

Promoting Gender Equality Through Leveraging the Women, Business, and the Law Index: A Comparative Analysis of High- and Low-Income Countries

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Abstract: **Background:** Gender equality and the empowerment of women are imperative for inclusive and sustainable development. Despite the fact that the Women, Business, and the Law (WBL) Index provides a comprehensive framework for evaluating legal progress towards gender equality, there is a paucity of research on how key influencing factors vary across economic contexts.

Research objectives: The present study aims to examine the influence of asset accessibility, workplace conditions, mobility rights, pay equality, entrepreneurial opportunities, and safety on WBL index scores in high- and low-income countries. The present analysis aims to address the research gap concerning the differential impact of these variables in diverse economic environments.

Research design and methods: Multiple linear regression analysis was employed using data from countries classified by income level. The WBL index functioned as the dependent variable, with the influence of six predictor variables on gender equality outcomes being assessed.

Results: The findings suggest that pay equality and mobility rights have a greater impact in low-income countries, while safety, workplace conditions, and entrepreneurial opportunities play a more significant role in high-income countries. These results emphasize the necessity of adapting gender equality policies to particular economic contexts.

Conclusions: The study emphasizes the importance of context-specific approaches to the promotion of gender equality. In low-income countries, efforts should be concentrated on the improvement of legal rights related to remuneration and mobility. In high-income countries, efforts should be concentrated on enhancing workplace conditions, improving safety, and fostering women's entrepreneurship. The study also identifies common areas for improvement across both contexts to support global gender equality initiatives.

Keywords: gender equality, Women, Business and the Law index, comparative analysis, economic participation

JEL Codes: P50, P52, P48

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Gender equality and women's empowerment are essential for social progress and sustainable development. Although recent decades have witnessed considerable progress in this area, gender disparities continue to exist, affecting social inclusion, legal rights, and economic engagement. Such disparities not only prevent the full achievement of women's rights but also

present significant obstacles to attaining wider social objectives, including poverty reduction and economic advancement.

In recent years, both national and international efforts have increasingly focused on advancing gender equality and women's empowerment. Governments, international organizations, civil society bodies, and other stakeholders have intensified their efforts to implement legislation and initiatives that strive for equal opportunities for women and men.

The Women, Business, and the Law (WBL) index serves as a widely recognized indicator of gender equality and women's empowerment. The World Bank created the WBL index to evaluate legislative obstacles to women's economic participation in 190 different economies across the globe (World Bank, 2024). The WBL index offers important insights into the legal and economic environments for women in different countries by looking at laws and regulations pertaining to women's access to financial services, the ownership of property, and the ability to work.

Nevertheless, elements that influence the determinants of gender equality and women's empowerment are numerous and include institutional structures, legal frameworks, cultural norms, and socioeconomic conditions. Given the complexity and multifaceted nature of these factors, policymakers must first gain a thorough understanding of the matter to design effective strategies and interventions that address the root causes of gender inequality.

This study utilizes the WBL index as a key metric to advance our knowledge of the variables that influence women's empowerment and gender equality across a variety of economic levels. Within this context, this research looks into the factors that influence women's empowerment and gender equality at various income levels. Through an analysis of numerous socioeconomic elements, including pay equality, access to assets, mobility rights, safety, and working conditions, the study seeks to provide insight into the difficulties and opportunities that women encounter in diverse economic environments.

The study's central research question is: *What are the key factors influencing gender equality and women's empowerment in high- and low-income countries, and how do these factors vary across different socioeconomic contexts?*

This study seeks to provide insight into the intricate interactions between socioeconomic conditions and gender equality outcomes through a comparative analysis of these components. The article intends to provide guidance for policy decisions and advocacy initiatives that aim to advance gender equality and women's empowerment worldwide by identifying areas that have made progress and those that need more attention.

Literature Review

Gender equality refers to the equal rights, responsibilities, and opportunities of individuals regardless of their gender. The principle aims to eliminate discrimination and ensure that both men and women can participate fully in all aspects of life, including the workforce (Sever, 2022). Furthermore, gender equality is essential for unlocking a nation's full economic potential and upholding human rights. When women have equal opportunities, societies gain from greater innovation, productivity, and growth. Achieving equality requires dismantling systemic barriers, challenging stereotypes, and ensuring supportive legal frameworks. Denying women equal rights harms both the well-being of individuals and the national progress. As such, gender equality is a cornerstone of inclusive societies and their sustainable development (Sepashvili, 2019).

Women experience gender discrimination in the workplace in a variety of ways. The gender gap reflects larger biases and social norms that might hinder women's possibilities for leadership in the workplace and their progress. Establishing inclusive and equitable work environments requires addressing gender prejudices and advancing gender equality. Developing procedures and policies that encourage equitable opportunity for all employees, regardless of gender, is a key component of promoting gender equality in business. Such initiatives aim to reduce the pay gap, give women the opportunity to advance as leaders, and establish a welcoming workplace free from bias and discrimination. By actively encouraging gender equality, businesses can improve their employee engagement and satisfaction, attract and retain top talent, and become more resilient and prosperous (Brophy, McAdam, & Clinton, 2023).

