

# Firms' Discriminatory Behavior, and Women's Employment in the Democratic Republic of Congo

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**WORLD BANK GROUP**

Development Economics

Global Indicators Group

April 2020

## Abstract

This paper contributes to better understanding firms' discriminatory behavior in the presence of gender-based legal discrimination and its linkages with labor market outcomes for women in a developing country setting. Using data collected through the World Bank Enterprise Surveys in the Democratic Republic of Congo, the paper documents the existence of nonnegligible employer discrimination and limitations in women's autonomy in the presence of a discriminatory environment. Interestingly, these are more

pervasive outside the capital city, Kinshasa, which suggests that cultural norms or differences in regulation enforcement may be at play. The paper also finds that firms' discriminatory behavior harms women's labor market outcomes, in their representation among the upper echelons of management and participation in the overall workforce. The negative relationship between restrictions from discriminatory behaviors and female employment is particularly strong in the manufacturing sector.

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# **Firms' Discriminatory Behavior and Women's Employment in the Democratic Republic of Congo\***

*Updated June 2020*

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JEL: K38, J16, J21, D22

Keywords: Gender, Laws, Employment, Firms, DRC

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\* We would to thank Nayda Almodovar Reteguis from the Women Business and the Law unit in the Development Economics and Chief Economist Department of the World Bank for the invaluable collaboration that allowed to design the questions used in the analysis. We would also like to thank Jorge Luis Rodriguez Meza for very helpful comments. All remaining errors are our own.

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# **Firms' Discriminatory Behavior and Women's Employment in the Democratic Republic of Congo**

## **1. Introduction**

Women's increased involvement in the economy has been the most significant change in labor markets during the past years (Goldin, 2006). However, despite uncontested and unprecedented improvements, progress has not come evenly to all countries or to all women (World Bank, 2011) and gender differences in employment and pay, as well as differences in the types of activities that women and men perform are still noticeable (OECD, 2017; World Bank, 2019). Furthermore, there is concern that such gaps may expand in poorer developing economies with weak institutions and where women may have little recourse. In this study we explore one specific context – the Democratic Republic of Congo (DRC).

Broadly, reducing the persistent gender gap in employment opportunities and outcomes is important not only to promote equity, but also because it is beneficial for many society-wide outcomes (Duflo, 2012). The gender gaps in the labor market lead to low human capital, low productivity, low economic growth and less equal economic development (Goldin, 1995; Dollar and Gatti, 1999; Knowles et al., 2002; Klasen, 2002; Lagerlof, 2003; Abu-Ghaida and Klasen, 2004; Heintz, 2006; Klasen and Lammana, 2009; Gaddis and Klasen, 2014; Bandara, 2015; Elborgh-Woytek et al., 2013; Balamoune-Lutz and McGillivray, 2015).

Different factors have been traditionally identified as the basis of the persistent gender gaps in labor market outcomes. Numerous studies pointed at supply-side barriers, such as human capital, fertility choices, family constraints and individual preferences (Cameroon et. al., 2001; Goldin, 2006; Mammen and Paxson, 2000), while others looked at demand-side factors including job availability (Chatterjee et al., 2015) and employer discrimination (Altonji and Blank, 1999; Neumark, 1996; Goldin and Rose, 2000; Bertrand and Mullainathan, 2004). Supply-side and demand-side factors are also connected to the cultural and institutional environment. A growing body of literature shows the influence of culture on women's employment (Antecol 2000; Fernández, 2007; Fernández, 2013; Fernandez et al., 2004; Fernandez and Fogli, 2009; Alesina et al., 2013; Blau et al. 2013)<sup>4</sup> and several studies show that, all over the world, discriminatory laws continue to threaten women's economic participation and career growth at every stage of life (Hyland et al., 2019; Islam, Muzi, and Amin, 2018; Amin and Islam, 2015; Hallward-Driemeier and Gajigo, 2015; Gonzales et al., 2015; Branisa et al., 2013).<sup>5</sup>

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<sup>4</sup> See Fernandez (2014) for an overview.

<sup>5</sup> See Roy (2019) for an overview.

This paper provides a first step in understanding the linkages between firms' discriminatory behavior in the presence of gender-based legal discriminations and labor market outcomes for women in a developing country setting. The paper focuses on the DRC and takes advantage of, to the best of our knowledge, previously unused data on firms' behavior, which were collected through the 2013 World Bank Enterprise Surveys (ES) in the DRC. As documented by the World Bank's Women, Business and the Law (WBL), at the time of the 2013 ES, the DRC was characterized by the presence of several gender-based discriminatory provisions in areas such as family and inheritance laws, labor laws and land laws that could potentially limit women's participation in economic activities. Several gender disparities were also present in the country. Although women accounted for almost 48 percent of the labor force, 80 percent of women were employed in agriculture, only 4 percent in industry, and 16 percent in services. Moreover, human capital accumulation was still lower for women than for men. About 28 percent of women had never gone to school in contrast to 14 percent for men (World Bank, 2013) and secondary and tertiary school enrollment was lower for girls than for boys. Finally, about 75 percent of women in the DRC indicate they have no say in household decisions (UN Women, 2011).

Development practitioners have encouraged and worked with governments to reform laws that hold women back from working and doing business. However, there is some concern that some of these laws suffer from lack of enforcement, especially in developing economies with weak institutions. The divergence between *de iure* and *de facto* situations may imply that even though there may be gender-based discrimination in the law, in practice women benefit from the same rights as men or, vice versa, that women may be still discriminated despite the presence of laws that protect them from gender-based discrimination. Such differences have been documented for the business environment regulations in general using firm-level data (Hallward-Driemeier and Pritchett, 2015), but not for gender-specific laws. Through the existence of a unique firm-level data set of 400 private-sector firms operating in the manufacturing and services sectors in the DRC, the paper can verify if employers discriminate in the presence of discriminatory laws, or if they discriminate despite the presence of laws that protect from gender discrimination. Furthermore, the study can explore whether employers' discriminatory behavior has any correlation with women's participation in the private sector either in positions of power, like a firm's top manager or owner, or in the general workforce. As the data are characterized by good geographical coverage, the analysis can also explore to what extent restrictions from discriminatory behaviors apply to women living and working in the capital city as compared to those who live and work outside the capital city, offering some interesting insights on the possible roles of culture and law enforcement.

