remains significant in increasing women's share. In non-Tigray urban areas, the effect of the law is significant with regards to non-home-based employment but not in other dimensions. As in the case with excluding Amhara, part of the reason why statistical significance fell in the second panel of Table 9 could be loss of statistical power.

**Table 9: Robustness: Excluding Tigray**

	Excluding Tigray				Urban areas & excluding Tigray			
	1	2	3	4	5	6	7	8
Reform* Non-homework	0.277** (2.14)				0.397** (2.81)			
Reform* Paid-work		0.326** (2.18)				-0.046 (-0.38)		
Reform* All-year-work			0.403** (2.02)				0.328* (1.77)	
Reform*Education				0.015** (2.10)				0.011* (1.75)
Constant	0.678*** (14.13)	0.684*** (14.71)	0.672*** (14.8)	0.676*** (16.29)	0.407 (8.05)	0.426 (7.82)	0.410 (8.28)	0.119 (0.87)
N	156	156	156	156	156	156	156	156
R sq.	0.72	0.72	0.72	0.72	0.71	0.69	0.7	0.7

The result from estimating equation 1 for all occupations and all geographic areas but Tigray. The dependent variable is women share in occupation and t-stats are in parentheses. Occupation share in the geographic area, the geographic area-time and occupation dummies were controlled for but omitted from table. Standard errors are clustered at the level of the geographic areas.

\*\*\*significant at 1%, \*\*significant at 5%, \*significant at 10%.

## VI. Conclusion

Household heads cannot be regarded as “benevolent dictators” where they always internalize the preferences of other members. Given the difference in preferences, the welfare of all individual members is unlikely to be accorded equal considerations given power asymmetries. While bargaining positions have traditionally been viewed from who controls the most income flowing into the household, the institutional environment can also play a significant role in shaping power and consequently the bargaining position of individuals within households.

In this paper, we analyze the effects of changes in family law on women’s labor market outcomes in Ethiopia. The Revised Family Code 2000 came into effect across some Ethiopian regions and chartered cities shortly after 2000. Using difference-in-difference, we exploit the variation in the timing of the implementation of this new family code by using DHS data sets from 2000 (before implementation) and 2005 (after implementation in five geographic areas). Our results show that the implementation of the new Family Code is associated with a significant

increase in the proportion of women in occupations that have a high proportion of non-home-based employment, paid work, year-round employment and higher educational requirements. In other words, the representation of women increased in occupations that are likely to have higher returns.

The effect of the law, however, is heterogeneous across different groups of women. For example, the law's effect seems strongest for young, single women, with the relative increase in women's participation 15-24 percent higher than in non-reforming areas. The strong effect on young women seems to result from an increase in the age of first marriage. This may be a direct result of raising the legal minimum age of marriage for women, or indirectly by raising the economic opportunities for women to work. For virtually all groups, the new Family Law also has a significantly robust effect on increasing women's share in non-home employment.

We provide evidence that our results are not due to pre-existing trends in areas that first implemented the new results, or to differences in the average participation in these types of employment across early and later reforming areas. Furthermore, our results are unlikely to be confounded by the simultaneous implementation of the country's land certification reforms mainly because it was largely restricted to rural areas and our results remain significant among the urban sample. These results reinforce earlier findings that strengthening property rights strengthens the ability to pursue economic opportunities. This should encourage efforts to support women's economic empowerment through addressing gender gaps in economic and property rights.

