

# Flexibility and equality: unraveling the nexus of labor market dynamics and gender equality in developing countries.

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DOI: [10.29180/978-615-6886-04-0\\_11](https://doi.org/10.29180/978-615-6886-04-0_11)

## ABSTRACT

Recent decades have witnessed notable advancements in gender equality. However, improvement in labor market outcomes remains limited especially when for women. On the other hand, regulations related to the labor market have shifted toward greater flexibility. This study investigates the relationship between labor market flexibility and gender equality, aiming to uncover the impact of flexible employment strategies on social inequality. Utilizing cross-country regression models, we analyze the correlation between labor market flexibility indicators and wage equality for a similar work index across 99 developing countries in 2021. The findings indicate that three of the examined indicators exhibit a robust positive correlation with the dependent variable. This suggests that increased flexibility in these areas would potentially reduce gender disparities. Focusing on a wide sample of developing countries, the research implications provide valuable insights for policymakers seeking to address the gender gap in the labor market and promote equal opportunities.

**Keywords:** Labor market Flexibility, gender equality, wage equality, developing countries, work-life balance.

## 1. Introduction

In the present era, women are showing remarkable advancements across different sectors, making notable strides in education, professional attainment, and social recognition. However, despite these achievements, women still experience huge gaps in the labor market posing serious threats to gender equality in the workplace (H. & L., 2007). Wage inequalities remain one of the major challenges making men earn more than women. Per the ILO Global Wage

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Report 2018/19, women earn on average about 20% less than men do. Moreover, female workers continue to face fewer career options, and encounter mainly routine tasks and low-skilled work (Based on the ILO, at least 72% of occupations in information technology, science, and engineering are occupied by men in 2020). Additionally, there is a huge lack of representation of women in leadership and managerial positions. In fact, according to the ILO, in 2023 women hold only 36% of senior and middle management roles. In addition, one of the major indicators of gender disparities in the labor market is the high unemployment rate among the female labor force. By the latest estimates of the ILO, the jobs gap shows that globally “women are more likely than men to want a job and not have one”, with rates of 13.7 and 9.3 % respectively.

Old theories attributed labor market gaps to discrimination (Anderson, Fryer, & Holt, 2006), (Riach & Rich, 2010), (Blau & Kahn, 2017), (Neumark, 2018). Nowadays, even if we can attribute these disparities in part to social prejudices, more recent researches argue that the structure and the framework of the labor market make equal opportunities in the workplace difficult to attend between the two genders. One of the famous researchers, Claudia Golden has highlighted the importance of flexible work to address the gender gap. The labor market is structured as if the workers are dedicated to their jobs only, and do not have further responsibilities. With traditional long working hours, unpaid care work, and short or nonexistent parental leaves, parents often strive to maintain the work-family balance. It is true that the number of female workers has increased significantly compared to the last decade (L. & L., 2007), however, working wives still find themselves managing their traditional household responsibilities alongside their jobs, often dealing with a greater share of childcare duties (Hochschild & Machung, 2003) (ILO, 2017).

In this regard, and especially after the COVID-19 pandemic, labor market regulations have been shifted toward greater flexibility. Over the past year, the majority of workers have expressed a preference for shorter working hours and remote opportunities (Finn & Donovan, 2013). The increase in the demand for flexibility has imposed huge changes in the labor market regulations including more flexible hiring practices, adjustment in the minimum wage negotiations, reduced working hours, and a shift away from traditional office-based work arrangements. However, the question remains the same: does the labor market flexibility facilitate the dual-career responsibilities for parents and promote the equitable sharing of household and childcare duties between partners?

Although some studies have investigated this issue in developed countries, analyzing the effect of labor market flexibility on gender equality in developing countries remains largely

unexplored. Addressing this gap, this paper contributes to the existing literature by focusing on the ‘flexibility-equality’ relationship across a broader sample of countries.

The originality of this research can be assessed in different areas. Firstly, understanding how flexibility in the labor market affects gender equality in developing nations is crucial for policymakers aiming to foster inclusive and sustainable growth. Additionally, given the diverse cultural and socio-economic contexts of developing countries, exploring this relationship can provide valuable insights into the complex dynamics at play and inform tailored interventions to promote gender equality. Ultimately, by shedding light on this understudied area, the research has the potential to contribute to more informed decision-making and initiatives aimed at advancing gender equality globally. Finally yet importantly, unlike the majority of the previous research that used qualitative methods including interviews and observations, our paper utilizes a quantitative approach.