We find mixed evidence in terms of enforcement of laws – whether or not some forms of discriminatory laws exist does not result in uniform firm behavior, calling into question whether these laws are known, or

if there is any enforcement at all. We find that strict legal restrictions placed on women's autonomy in opening or running a business, as well as in participating in the formal private sector, which were in place at the time of the survey, were not fully enforced in the DRC. Nonetheless, a non-negligible percentage of women were subject to spousal permission when running their business or when joining the private sector workforce, and a high percentage of firms reported discriminatory behaviors against women. Interestingly, limitations to women's autonomy and employer's discrimination are more pervasive outside the capital city, Kinshasa, which may suggest that cultural norms may be at play, or that there is stricter enforcement of laws beyond the capital city, or both. However, regardless of the discriminatory legal environment, we find that firms' discriminatory behavior harms women's labor market outcomes, both in terms of their representation among the upper echelons of management and in terms of their participation in the overall workforce. In particular, we find a negative relationship between the existence of restrictions on the activities that women can perform and female employment and career progression. We also find evidence that firms that allow female workers to work night shifts hire significantly more women. The same positive and statistically significant relationship is found for firms that provide maternity leave.

To summarize, the paper contributes to the analysis of female labor market participation in the following ways. First, it contributes to the growing literature on gender-based legal discrimination and female labor market outcomes by exploring the extent to which gender disparities in the laws are reflected in disparities in firms' behavior. This offers unique and rarely available insights on the extent to which laws are enforced. The context of the DRC, a country where a low level of law enforcement is expected given the high level of informality, implies the results are a lower bound effect. Second, given the extensive geographical coverage of the data, the paper highlights the need to account for geographical heterogeneity within an economy – areas beyond the capital city may face a different legal environment due to lack of enforcement, or face more ingrained social norms that are unresponsive to legal reforms. Finally, it is one of the few papers that explore the effects of employers' discriminatory behavior on female labor market outcomes using nationally representative firm-level data in a developing country context. Within this strand of literature, it complements a recent study by Kotikula et al. (2020) that explores discriminatory firms, defined in terms of their perceptions of women employees, in South Asia.<sup>6</sup>

The rest of the paper is organized as follows. Section 2 gives some background about the DRC in general and the DRC labor market in particular; this section also discusses the institutional and cultural environment in the country. Section 3 describes the data used in the analysis. Section 4 presents some patterns of

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<sup>6</sup> See Azmat and Petrongolo (2014) for a review of discrimination studies looking at gender and labor market outcomes.

discrimination observed in the DRC. Section 5 presents the empirical approach and the results; finally, section 6 concludes.

## **2. Context: The Democratic Republic of Congo**

The DRC is one of the poorest countries in the world; it is the fourth most populous (67.5 million inhabitants) and the largest country in terms of land area in Sub-Saharan Africa. In 2012, the time period covered by the survey, it had an estimated GNI per capita of US\$335.48 in constant 2010 US\$ and was ranked 176 of 189 economies in the UNDP's Human Development Index. Fertility rates were quite high at 6.4 births per woman and gross secondary school enrollment was still low at 43.3 percent. The economy suffers from low levels of human capital. The recent World Bank's Human Capital Index ranked the DRC 146<sup>th</sup> of 157 economies in 2017.<sup>7</sup> The score for the DRC was 0.37, implying that the productivity as a future worker for a child born in 2017 in the DRC is 63 percent below what could be achieved with full health and education. Both the human capital index and primary school enrollment rates are similar between men and women in the DRC. However, in 2012 secondary school enrollment rates were much higher for males than females (54.2 percent versus 32.1 percent), and tertiary school enrollment for males was almost double that of females (10.6 percent versus 5.9 percent).<sup>8</sup>

Women are as likely as men to work, but they are over-represented in the agricultural sector. Women made up 48 percent of the labor force all throughout 2012-2018. However, in 2012, 80 percent were employed in agriculture, 4 percent in industry, and 16 percent in services.<sup>9</sup> Informal employment is quite high with the most recent available estimate in 2005 of 89.6 percent of total employment (ILO); estimates of informal output are 45.9 percent of GDP in 2012 (Medina and Schneider, 2018). However, despite the prevalence of informality, a significant number of firms are registered with the government authorities (about 14,000 firms), and thus formal according to the a legalistic definition of informality.<sup>10</sup> In 2012, only 23 percent of firms in the manufacturing and services formal sectors had female top managers and only 22 percent of the firms had a majority female ownership.

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<sup>7</sup> Data are not available for previous years.

<sup>8</sup> The figures have hardly changed since 2012. Data are from the World Development Indicators, World Bank.

<sup>9</sup> In 2018 these figures were: agriculture (87 percent), industry (9 percent), services (4 percent). Source: World Development Indicators, World Bank.

<sup>10</sup> The data about formal firms operating in the DRC are from a block enumeration conducted in the country prior to the 2013 Enterprise Survey. Block enumeration was needed to build the sampling frame for the data collection in absence of comprehensive and updated lists of formal firms operating in the DRC (e.g. census data or data from firm's registrar office).

The low engagement of women in occupations outside agriculture is problematic. Several factors could be holding women back from non-agriculture forms of employment, including low education and skills, social norms, legal restrictions and employer discriminatory behavior. Social norms are hard to decipher and are typically alluded to using polling data. A 2017 ILO Gallup poll found that in the DRC 81 percent of respondents agreed that it is perfectly acceptable for any woman in the family to have a paid job outside the home if she wants one (gender disaggregation, male: 72 percent, female 89 percent). About 26 percent of male respondents would rather the women in the family stay at home and not work, while 13 percent of female respondents would rather stay at home. In comparison, in more egalitarian countries like Denmark, only 2 percent of male respondents would rather the women in the family stay at home and not work, while 6 percent of female respondents would rather stay at home. Thus, while social norms do point to a large portion of respondents in the DRC favoring women's pursuit of work outside the home, it is still far lower than in societies where gender differences are less prevalent.