## References

- Aigner, D. and G. Cain. 1977. "Statistical Theories of Discrimination in Labor Markets", *Industrial and Labor Relations Review*, 30(2): 175-187.
- Arrow, K.J. 1972. "Models of Job Discrimination" in *Racial Discrimination in Economic Life*, A. H. Pascal (ed), Lexington, MA.
- Aterido, R and M. Hallward-Driemeier. 2011. "Whose Business is it Anyway?" *Small Business Economics*. 37(4): 443-64.
- Becker, G.S. 1971. "Economics of Discrimination", University of Chicago Press, Chicago.
- Becker, G.S. 1981. "Treatise on the Family", Harvard University Press. Cambridge, MA.
- Becker, G.S. 1985. "Human Capital, Effort, and the Sexual Division of Labor", *Journal of Labor Economics*, 3(1): S33-S58.
- Besley, Timothy, and Maitreesh Ghatak. 2009. Property Rights and Economic Development. CEPR discussion paper 7234.
- Blanchard, O. and F. Giavazzi. 2003. "Macroeconomic Effects of Regulation and Deregulation in Goods and Labor Markets", *Quarterly Journal of Economics*, 118(3): 879-907.
- Botero, J. C., S.Djankov, R. La Porta, F. Lopez-de-Silanes and A. Shleifer. 2004. "The Regulation of Labor." *The Quarterly Journal of Economics*, 119(4): 1339-1382.
- Browning, M., P.A. Chiappori and V. Lechene. 2009. "Distributional Effects in Household Models: Separate Sphere and Income Pooling", *Economic Journal*, 120(545): 786-799.
- Bruhn, M. 2007. "License to Sell: The Effect of Business Registration Reform on Entrepreneurial Activity in Mexico", World Bank.
- Central Statistical Agency of Ethiopia. 2004. "Urban Bi-annual Employment Unemployment Survey, Addis Ababa, Ethiopia.
- Deininger, K., A. Goyal and H. Nagarajan. 2010. "Inheritance Law Reform and Women's Access to Capital: Evidence from India's Hindu Succession Act", World Bank Policy Research Working Paper.
- Deininger, K., D.A. Alie, S. Holden and J. Zevenbergen. 2008. "Rural Land Certification in Ethiopia: Process, Initial Impact and Implications for Other African Countries", *World Development*, 36(10): 1786-1812.
- Del Mel, S., D. McKenzie and C. Woodruff. 2009. "Are Women More Credit Constrained? Experimental Evidence on Gender and Microenterprise Returns", *American Economic Journal: Applied Economics*, 1(3): 1-32.

Demographic and Health Survey. 2000 & 2005. "Ethiopia", Maryland, USA.

Djankov, S., R. La Porta, F. Lopez-de-Silanes, & A. Shleifer. 2002. "The Regulation of Entry." *The Quarterly Journal of Economics*. 117(1): 1-37.

Duflo, E. 2005. "Gender Equality in Development." BREAD Policy Paper, 11.

Fafchamps, M., A.R. Quisumbing. 2002. "Control and Ownership of Assets Within Rural Ethiopian Households", *Journal of Development Studies*, 38(6): 47-82.

Fafchamps, M., A.R. Quisumbing. 2005. "Assets at Marriage in Rural Ethiopia", *Journal of Development Economics*, 77:1-25.

Federal Civil Service Commission. 2005. "Survey on the Status of Men and Women Employees and Strategies for Gender Equality", Addis Ababa, Ethiopia.

Federal Democratic Republic of Ethiopia. 2000. "The Revised Family Code Proclamation No. 213/2000" Federal Negarit Gazetta of the Federal Democratic Republic of Ethiopia, Issue 1/2000.

Field, Erica. 2007. Entitled to Work: Urban Property Rights and the Labor Supply in Peru. *Quarterly Journal of Economics* 122: 1561-1602.

Field, Erica, and Maximo Torero (2008) "Do Property Titles Increase Credit Access Among the Urban Poor? Evidence from a Nationwide Titling Program." Harvard University Working Paper.

Goldstein, Markus and Christopher Udry. 2008. "The Profits of Power: Land Rights and Agricultural Investment in Ghana", *Journal of Political Economy*, 116(6): 981-1022.

Gopal, G. and M. Salim. 1999. "Gender and Law: East Africa Speaks" Proceedings of the Conference by the World Bank and Economic Commission for Africa".

Gray, 1998. "Household Bargaining, and Married Women's Labor Supply", *American Economic Review*, 88(3): 628-642.

Gruber, J. 2004. "Is Making Divorce Easier Bad for Children? The Long-Run Implication of Unilateral Divorce", *Journal of Labor Economics*, 22(4): 799-833.

Haile, M., W. Witten, K. Abraha, S. Fissaha, A. Kebede, G. Kassa and G. Reda. 2005. "Land Registration in Tigray, Northern Ethiopia", International Institute of Environment and Development, UK.