This paper is divided into sections; each contributes to a complete investigation of the effect of labor market flexibility on gender equality. Initially, the paper introduces the research, highlighting its significance and outlining the research questions. Following this, a comprehensive literature review delves into the characteristics of the gender equality gap in the workplace and previous research on similar topics. The methodology section details the research design, data sources, and analytical techniques utilized in the study. Subsequently, the paper focuses on empirical findings to explore how labor market flexibility impacts gender disparities across developing countries. These findings are thoroughly analyzed in the results and discussion section. Finally, the paper concludes by summarizing key insights, offering recommendations, and suggesting avenues for further research.

## **2. Literature review**

Numerous studies on the impact of labor market flexibility on gender equality have been conducted. One of the most interesting theories from Claudia Goldin, a Nobel Prize laureate in Economic Sciences, suggests that the highest-paying jobs (‘the greedy professions’) require long working hours, and full commitment and may necessitate sacrificing personal goals such as family duties. Given that women predominantly assume household duties and childcare, mothers may find it challenging to pursue careers in these inflexible job categories limiting their access to high-earning jobs. Such a situation can further expand the gender gap. Claudia has supported the so-called ‘pro-family policies’, just as paid family leaves, to create more equitable opportunities for women in the workplace. (GOLDIN, 2021).

(Chung & Van Der Lippe, 2018) have demonstrated that flexible work arrangements enable mothers to sustain their employment hours following childbirth. (Fuller & Hirsh, 2018) (Singley & Hynes, 2005) also got similar results, their findings suggest that flexible work arrangements frequently mitigate the difficulties encountered by mothers, especially those holding university degrees, and remote work from home was found to contribute to reducing wage disparities. Moreover, ‘family-friendly’ regulations that lead to more flexible work are important for employees to manage their job and family responsibilities at the same time (Belwal, Belwal, & Al-Hashemi, 2019). This can potentially lead to gender equality in the workplace. (Al-Asfour, Tlaiss, Khan. S. A., & Rajasekar, 2017) also agreed that the organizational framework can be a barrier to gender equality. Intensive business trips, high workloads, along with challenges related to pregnancy and short maternity leaves may not align with women’s obligations leading to more enhanced gender disparities. Other studies have focused on the impact of labor work flexibility on parent-child interactions. Concluded that flexible working hours are correlated with increased involvement of fathers in household responsibilities and childcare. This can potentially facilitate equitable distribution of daily household tasks between parents and alleviate the burden on women. Other evidence from (Scott, 2023) shows that increased remote work opportunities have enabled numerous mothers to remain in the workforce.

However, it is important to acknowledge the other side of flexibility. While flexibility can positively impact some, it can adversely affect some vulnerable segments of society such as women, immigrants, youth, and low-skilled workers exacerbating their job insecurities and widening wage disparities (Kahn, 2011). Based on Deloitte’s 2023 Women at Work Study, 97% of women reported that requesting a flexible work arrangement would negatively affect their prospects for promotion. Another finding from the same survey suggests that 37% of women who work in a hybrid situation say that they have felt excluded from meetings, important decisions, or informal interactions and 30% say they do not have adequate access to leaders. Moreover, according to (Lott & Chung, 2016) findings, men are expected to utilize work flexibility to invest more in their jobs leading to increased wages. However, women are supposed to use work flexibility to compensate for their house responsibilities.

In summary, although labor market flexibility offers potential benefits for promoting gender equality and enhancing work-life balance, it is important to pay attention to its potential negative consequences, especially for marginalized groups.

### **3. Research design**

In this section, we are going to present the methodology used in this research along with the data and sources.

#### *3.1. Empirical methodology*

This study aims to investigate the impact of labor market flexibility on gender equality, with a focus on wage equality for similar work, across 99 developing countries in 2021.

Based on the following hypothesis, and using SPSS software, we will employ a regression analysis to examine this relationship, controlling for various factors that may influence wage equality.

H0 (Null Hypothesis): There is a positive correlation between labor market flexibility and wage equality for similar work.

H1 (Alternative Hypothesis): There is no correlation between labor market flexibility and wage equality for similar work.

The study anticipates finding evidence supporting the null hypothesis, suggesting a positive correlation between labor market flexibility and wage equality. Additionally, the analysis will provide insights into the influence of other factors on wage equality.

$$W_i = \alpha_i + \beta Lab_i + \gamma X_i + \varepsilon_i$$

Where:

$W_i$ : represents the dependent variable, the wage equality for similar work in the country I.

$Lab_i$ : represents the independent variable labor market flexibility index for country i.

$X_i$ : represents the control variables each for country i.

$\beta, \gamma$  : represent the coefficients of the independent and the control variables.