The legal environment in the DRC is also worth close consideration. At the time of the survey, women in the DRC faced several legal restrictions that have since been reformed. In 2012, the World Bank's Women, Business and the Law (WBL) index, which measures the extent of legal discrimination that women around the world face as they navigate through their working lives, scored the DRC 42.5 out of 100, meaning that in the DRC at that time, women had less than half the amount of rights as men in the areas covered by the index. The global average score for the same year was 71.38.<sup>11</sup> The legal restrictions to women's economic opportunities in the DRC come in three main forms. One entails the requirement of spousal permission as noted in the family code. The other two are in the labor code and relate to restriction on work activity and night work. Articles 448-450 of the old 1987 Family Code note that "A woman must obtain the authorization of her husband for all legal acts in which she is obliged to perform a service which she must perform in person" and that "a woman cannot go to court in civil matters, acquire, alienate or bind herself without the authorization of her husband." Legal acts include: signing a contract, registering a business, opening a bank account, starting a job. Whereas, Article 137 of labor code states that "The Labor Inspector can require the examination of children, women and people with disabilities by a doctor to check whether the work does not exceed their strengths. This requisition is right to the request of the interested parties." Thus, women can be excluded from some activities. Furthermore, the labor code states that "Women, children under 18 years old and people with disability cannot work the night in industrial establishments

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<sup>11</sup> The extent of gender-based disparities in the DRC is documented also by two additional indexes. The OECD Social Institutions and Gender Index (SIGI) rated discrimination against women in the DRC in 2014 as "very high." The UN Gender Inequality Index (GII) ranked DRC 149th of 153 economies, and the most recent Global Gender Gap report from the World Economic Forum, in which the DRC has been included for the first time, ranked the DRC 144<sup>th</sup> of 149 economies (Hausmann et al., 2018).



public or private.”<sup>12</sup> A final point in relation to the labor code worth noting is that maternity leave provisions are a right for employees. The labor code states that any agreements contrary to the provisions on maternity are void by right. Employers will be punished with a fine for violating the provision that allows a pregnant woman with health risks to terminate her contract without incurring a termination indemnity. Table 1 summarizes the restrictions and maternity leave provisions in 2012. In 2016, the family code was amended to remove marital authorization. However, some restrictions in the labor code remain.

**Table 1: Rights and restriction of women in the DRC at the time of the survey**

Democratic Republic of Congo - Laws	2012	Explanation
Are wives required to obey their husbands?	Yes	
Can a married woman get a job in the same way as a married man?	No	Authorization from spouse
Can a married woman sign a contract in the same way as a married man?	No	Authorization from spouse
Can a married woman register a business in the same way as a married man?	No	Authorization from spouse
Can a married woman open a bank account in the same way as a married man?	No	Authorization from spouse
Can women work the same night hours as men?	No	Industrial undertakings restricted
Can women do the same jobs as men?	No	For women, work should not exceed strength
Does the law mandate paid or unpaid maternity leave?	Yes	
Who pays maternity leave benefits?	Employer 100%	

*Source: The World Bank Women Business and the Law*

### 3. Data and descriptive statistics

The data used in the analysis are nationally representative firm-level data from the World Bank Enterprise Survey (ES) for the DRC; data were collected between August 2013 and May 2014. The ES have high coverage in terms of countries and topics including access to finance, corruption, infrastructure, crime,

<sup>12</sup> According to the ILO definitions, ““Industrial undertakings” include “(a) mines and extractive industries of any kind (mining); (b) undertakings in which goods are manufactured (manufacturing), modified, cleaned, repaired, decorated, finished, prepared for sale, destroyed or demolished or in which the materials undergo a transformation, including shipbuilding, production, transmission of electricity (energy) and motive power in general; construction (construction) and civil engineering companies, including construction, repair, maintenance, processing and demolition.”

competition, labor, the business environment, and performance. The main respondents are business owners and top managers of firms. The ES universe excludes extractive industries, agriculture, informal firms (i.e., firms that are not registered), fully government-owned enterprises and micro firms (i.e., firms with fewer than five full time employees). However, in addition to the standard ES, the World Bank also occasionally collects data on micro firms (registered firms with fewer than 5 employees, which are not part of the universe of inference of the standard ES. In the case of the DRC, a survey of micro firms was carried out in parallel to the standard ES.

The DRC survey was stratified according to three standard ES levels – industry, establishment size, and within country location. The stratification of industry divided the universe of firms into manufacturing, retail and other services sectors, while stratification by size divided firms into micro (1-4 employees), small (5-19), medium (20-99) and large (100+) enterprises. Finally, the within country location stratification divided the DRC into four regions: Center (Kananga and Mbuji Mayi), East (Bukavu, Butembo, Goma, Kisangani), South (Likasi, Lubumbashi), and West (Boma, Kikwit, Kinshasa, Matadi). Survey weights were calculated and are applied to all statistics discussed below. Weights ensure that estimates are inferences with a pre-determined level of precision to the universe of the ES: the non-agricultural, non-extractive formal private sector in the DRC.

The summary statistics presented in Table 2 show that the mean firm operating in the DRC has been in business for nine years and employs approximately six people. Around 4 percent of establishments in the DRC are part of a multi-establishment firm, 2 percent engage in exporting activity and 3 percent are foreign owned. Other firm characteristics of note include total female employment, as well as female participation in management and ownership: the average firm employs only one woman (although the standard deviation is high), while approximately 23 percent of firms have a top female manager and 27 percent have some degree of female participation in ownership. The data show that women have greater representation in the capital city (Kinshasa), where the average firm employs two women, 28 percent of firms have a female top manager and 32 percent have female participation in ownership.<sup>13</sup>

The DRC survey contains the standard ES questions on firm characteristics, performance, and business environment. The survey also contains several country-specific questions included to ascertain women's autonomy, equality of economic opportunity, and gender discrimination in the DRC. These specific questions were built based on the legal gender discriminations identified by the WBL data and discussed in the previous section.<sup>14</sup>

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<sup>13</sup> A breakdown of Table 3 by firm location is not provided here but is available upon request.

<sup>14</sup> The specific questions are presented in Table A1 in the Annex; in each case the question was only posed where relevant, as explained in the second column of Table A1.

**Table 2: Summary statistics – all firms**

	Obs	Mean	Std. Dev.	Min	Max
Firm age	905	9.00	7.06	1	85
Number of employees	940	5.57	45.60	1	3900
Multi-establishment firm	941	0.04	0.19	0	1
Exporting firm	937	0.02	0.15	0	1
Foreign-owned firm	938	0.03	0.18	0	1
Firm offers formal training	934	0.08	0.27	0	1
Top manager's years of experience	919	10.53	7.41	1	60
Total female employment	929	1.20	16.42	0	1500
Female top manager	938	0.23	0.42	0	1
Female participation in ownership	938	0.27	0.44	0	1
Has a current/checking account	919	0.49	0.50	0	1
Has a line of credit or loan from a financial institution	913	0.06	0.24	0	1
Firm experienced losses due to crime	939	0.15	0.36	0	1

#### **4. Legal gender discrimination: Patterns observed**

In this section we consider firms' responses on the topics related to women's autonomy, economic opportunity and discrimination against them. In general, we find that the legal restrictions that were formally in place on women in the DRC at the time of the survey were not universally enforced. Nonetheless, among a significant proportion of firms, practices and procedures were in place that prevent women from fully and equally participating in economic activity. Discriminatory behavior appears more prevalent outside the capital city, suggesting that what holds women in the DRC back is a combination of restrictions placed on them under national law, social norms that discriminate against them, and differences in the enforcement of laws.