Hallward-Driemeier, M. 2013. *Enterprising Women: Expanding Economic Opportunities in Africa*. Washington DC: World Bank and Agence Francaise de Developpement.

Hallward-Driemeier, M. and T. Hasan. 2012. *Empowering Women: Legal Rights and Economic Opportunities in Africa*. Washington DC: World Bank and Agence Francaise de Developpement.

- Hallward-Driemeier, M. and O. Gajigo. 2010. "Where Women Work: Empowerment and Occupational Choice", Working Paper.
- Holden, S. 2008. "From Being Property of Men to Becoming Equal Owners? Early Impacts of Land Registration and Certification on Women in Southern Ethiopia", UN HABITAT.
- Holden, S., K Deininger, H Ghebru. 2007. "Impact of Land Certification on Land Rental Market Participation in Tigray Region, Northern Ethiopia", Nordic Development Economics Conference, Copenhagen.
- Hsieh, C. T., and P.J. Klenow. 2009. "Misallocation and Manufacturing TFP in China and India." *The Quarterly Journal of Economics*, 124(4): 1403-1448.
- IMF. 2010. "World Economic Outlook",
- Kabeer, N. 2005. "Gender Equality and Women Empowerment: A Critical Analyses of the Third Millennium Development Goal", *Gender and Development*, 13(1): 12-24.
- Klapper, L, L Laeven and R. Rajan. 2006. "Entry Regulation as a Barrier to Entrepreneurship", *Journal of Financial Economics*, 82(3): 591-629.
- Kumar, N and AR Quisumbing. 2010. "Policy Reforms towards Gender Equality in Ethiopia: Little by Little the Egg Begins to Walk", IFPRI.
- Lundberg, S. and R.A. Pollak. 1993. "Separate Sphere Bargaining and the Marriage Market", *Journal of Political Economy*, 101(6): 988-1010.
- Mwase, N. 2003. "The Liberalisation, De-regulation and Privatisation of the Transport Sector in Sub-Saharan Africa: Experiences, Challenges and Opportunities", *Journal of African Economies*, 12(1): 153-192.
- Pande, Rohini, and Christopher Udry (2005). "Institutions and Development: A View from Below", Economic Growth Center Discussion Paper No. 928, Yale University.
- Psacharopoulos, G. 1985. "Returns to Education: A Further International Update and Implications", *Journal of Human Resources*, 20(4): 583-604.
- Quisumbing, Agnes, Ellen Payongayong, J. B. Aidoo, and Keiji Otsuka Women's Land Rights In The Transition To Individualized Ownership: Implications For The Management Of Tree Resources In Western Ghana, IFPRI (1999)
- Rangel, M. 2006. "Alimony Rights and Intrahousehold Allocation of Resources: Evidence from Brazil", *Economic Journal*, 116: 627-658.
- Roy, S. 2008. "Female Empowerment through Inheritance Rights: Evidence from India", LSE.

Rubery, J., S. Horrell and B. Burchell. 1994. "Part-time Work and Gender Inequality in the Labor Market" in *Gender Segregation and Social Change*, (eds) Scott, A.M., Oxford University Press.

Ruhm, C.J. 1998. "The Economic Consequences of Parental Leave Mandates: Lessons from Europe", *Quarterly Journal of Economics*, 113(1): 285-317.

Strassmann, P. 1987. "Home-based Enterprises in Cities of Developing Countries", *Economic Development and Cultural Change*, 36(1): 121-144.

United Nations. 2000. "United Nations Millennium Declaration", New York.

United Nations Development Fund for Women (UNIFEM). 2009. "United Nations Trust Fund in Support of Actions to Eliminate Violence against Women", NY.

United Nations Development Program (UNDP). 2009. "Human Development Index", UN.

Stevenson, B. and J. Wolfers. 2006. "Bargaining in the Shadow of the Law: Divorce Laws and Family Distress", *Quarterly Journal of Economics*, 121(1): 267-288.

World Bank. 2001. *Engendering Development: Through Gender Equality in Rights, Resources and Voice*, Policy Research Report, Washington, DC.

World Bank. 2011 *World Development Report 2012: Gender Equality and Development*. Washington, DC: World Bank.