$\varepsilon_i$ : represents the error term.

### 3.2. Empirical data

In this section, we are going to present a detailed explanation of the data used in our research, the different variables, and their sources.

This paper compiles a dataset of 99 developing countries for which data on the labor flexibility index could be obtained. Labor market flexibility data are sourced from the Fraser Institute's Economic Freedom of the World (EFW) database, incorporating indicators across seven areas: (i) minimum wage (MW); (ii) hiring and firing regulations (HF); (iii) centralized collective wage bargaining (CCB); (iv) hours regulations (HR); (v) mandated cost of work dismissal (MCD); (vi) conscription (CONS); (vii) foreign labor (FL). All indicators are standardized on a 0–10 scale, with the higher value of the indicator representing a more flexible labor market. Each policy area will be explained in detail in Annex I.

We selected the wage equality for similar work index from the World Economic Forum's Executive Opinion Survey (EOS) as our dependent variable. This index is rated on a scale from 0 to 1, where a score of 1 indicates greater parity. Simply put, as the index approaches 1, the gender wage gap for similar work decreases, signifying greater equality in wages between genders.

To enhance the precision and reliability of our analysis, we included both macroeconomic and demographic variables as controls: Population growth (PG), Labor force participation rate,

female-to-male ratios (F/M), and the Economic Participation and Opportunity Index (EPO). The full list of variables, along with definitions and sources are provided in Annex II.

#### **4. Results and discussion:**

We employed a backward method utilizing the statistical software SPSS. This approach involved running various models with different combinations of variables. By systematically removing variables from each model iteration, we aimed to identify the most optimal model that best explained the relationships within the data. This iterative process allowed for a comprehensive exploration of potential variables while focusing on refining the model to enhance its predictive accuracy and explanatory power.

**Table 1** shows the summary of our model. The Durbin-Watson value of 2.069 suggests a lack of significant autocorrelation among residuals in the regression analysis. This indicates that the assumption of independence between consecutive residuals is reasonably met, supporting the reliability of the regression results.

However, the R-squared value of 0.361 signifies that only approximately 36.1% of the variability observed in the dependent variable, the wage equality for similar work could be explained by the independent variables included in the model. This insight underscores the need for further exploration of additional factors influencing gender-related labor market dynamics.

**Table 2** shows that the significance level of 0.001 demonstrates that the regression model attains statistical significance at the 0.05 level. This provides compelling evidence to reject the null hypothesis, affirming that at least one of the independent variables within the model exerts a non-zero impact on the dependent variable.

**Table 3** exhibits that among the seven sub-components of the labor market flexibility index, four have shown a statically significant correlation to the dependent variable.

Starting with the Hiring and firing regulations (HF), the coefficient of 0,491 shows a positive correlation with wage equality for similar work. This suggests that more flexible regulations

related to the hiring and firing process could potentially lead to greater wage equality in the workplace. For instance, if recruiters would put aside the perception of leaders as more aligned with masculine traits (M., H., A., & T., 2011) and the mismatch between leadership stereotypes and gender roles (Rosette A. S., 2010) during the recruitment process, women would likely encounter equal opportunities, enjoy more representation in leadership roles, and enhance prospects for career advancement.

Moreover, acknowledging the tendency for women to experience more career interruptions, even within high-prestige occupations (C., 1998), recruiters often favor candidates who demonstrate a commitment to uninterrupted career trajectories, a characteristic more commonly associated with men. Encouraging flexible work arrangements and destigmatizing career breaks could play a pivotal role in advancing gender equality. By normalizing career interruptions, organizations can create a more inclusive environment that supports both genders in achieving professional success while addressing personal and household responsibilities.

Moving to the second sub-component of the labor market flexibility index, the Centralized Collective Bargaining (CCB), also exhibits a positive correlation with wage equality for a similar work. This aligns with the findings discussed in numerous papers. (ILO., 2004), (Antonczyk, Fitzenberger, & Sommerfeld, 2010), (ETUC, 2015), (Pillinger, 2014).

(CCB) proves to be an important means of promoting gender equality. Fostering dialogue among stakeholders including employers and employees regarding terms and conditions of employment like wages and benefits, leaves, and working environment would point out the gaps between the two genders and prioritize the needs of the workers. Less centralized bargaining power could eliminate disparities in the workplace and ensure that opportunities are divided equally between the two genders.