Looking, firstly, at laws which may be thought to hinder the autonomy of married female business managers and owners, we examine the instances where either spousal permission or a spouse's co-signature was required for women to conduct some important business transactions.<sup>15</sup> The data displayed in Panel A of Table 3 show that one-fifth of firms indicated that, for female-owned firms, permission from the spouse of a married female owner was needed to register the business and almost one-third of married female owners

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<sup>15</sup> In the following paragraphs we present the results for the questions for which we have a sufficiently large sample to conduct meaningful analysis.

or top managers indicated that spousal permission was required in order to open a checking account, which may reflect an important way in which access to credit is restricted for female businesses in the DRC. However, requirement for spousal co-signature was relatively uncommon when it comes to signing contracts (only 7 percent of firms with married female-owners or top managers stated that it was needed).

Note that while the statistics presented in Panel A of Table 3 illustrate that female business owners and managers face sizeable restrictions, if all businesses were to strictly adhere to the letter of the law, all female business owners and managers would be restricted in their business operations. As discussed in Section 2, according to the laws in place in the DRC at the time of the survey, all married women require the permission of their spouse to sign a contract, to register a business or to open a bank account. Thus, the data collected in the survey show that these laws are not universally enforced or that firms are unaware of them.

Turning from the situation of married female business owners and managers to that of female workers, Panel B of Table 3 summarizes some of the rights of and restrictions placed on female employees in the DRC. The data show that, in approximately 31 percent of the cases in which a married woman was hired, permission of her spouse was required. In terms of restrictions on specific tasks, 31 percent of firms stated that there are some work-related activities that female employees are forbidden to perform. The restrictions placed on women are the most severe when it comes to working night shifts – only 8 percent of firms indicated that female employees are allowed to work on these shifts, suggesting that the vast majority of firms place night-work restrictions on female employees. This is important, as evidence from previous studies suggests that night-work restrictions are negatively correlated with female employment (Zveglic and Rodgers, 2003) and with the likelihood of a woman being a top manager (Islam et al., 2018). Finally, the situation with regards to the right to maternity leave shows a positive result, with 82 percent of firms stating that their female permanent employees were entitled to take maternity leave. Again, it is worth noting here that, when it comes to the limitations placed on female employees, the strict restrictions placed on female autonomy under DRC law at the time of the survey were not universally enforced. According to DRC laws at this time, married women needed their husbands' authorization to get a job and there were also some legal restrictions in place regarding work-related activities and night work, although these restrictions were limited to certain occupations. On the other hand, DRC law did grant all women the right to maternity leave. The final aspect of discrimination here considered relates to discrimination in hiring decisions. Specifically, firms that hired staff over the last two years but that had not hired any married women were asked if any of the statements displayed in Panel C of Table 3 was a reason for not hiring married women (firms were asked to give a "yes" or "no" response to each option). The responses reveal that concerns about family commitments of married women were the most common reason for not hiring them, followed by a lack of skill of these women – be it perceived or actual. Approximately one-fifth of

firms responded that the requirement for written spousal permission was an obstacle to hiring married women; the figure is similar for the obstacle posed by government regulations.

**Table 3: Discriminatory behavior by firms in the DRC**

	Mean	Std. Dev.	Obs
<b>Panel A: Requirements for spousal permission to conduct important business transactions</b>			
Permission from spouse of married female-owner needed to register business (0/1)	0.21	0.41	386
Co-signature of spouse of married female owner/manager needed to sign contract (0/1)	0.07	0.25	363
Permission required from spouse of married female owner/manager needed to open checking account (0/1)	0.33	0.47	71
<b>Panel B: Rights and restrictions placed on female employees</b>			
Permission from spouse required to hire married women (0/1)	0.31	0.47	68
Any work-related activity female employees are forbidden (0/1)	0.31	0.46	512
Female employees allowed to work on night shifts (0/1)	0.08	0.28	248
Female permanent employees entitled maternity leave (0/1)	0.82	0.38	509
<b>Panel C: Reasons for not hiring married women</b>			
Family Commitments (0/1)	0.37	0.48	172
Lack of skill (0/1)	0.24	0.43	172
Written Permission from Spouse (0/1)	0.20	0.40	167
Governments regulations - Working Hours, Maternity Leave (0/1)	0.21	0.41	165

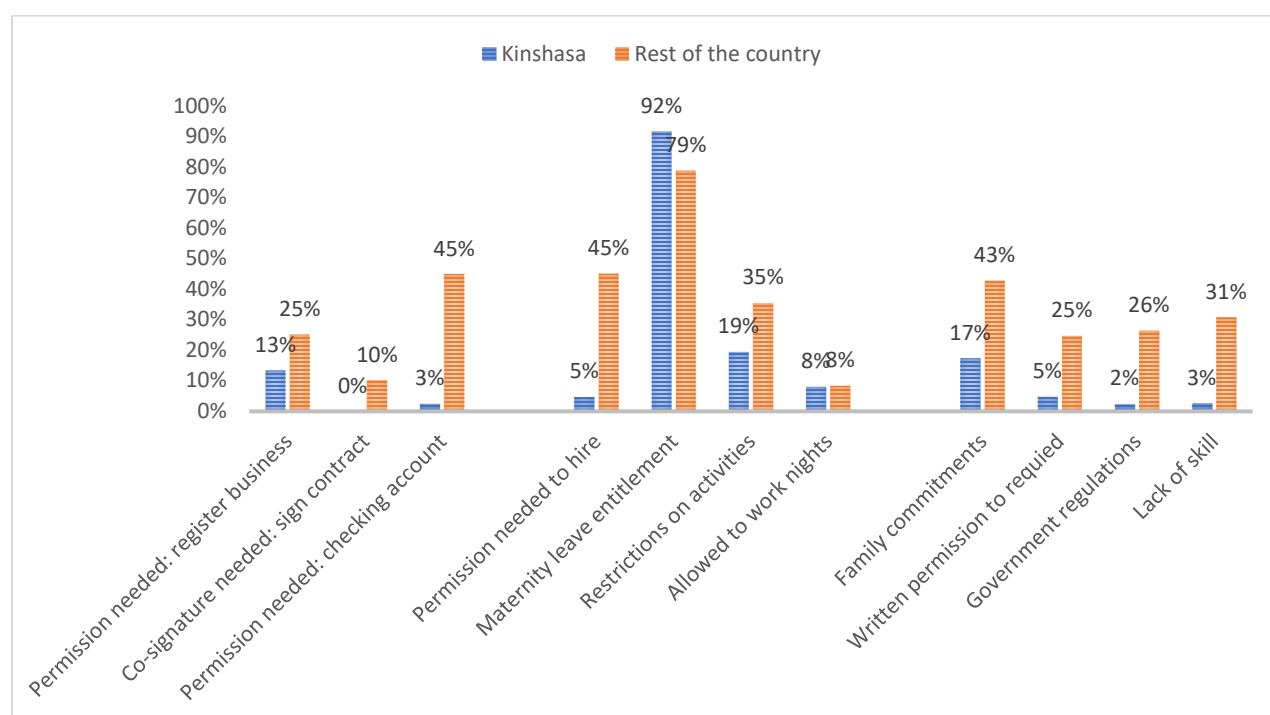
#### *Firms' discriminatory behavior inside and outside the capital city*

In terms of limitations to women's economic autonomy, some interesting results emerge when the data are disaggregated between Kinshasa (the capital city) and the rest of the country. In general, the data, summarized in Figure 1, show that female managers and business owners have less autonomy outside Kinshasa – suggesting that limitations placed on women's economic autonomy are more onerous outside large metropolitan areas. Thirteen percent of firms in Kinshasa indicated that the permission of the spouse of a female owner of the firm was required when registering the business; the figure outside the capital is almost double this. No firms in Kinshasa indicated a need for co-signatory requirement for married female owners or managers, but approximately 10 percent of firms outside the capital did. The starkest difference in terms of restrictions placed on married female owners and managers inside and outside the capital city relates to a basic metric of autonomy in access to finance – in Kinshasa, only 3 percent of female-owned or female-managed firms with an open bank account indicated that the permission of the spouse was needed to open a checking account, whereas, in the rest of the country, this restriction was 15 times more prevalent.

Turning to the rights and restrictions of female employees, a similar pattern emerges whereby, in Kinshasa, spousal permission for hiring married women is far less common in Kinshasa relative to the rest of the country. The same holds true for restrictions on work-related activity. With regards to the rights of women, both within and outside Kinshasa, the majority of female employees have access to maternity leave. On the other hand, women are widely restricted in their ability to work night shifts.

Finally, it is worth noting that there are also considerable differences in discriminatory hiring decisions between firms located inside and outside the capital, as displayed in Figure 1. In the main business city, approximately 17 percent of firms indicated that they did not hire married women due to their family commitments; about 5 percent cited the requirement of written spousal permission as a reason, while the proportions stating that government regulations or that lack of skill was a barrier are very low, at approximately 2 and 3 percent, respectively. However, outside the main business city, 43 percent of firms reported that married women's family commitments were a reason for not hiring them. Restrictions in the forms of spousal permission and government regulations were important for 25 percent and 26 percent of these firms, respectively. Finally, 31 percent of firms located outside the main business city stated that they did not hire any married women due to their lack of skill. The data cannot answer whether the difference between the reported lack of skill as a reason for not hiring married women reflects actual differences in skill levels of married women inside and outside Kinshasa, or if it is a discriminatory perception that is held more prevalently outside the main business city. While other questions in the survey show that business owners and top managers outside Kinshasa are more likely to report that an inadequately educated workforce is a constraint to their operations (40 percent of firms outside Kinshasa report that this is the case compared to ten percent of firms in the main business city), the average number of years of education of a typical female worker is almost the same in the main business city (11.5 years) as it outside (10.8 years).

**Figure 1: Discriminatory behavior by firms in the DRC inside and outside the capital city**



While it is difficult to ascertain the relative roles played by discriminatory laws versus social norms in holding women back in the DRC from reaching their full economic potential, the data summarized in Figure 1 do provide suggestive evidence that social norms may matter. The legislation set out in the labor and family code refers to the entire economy, and not just to Kinshasa – this suggests that something other than laws is driving the differences we see in discriminatory behavior. An alternative explanation may be that there is a lack of enforcement in laws in Kinshasa, but it is quite likely that the level of enforcement is endogenous to prevailing social norms. We posit that social norms are a likely driver, in line with a well-established literature that shows that women with more traditional gender roles or living in a more traditional context are less likely to be employed than women with less traditional gender roles or living in less traditional contexts (Fernández, 2007; Alesina et al., 2013). These findings are also in line with interesting insights about the role of culture or social norms in the DRC provided by the Demographic and Health Survey (DHS) data. During the 2013-2014 DHS, questions concerning the decisions about the use of the salary were asked to married women who had worked during the previous 12 months. In Kinshasa, 63 percent of married women replied that they are the main person who takes decisions about the use of their salary versus an average of 26 percent outside Kinshasa. The same pattern is observed when questions about women’s autonomy in making decisions on other aspects of life are asked, such as decisions on health care for women, purchases for the household, and visits to women’s family. A higher percentage of women

reported to be able to take these decisions, independently or jointly with the husband, in Kinshasa as compared to outside Kinshasa (60 percent vs 44 percent for health decisions; 73 percent vs. 60 percent for decisions about purchases for the household; 71 percent vs. 51 percent for visits to the family) and only 10 percent of women reported not to be able to participate in any of these three decisions in Kinshasa as compared to an average of 30 percent outside Kinshasa (DHS, 2014).

## 5. Estimation strategy and empirical results

While the previous section documented some of the constraints that female employees and entrepreneurs face in their working lives in the DRC, here we ask what impact these have on the economic opportunity of women in the country. A priori, it is difficult to predict how restrictions and discriminatory behavior may affect women. Part of the literature suggests that the types of restrictions measured here affect women's labor market outcomes; for example, Zveglic and Rodgers (2003) show that night-hour restrictions negatively impact female employment, whereas Islam et al. (2019) show that the same type of restrictions are associated with lower representation of women in managerial positions. However, in other contexts, reforming discriminatory laws had unanticipated consequences – research from the United Kingdom (Pike, 1985) found that equal pay legislation was associated with a decline in female employment in the manufacturing sector.

Here we consider the relationship between the restrictions measured in the survey and women's empowerment within firms – proxied by whether or not a firm's top manager is female; we also consider their relationship to women's employment in firms – measured using the log of total female employment in a firm or a firm's propensity to hire married women. We focus on the types of restrictions where the sample size is sufficiently large for meaningful estimations, and ask the following three questions: firstly, are the restrictions placed on the work-related activities that women can perform associated with worse outcomes for women? Secondly, how does allowing women to work night shifts relate to employment and career progression? And, thirdly, what is the relationship between maternity leave entitlement and the hiring of married women?

These questions are examined via the following model:

$$Y_f = \alpha_0 + \beta \cdot X_f + \gamma \cdot Z_f + \delta \cdot D_S + \varphi \cdot D_R + \varepsilon_f \quad (1)$$

where  $Y$  represents the various measures of female outcomes in firm  $f$ . The  $X_f$  term represents our main explanatory variables of interest, i.e., the various rights and restrictions on which we test for an impact.