Similarly, the positive coefficient for hour regulations (HR) implies more flexible working hours tend to enhance wage equality for similar work leading to greater equality in the workplace. Shorter working hours can incentivize fathers to become more involved in household responsibilities and actively participate in childcare duties (Kim, 2018), (Tanaka & Waldfogel, 2007), which can decrease the burden on women enabling them to fully commit to their professional careers. Time allocation flexibility plays a pivotal role in achieving work-life balance allowing individuals to effectively manage their personal and professional obligations. (Clark, 2000), (Claudia, 2015).

However, the Mandate cost of dismissal index (MD) exhibits a negative correlation with the dependent variable. A higher degree of flexibility in the MD index corresponds to reduced



firing costs, effectively representing the trade-off between job security for workers and the ease with which employers can terminate employment contracts. While lower firing costs may enhance employers' ability to adjust their workforce according to changing business needs, they also entail diminished job security for workers. This dynamic underscores the importance of balancing flexibility in labor regulations with safeguards to protect workers' rights and economic stability. Striking this balance is essential for fostering a labor market environment that promotes both employment flexibility and workers' well-being.

**Table 1: Model summary<sup>b</sup>**

Model	R	R square	Adjusted R square	Str. The error of the estimate	R Square change	F change	df1	df2	Sig. F change	Durbin Watson
1	,601 <sup>a</sup>	,361	,306	,0744	,361	6,538	7	81	<,001	2,069

a. Predictors: (Constant), HF, HR, CCB, MD, EPO, PG.

b. Dependent Variable: W

Source: Own work

**Table 2. ANOVA<sup>a</sup>**

Model		Sum of squares	df	Mean square	F	Sig.
1	Regression	,253	7	,036	6,538	<,001 <sup>b</sup>
	Residual	,448	81	,006		
	Total	,702	88			

a. Dependent Variable: W.

b. Predictors: (Constant), HF, HR, CCB, MD, EPO, PG.

Source: Own work

**Table 3. Coefficients<sup>a</sup>**

Model	Unstandardized coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std.Error	Beta			Tolerance	VIF
1	(Constant)	,198	,070		2,848	,006	
	HF	,024	,009	,491	2,662	,009	,232
	CCB	,018	,008	,223	2,265	,026	,817
	HR	,009	,004	,207	2,251	,027	,929
	MD	-,011	,006	-,364	-2,001	,049	,239

a. Dependent Variable : Wage equality for a similar work.

Source: Own work

## 5. Conclusion

To summarize, this paper delved into the relationship between flexibility and gender equality in the labor market. Utilizing the labor market flexibility index, and the wage equality for similar work, we used regression models across 99 developing countries in 2021. The findings unveiled that among the seven sub-components of the labor market flexibility index; four have shown significant correlation with the dependent variable. (HF), (CCB) and (HR) are positively correlated with the wage equality for a similar work indicator, suggesting that an increased flexibility in these areas would promote wage equality and potentially reduce the gender gap in the workplace. Promoting equal opportunities for both genders, particularly women necessitates the eradication of stigmas entrenched in the recruitment process, such as gender biases that dictate certain roles as inherently more suitable for men or women. Normalizing career breaks is another crucial step towards gender equality, as it acknowledges the diverse responsibilities individuals may have outside of work and mitigates the penalties associated with taking time off. Moreover, empowering individuals with bargaining power is instrumental in addressing gender disparities in the workplace. Less centralized collective bargaining fosters collaboration and negotiation between employers and employees, amplifying the voices of vulnerable workers and fostering equality.

Furthermore, flexibility in work arrangements plays a pivotal role in achieving a healthy work-life balance. Practices such as telecommuting, part-time work, reduced hours, parental leave policies, and job sharing enable individuals, particularly fathers, to be more involved in household and childcare responsibilities. By sharing these responsibilities more equitably, women are relieved of the disproportionate burden of caregiving, allowing them to remain

engaged in their careers without sacrificing family obligations. Moreover, such arrangements have been shown to enrich parent-child interactions, leading to greater family prosperity and reduced conflict.

Conversely, the Mandate cost of dismissal index (MD) exhibited a negative correlation with the wage equality indicator for similar work, implying that decreased firing costs may not contribute to improved wage equality and could potentially widen the gender gap. This phenomenon is attributed to the inherent threat to job security posed by reduced firing costs. When termination procedures become less burdensome for employers, workers may face increased uncertainty about the stability of their employment, leading to heightened insecurity in the workforce. This insecurity can disproportionately affect marginalized groups, exacerbating wage disparities and impeding progress toward gender equality in the labor market. Therefore, while efforts to enhance labor market flexibility are important, policymakers must carefully balance the need for flexibility with safeguards to protect workers' rights and ensure equitable outcomes for all genders.