Apart from discriminatory behavior, there are several other factors that have been linked to women's labor market outcomes. Global integration, proxied by exports and foreign ownership of firms, has been found to affect female employment (Elson, 1996; Seguino, 2000). Regarding firm specific characteristics, age of the firm may matter. Older firms may be resistant to change and thus have a reluctance to hire women workers or top women managers (Blum et. al., 1994). Some business sectors are friendlier towards women while others are less so (Islam and Amin, 2014; Juhn et. al., 2014). In some firms, informal networks tend to be dominated by males, and thus the presence of formal training may be crucial for women to move up the career ladder (Rowley, 2013). Crime has also been found to be correlated with women's employment in management positions (Islam, 2013). In our empirical estimations, we attempt to account for these factors, with the constraints posed by data limitations. These variables are comprised in vector  $Z_f$  in equation (1). Additionally, the term  $D_S$  is a control for the firm's sector of activity, measured at the ISIC two-digit level, and  $D_R$  is a control for within-country location. Finally,  $\varepsilon_f$  represents the error term.

We begin by examining the impact of work-related activity restrictions on the probability that a firm has a top female manager. The results, displayed in column (1) of Table 4, show that firms that impose restrictions on the activities that female employees can perform are approximately 24 percent less likely to have a female top manager. This provides suggestive evidence that placing restrictions on the activities that women can perform may harm their career progression within a firm. This relationship holds after controlling for a range of firm characteristics as well as the sector and region in which the firm operates. The results presented in Table 4 also show a second dimension along which these types of restrictions can restrict women's ability to reach their economic potential – column (2) shows that firms that place restrictions on the work-related activities of women employ, on average, 14 percent fewer women relative to otherwise similar firms that do not have any such restrictions in place. On an economy-wide scale, these restrictions are likely to be a major hindrance to women in the DRC because, as the results presented in Table 3 show, almost one-third of firms in the DRC place restrictions on the activities that female employees can perform.

Columns (3) to (6) of Table 4 present the results when the data are divided by firms' broad sector of activity. Comparing the results in columns (3) and (5), the negative impact of work restrictions on the probability of having a female manager is slightly stronger in the services sector, compared to manufacturing and construction firms; however, the difference by sector is not statistically significant. On the other hand, when it comes to hiring women, it turns out that the impact of work-related activity restrictions is notably stronger in manufacturing and construction firms relative to firms operating in the services sector. It is worth noting that in 2012, the labor code did discriminate stating that work undertaken by women should not exceed their strength.

**Table 4: The relationship between work-activity restrictions and women's economic opportunity**

	(1)	(2)	(3)	(4)	(5)	(6)
Dependent Variable	Female Top Manager	Log of Total Female Employment	Female Top Manager	Log of Total Female Employment	Female Top Manager	Log of Total Female Employment
	All firms		Manufacturing & construction		Services (excl. construction)	
Job restrictions in place for female employees (Y/N)	-0.240**	-0.135**	-0.192*	-0.345***	-0.233**	-0.121*
	(0.097)	(0.068)	(0.099)	(0.131)	(0.106)	(0.072)
Log of age of firm	-0.148*	-0.107*	-0.064	-0.185***	-0.169*	-0.094
	(0.080)	(0.061)	(0.059)	(0.072)	(0.092)	(0.065)
Log of size	-0.063	0.495***	-0.069**	0.442***	-0.068	0.512***
	(0.054)	(0.046)	(0.031)	(0.100)	(0.072)	(0.051)
Part of a larger firm (Y/N)	0.151	0.065	0.352***	0.084	0.152	0.074
	(0.175)	(0.068)	(0.122)	(0.274)	(0.190)	(0.067)
Offers formal training (Y/N)	-0.122	-0.053	0.070	0.016	-0.181	-0.091
	(0.105)	(0.092)	(0.108)	(0.127)	(0.127)	(0.104)
Top manager experience in sector (years)	0.013**	0.016***	-0.003	0.003	0.017**	0.019***
	(0.007)	(0.005)	(0.005)	(0.006)	(0.008)	(0.006)
Exports 10% or more of sales (Y/N)	-0.040	-0.253*	0.089	0.102	-0.084	-0.271*
	(0.141)	(0.141)	(0.162)	(0.176)	(0.165)	(0.143)
Foreign ownership (Y/N)	-0.154	-0.068	-0.047	0.081	-0.222*	-0.089
	(0.101)	(0.084)	(0.082)	(0.143)	(0.126)	(0.097)
Has checking or savings account (Y/N)	-0.195*	-0.003	-0.185*	-0.117	-0.201*	0.003
	(0.108)	(0.066)	(0.095)	(0.086)	(0.121)	(0.071)
Has a line of credit or loan (Y/N)	0.149	-0.218**	-0.051	-0.151	0.225	-0.215**
	(0.135)	(0.096)	(0.101)	(0.139)	(0.141)	(0.107)
Experienced losses due to crime (Y/N)	-0.356***	-0.076	0.048	0.091	-0.427***	-0.096
	(0.093)	(0.089)	(0.110)	(0.127)	(0.104)	(0.097)
Constant	0.855***	0.284*	0.721***	0.917***	0.441**	0.127
	(0.243)	(0.173)	(0.155)	(0.226)	(0.214)	(0.139)
Number of observations	452	443	204	200	248	243
R2	0.287	0.492	0.451	0.572	0.294	0.470

Notes: All models included sector (ISIC 2 digit) fixed effects as well as location (within country) fixed effects. Standard errors are presented in parentheses; \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. Sampling weights are used throughout.

Turning next to the relationship between night-work restrictions and women's economic opportunity in the DRC, column (1) of Table 5 finds no evidence of a relationship between women's freedom to work night shifts and the probability that a firm has a female top manager – this differs from the results of Islam et al.

(2019) who did find evidence of such an effect when studying the aggregate impact on a wider scale.<sup>16</sup> Considering the relationship between permission to work nights and female employment within a firm, column (2) of Table 5 shows that, on average across all firms, those that allow female workers to work nights shifts hire significantly more women. Once again, these results hold after controlling for a rich set of firm characteristics. The results presented in columns (3) and (4) of Table 5 show that, when the data are divided between manufacturing and construction versus services firms, the relationship between women's freedom to work night shifts and the level of female employment is almost three times as strong in manufacturing and construction firms relative to firms in the services sector. This suggests that this freedom may have important implications for occupational segregation and the pay gap between men and women in the DRC.<sup>17</sup> The law in the DRC at this point in time did restrict women from night work for industrial undertakings.

The final relationship examined is that between women's entitlement to maternity leave and the propensity of firms in the DRC to hire married women. The results, displayed in Table 6, show that, when women are entitled to maternity leave, it is significantly more likely that a firm will hire a married woman. This relationship holds after including a range a firm level controls, including a control for the total number of women currently employed by the firm (column (2)). From the perspective of a firm, this result makes economic sense – research has shown that women are more likely to return to work after having children if they can avail of maternity leave (Ruhm, 1998; Berger and Waldfogel, 2004; Baker and Milligan, 2008). Thus, it seems plausible that firms are more likely to invest in hiring and training an employee if she is more likely to return to work should she have children. The law does mandate maternity leave for women.

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<sup>16</sup> Islam et al. (2019) use a cross section of 94 economies but their data do not include micro firms, nor are they able to analyze restrictions at the level of the individual firm.

<sup>17</sup> Differences by gender in terms of occupation and industry are, according to Blau and Kahn (2017), an important driver of the gender pay gap.

**Table 5: The relationship between night work and women's economic opportunity**

Dependent Variable	(1)	(2)	(3)	(4)
	Female Top Manager	Log of Total Female Employment		
	All firms	All firms	Manufacturing & Construction	Services (excl. Construction)
Female employees allowed to work night shifts (Y/N)	0.216	0.490**	1.343***	0.461**
	(0.192)	(0.192)	(0.507)	(0.204)
Log of age of firm	-0.146	-0.155	-0.227	-0.152
	(0.092)	(0.163)	(0.145)	(0.192)
Log of size	-0.068*	0.467***	0.512***	0.438***
	(0.040)	(0.099)	(0.143)	(0.127)
Part of a larger firm (Y/N)	-0.121	0.344	-0.649	0.411**
	(0.143)	(0.164)	(0.666)	(0.185)
Offers formal training (Y/N)	-0.140	0.177	0.086	0.215
	(0.089)	(0.147)	(0.325)	(0.178)
Top manager experience in sector (years)	0.009	0.012	0.018*	0.013
	(0.009)	(0.014)	(0.011)	(0.017)
Exports 10% or more of sales (Y/N)	-0.089	-0.445*	-0.242	-0.607*
	(0.108)	(0.266)	(0.437)	(0.312)
Foreign ownership (Y/N)	0.043	0.241	0.571**	0.227
	(0.105)	(0.285)	(0.228)	(0.442)
Has checking or savings account (Y/N)	0.271**	0.185	-0.063	0.181
	(0.121)	(0.179)	(0.237)	(0.205)
Has a line of credit or loan (Y/N)	0.067	-0.063	-0.018	-0.128
	(0.128)	(0.274)	(0.446)	(0.332)
Experienced losses due to crime (Y/N)	-0.023	-0.079	-0.018	-0.081
	(0.093)	(0.288)	(0.245)	(0.354)
Constant	0.388**	0.059	-0.520*	-0.675
	(0.180)	(0.411)	(0.308)	(0.493)
Number of observations	214	213	79	134
R2	0.300	0.480	0.729	0.429

Notes: All models included sector (ISIC 2 digit) fixed effects as well as location (within country) fixed effects. Standard errors are presented in parentheses; \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. Sampling weights are used throughout.

**Table 6: The relationship between maternity leave entitlement and the hiring of married women**

<b>Y = Married Woman Hired Over Last Two Years (Y/N)</b>	<b>(1)</b>	<b>(2)</b>
Female permanent employees entitled maternity leave (Y/N)	0.435**	0.372**
	(0.178)	(0.185)
Log of total female employment		0.231*
		(0.134)
Female top manager (Y/N)	0.045	-0.012
	(0.143)	(0.138)
Log of age of firm	0.042	0.066
	(0.124)	(0.122)
Log of size	0.076	-0.061
	(0.064)	(0.091)
Part of a larger firm (Y/N)	-0.396***	-0.352**
	(0.142)	(0.147)
Offers formal training (Y/N)	0.055	0.064
	(0.161)	(0.160)
Top manager experience in sector (years)	-0.001	-0.005
	(0.009)	(0.009)
Exports 10% or more of sales (Y/N)	-0.330**	-0.310**
	(0.154)	(0.151)
Foreign ownership (Y/N)	0.012	0.046
	(0.319)	(0.303)
Has checking or savings account (Y/N)	0.138	0.176
	(0.189)	(0.186)
Has a line of credit or loan (Y/N)	-0.087	-0.129
	(0.252)	(0.180)
Experienced losses due to crime (Y/N)	0.252**	0.210*
	(0.118)	(0.123)
Constant	-0.130	0.082
	(0.593)	(0.572)
Number of observations	154	153
R2	0.433	0.459

Notes: Only firms that engaged in hiring activity in the past fiscal year are included in the sample. Both models include sector (ISIC 2 digit) fixed effects as well as location (within country) fixed effects. Standard errors are presented in parentheses; \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. Sampling weights are used throughout.

The results presented above provided strong suggestive evidence that discriminatory behavior by firms in the DRC prevent women from achieving their full economic potential. This may be an important part of the reason behind low participation of women in formal employment in the DRC. The results suggest that the impact of task-specific restrictions and restrictions on night-time work are particularly strong for firms operating in the manufacturing and construction sectors, which may help to explain the low participation of women in these activities -- in the DRC at the time of the survey less than 4 percent of female employment

was in industry. While it is not possible to say whether the discriminatory behavior of firms is driven by the laws that were in place in the DRC at the time of the survey, or if the behavior is more strongly driven by social norms, the descriptive results outlined in section 4, showing that there are large differences in the behavior of firms inside and outside the capital city, indicate that discrimination is driven by more than just laws. It is likely, and not surprising, that what holds women back from economic participation in the formal sector in the DRC is a combination of unequal laws, heterogeneous enforcement of laws, and discriminatory attitudes.

## **6. Discussion and conclusions**

Women in the DRC face inequalities in terms of their economic opportunities and their outcomes. In this paper we present novel, firm-level data on the restrictions placed on female employees and entrepreneurs in the DRC as result of firms' discriminatory behavior and the discriminatory environment in the country. The data show that while laws on the books in the DRC at the time of the survey were not universally enforced, discriminatory behavior was widespread. Had all firms abided by the strict restrictions limiting women's economic opportunity, female employees and entrepreneurs would likely have been even less empowered. For example, the laws in place at the time of the survey mandated that a woman needed to receive authorization from her husband to start a job. Data show that 31 percent of firms reported that spousal permission was required to hire a married woman; a considerable figure given that the same restrictions were not at all existing to hire married men.