One limitation of the current research lies in the weak explanatory power of our model. While some flexibility indicators exhibit a strong correlation with the dependent variables, our analysis suggests additional factors may strengthen the overall fitness of the model. Country contexts matter in our investigation (Kurowská, 2018). Since we analyzed 99 developing countries, it is important to acknowledge that social, economic, and cultural characteristics may differ from one country to another as well as among different organizations within the same country. Moreover, perceptions of flexibility may vary between a more traditional society and a less traditional one. Therefore, future research endeavors could delve deeper into this segmentation of countries, exploring potential variations in outcomes across different contexts. By examining how cultural norms and organizational dynamics intersect with labor market flexibility, researchers can provide valuable insights into the nuanced factors shaping wage equality and gender disparities worldwide.

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## Annex I

5. Data	Source	Description
(i) Minimum wages (area5bi)	World Bank doing business	This sub-component uses the following components: (1) whether fixed-term contracts are prohibited for permanent tasks; (2) the maximum cumulative duration of fixed-term contracts; and (3) the ratio of the minimum wage for a trainee or first-time employee to the average value added per worker.
(ii) Hiring and firing Regulations (area5bii)	World Economic Forum's Global Competitiveness Report.	This sub-component is based on the Global Competitiveness Report question: "The hiring and firing of workers is impeded by regulations (= 1) or flexibly determined by employers (= 7)". The question's wording has varied over the year.
(iii) Centralized collective bargaining (area5biii)	World Economic Forum's Global Competitiveness Report.	This sub-component is based on the Global Competitiveness Report question: "Wages in your country are set by a centralized bargaining process (= 1) or up to each individual company (= 7)". The wording of the question has varied over the years. In earlier years, the actual union density was used to determine ratings for select countries.
(iv) Hours regulation (area5biv)	World Bank's Doing Business data.	This sub-component is based on the Employing Labor section in the World Bank's Doing Business; it uses the following five components: (1) whether there are restrictions on night work; (2) whether there are restrictions on holiday work; (3) whether the length of the work week can be 5.5 days or longer; (4) whether there are restrictions on overtime work; and (5) whether the average paid annual leave is 21 working days or more.
(v) Mandated cost of worker dismissal (area5bv)	World Bank's Doing Business data.	This sub-component is based on the World Bank's Doing Business data on the cost of the advance notice requirements, severance payments, and penalties due when dismissing a redundant worker with 10-years tenure. The formula used to calculate the zero-to-10 ratings was: $(V_{max} - V_i) / (V_{max} - V_{min})$ multiplied by 10. $V_i$ represents the dismissal cost (measured in weeks of wages). The values for $V_{max}$ and $V_{min}$ were set at 58 weeks (1.5 standard deviations above the average in 2005) and 0 weeks, respectively.

(vi)Conscription (area5bvi)	International Institute for Strategic Studies’ “The Military Balance,” and the War Resisters International’s “World Survey of Conscription and Conscientious Objection to Military Service,”	Data on the use and duration of military conscription were used to construct rating intervals. Countries with longer conscription periods received lower ratings.
(vii)Foreign labor (area5bvii)	World Economic Forum, Global Competitiveness Report; Economist Intelligence Unit, Business Environment Ratings.	This subcomponent is based on two sources. (a) The first source is the Global Competitiveness Report question: “To what extent does labor regulation in your country limit the ability to hire foreign labor? (The question’s wording has varied over the years). (b) The second source is the “Hiring of foreign nationals” indicator from the Economist Intelligence Unit. The final rating is the average of whichever of these sources are available, and the data are chain-linked to assure time consistency

## Annex II

Variable	Description	Data source
Wage equality for similar work (W)	Response to the survey question, “In your country, for similar work, to what extent are wages for women equal to those of men?” (1 = not at all, significantly below those of men; 7 = fully, equal to those of men).	World Economic Forum, Executive Opinion Survey (EOS) 2019-2020 or most recent year available
Economic Participation and Opportunity index (EPO)	It contains three concepts: the participation gap, the remuneration gap and the Advancement gap.	Global Gender Gap Report 2021
Population Growth (PG)	Year-on-year percentage change in total population, calculated based on current and previous year. It reflects the number of births and deaths during a period and the number of people migrating to and from a country.	United Nations, Department of Economic and Social Affairs, Population Division, World Population Prospects: The 2019 Revision.
Labor force participation rate (females to males ratio) (F/M)	Proportion of a country’s working-age (15–64) female population that engages actively in the labor market, either by working or looking for work. (i.e. ratio of the number of women participating in the labor force to total labor force).	International Labour Organization (ILO), ILOSTAT, modelled estimates