Furthermore, when the data are disaggregated between the capital city (Kinshasa) and the rest of the country, some stark differences emerge. For example, considering again the law mandating that a woman needed to receive authorization from her husband to start a job, we find that only 5 percent of firms in Kinshasa required spousal permission, compared to 45 percent in the rest of the country. A similar pattern emerges across almost all topics covered, showing that the discriminatory environment that women face is much tougher outside the capital city. This variation in firms' behaviors, despite the fact that the family and labor codes that dictate such matters are set at the national level, suggests that social norms may have a role to play in driving discriminatory behavior, or to some extent reflect different levels of enforcement inside and outside the capital city. Unfortunately, with the data we have available, it is not possible to say to what extent the restrictions that women face are determined by enforcement of the law, social norms, or economic factors affecting the demand for labor.

The results of our empirical analysis show that the types of discriminatory practices captured by the survey data are related to women's labor market outcomes. Firms that have restrictions in place on the types of tasks that female employees can carry out are less likely to have a female top manager and employ fewer women. The negative relationship between job restrictions and female employment is particularly strong in the manufacturing sector. While our results do not provide any evidence that allowing women to work night shifts is related to women in managerial positions, we do find that allowing women to work nights is associated with higher levels of female employment. Once again, this relationship is particularly strong for firms operating in the manufacturing and construction sectors. The final relationship that we uncover in the data is that firms offering maternity leave entitlements are more likely to have hired a married woman. In this case, it is particularly difficult to determine in which direction the causality may run – it may be that firms that report that women are entitled to take maternity leave are those firms that already have married women employed.

Overall, the results show that discriminatory behavior by firms and the presence of a discriminatory environment may prevent women from participating in the formal economy and advancing their careers. This has some important implications for economic development. Findings from other contexts have shown that female labor supply is related to economic growth. For example, in the United States, research has shown that without the increase in female labor force participation that occurred between 1890 and 1980, income per capita could have been as much as 14 percent below its actual level (Goldin, 1986). Furthermore, Klasen and Lamanna (2009) find that gender gaps in education and employment considerably reduce economic growth, and Cavalcanti and Tavares (2016) suggest that gender discrimination impacts output through two channels – it decreases women's participation in economic activity, which has a direct impact on output, and it is associated with higher levels of fertility and lower levels of investment in human capital, which have long-run implications for economic growth.

There are several policy implications that can be drawn from our findings. Firstly, we provide suggestive evidence that removing legal restrictions on the work activities that women can perform and allowing women to work night shifts is expected to boost women's employment and improve their prospects for reaching managerial positions. Furthermore, the potential impact of removing restrictions may be especially strong in the manufacturing and construction sectors, which is particularly important in the DRC as so few women are employed in these sectors. Segregation of the sexes in terms of occupation has been shown to be an important factor in explaining the gender wage gap (Blau and Kahn, 2017). Laws, unlike social norms, can be changed in the short term, thus, our findings suggest that efforts should be made to remove any outstanding legal restrictions preventing women from reaching their full economic potential. Our second policy implication relates to social norms. The data discussed in section 4 show that outside Kinshasa

women face much higher levels of discriminatory behavior. Because the legislation covering the restrictions we consider are set at a national level, we posit that this higher level of discrimination outside the capital is, at least in part, due to more deeply entrenched social norms that serve to disempower women. Differential enforcement of laws may partly explain this, but enforcement is also likely to be endogenous to social norms. This suggests that, in order to change the discriminatory behavior of firms outside Kinshasa, changes in laws alone will not suffice and that policy makers may also need to engage in outreach campaigns to change social norms that hold women back. A recent study by Bursztyn et al (2018) found that married men in Saudi Arabia privately support female labor force participation; however, they underestimate the level of support by other men. They show how social norms constraints might be lifted by the simple provision of information. Such outreach programs might be particularly important in more traditional environments where the social control is stronger as it could be in areas outside the capital city.

An interesting question to explore in future research is to what extent the legislative changes that have been enacted in the DRC since the time of the survey have resulted in changes in discriminatory behavior by firms. At the time of the survey, the World Bank's WBL index assigned a score of 42.5 to the DRC – suggesting that women in the DRC had less than half the rights of men in the areas covered by the index. By 2018, the score had increased to 70 (World Bank, 2019). It would also be interesting to consider whether the relative change in behavior has differed between firms inside and outside the capital city. We leave these questions to future work.



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## Annex

**Table A1: Questions on gender included in the 2013 DRC Enterprise Survey based on WBL**

Question	Firms where question was asked
<b>Women's autonomy</b>	
When this establishment was formally registered was permission from the spouse of any married female owner requested for the business to be registered by the Ministère de l'économie nationale?	Firms with married female owner
During last fiscal year, when this establishment signed any type of contract, was a co-signature from the spouse of any married female owners or top manager required when these contracts were signed?	Firms with married female owner or top manager
Was permission from the spouse of any married female owner or top manager required to be able to open the checking/current or saving account?	Firms where a married female owner or top manager opened a checking or savings account
Was permission required from the spouse of any married female owner or top manager to be able to request or sign the most recent line of credit or loan?	Firms where a married female owner or top manager requested a loan or a line of credit
Was permission required for any married female owners or top manager to be able to use any property as collateral?	Firms with a married female owner or top manager whose most recent loan or line of credit required collateral
Was permission from the spouse required for this establishment to be able to hire any of these married women?	Firms that hired a married woman in the last two years
<b>Labor Restrictions</b>	
Is there any work-related activity in this establishment that female employees are forbidden to perform?	Firms with female employees
Are female employees allowed to work on these night shifts?	Firms with night shifts
Are female permanent full-time employees working in this establishment entitled to take maternity leave?	Firms with female employees
<b>Entitlement to maternity leave</b>	
Over the last two years, how many female full-time permanent employees were eligible for maternity leave?	Firms with female employees who were entitled to maternity leave
Out of those eligible how many female full-time permanent employees made use of the maternity leave?	Firms with female employees who were eligible for maternity leave
<b>Hiring and firing decisions</b>	
Was any of the following a reason for not hiring married women? <ul style="list-style-type: none"> <li>- Married women's family commitments</li> <li>- Need of obtaining written permission by the spouse</li> <li>- Governments regulations such as working hours or maternity leave</li> <li>- Lack of skills</li> </ul>	Firms that hired over the last 2 years, but none of the hires were married women
Was any of the following a reason for firing any married woman over the last two years? <ul style="list-style-type: none"> <li>- Reduction in the amount of business</li> <li>- Spousal request to fire the employee</li> <li>- Lack of skills of the employee</li> </ul>	Firms that fired a married woman over the last 2 years