The requirements of job flexibility, childcare responsibilities, and work-life balance present major obstacles for women in the business world. Kanji and Vershinina (2024) indicate that women-owned businesses contribute to job creation, wealth generation, and innovation, highlighting the importance of supporting and empowering women in entrepreneurship. Initiatives that promote gender equality, provide mentorship and networking opportunities, and tackle obstacles to women's entrepreneurship are essential for creating a more inclusive and diverse business ecosystem. The authors add that by recognizing the unique strengths and perspectives that women bring to the table, businesses and society as a whole can benefit from increased diversity, creativity, and resilience in the entrepreneurial landscape. Empowering women in business not only fosters individual success but also contributes to overall economic development and societal advancement.

Women entrepreneurs face challenges such as gender inequality, limited access to finance, unequal working conditions, and cultural paradigms and stereotypes that restrict their opportunities for business ownership and leadership roles. These challenges can hinder women's access to resources, funding, and opportunities, perpetuating gender disparities in the entrepreneurial ecosystem. Addressing these barriers through supportive policies, financial inclusion initiatives, and empowerment programs is essential to promoting gender equality and empowering women in entrepreneurship (Sanchez-Riofrio et al., 2023).

According to Kosumi (2017), women encounter discrimination in various spheres of life, including social, economic, and political. Despite some improvements in women's participation in different sectors, gender discrimination remains a significant issue globally, impacting women's advancement and equality while hindering their career development and economic opportunities.

By providing men with preferential treatment, the labor market discriminates against women and boosts the female unemployment rate. The fact that gender pay disparities do not always signify wage discrimination underscores the difficulty of resolving discrimination against women in the workplace (Vravec & Bačik, 2012).

Women's economic participation closely aligns with their autonomy, as access to economic rights enables them to make independent choices about their lives and livelihoods. However, securing satisfactory employment remains a major challenge due to persistent gender pay gaps, workplace discrimination, and limited opportunities for advancement. Additionally, achieving a balance between work and personal life is often difficult for women, particularly those with caregiving responsibilities, as societal expectations and rigid workplace policies create significant obstacles. Access to essential resources such as healthcare, food, and water also plays a crucial role; when these are lacking, women's productivity and economic engagement suffer. Furthermore, human rights concerns, such as workplace violence and discrimina-

tion, not only threaten women's safety but also prevent their full participation in the economy (IWRAW, 2004).

Women encounter pervasive challenges that limit their economic participation. One such challenge is the risk of violence threatening women entering the public sphere, particularly the economic domain, where they may face abuse and discrimination. Systemic discrimination based on gender, race, and social status further hinders women's advancement in the workplace. Women's disproportionate burden of unpaid care work, such as childcare and household duties, can hinder their full participation in the economy by limiting their time and energy available for paid employment or entrepreneurship. Moreover, women may face challenges in accessing financial resources, loans, and assets necessary for economic empowerment and entrepreneurship (Naililhaq & Udasmoro, 2021).

The underrepresentation of women in formal economic activities in developing countries compared to women in more developed countries is a significant issue. This disparity underscores the importance of addressing gender inequalities and promoting women's economic empowerment in developing nations (Osinubi & Asongu, 2021).

According to Aydin, Benghoul, and Balacescu (2019), women face several challenges in terms of pay and earnings compared to men. The gender pay gap remains a significant problem, with women often receiving lower pay for the same work or work of equal value. Occupational segregation also plays a role, as the concentration of women is higher in lower-paying sectors or roles. Additionally, factors such as part-time work, limited access to higher-paying positions, and the need to perform unpaid care work further contribute to disparities in earnings between genders.

Ani et al. (2018) demonstrate a positive relationship between women's employment and economic growth in various high-income countries. According to these scholars, women's participation in economic activities can enhance their socioeconomic status, especially in low-income countries.

To fully participate in the economy, women must overcome several challenges, including cultural norms, legislative restrictions, gender discrimination, limited access to education, the burden of providing unpaid care, the lack of financial resources, and the matter of underrepresentation in decision-making positions. These obstacles limit women's opportunities for leadership, entrepreneurship, and job growth as well as their ability to become economically empowered (Early Childhood Caries Advocacy Group et al., 2020).

Munin (2012) highlights the disparities in regulatory discriminatory obstacles that women experience in labor markets across low- and high-income economies. Developing economies tend to feature more barriers toward women in areas such as access to institutions, property rights, job opportunities, work incentives, credit availability, and legal recourse, compared to high-income economies. This disparity results in lower female formal labor force participation rates in economies and higher legal differentiation between men and women, regardless of the income level. Women in low-income economies encounter challenges in accessing financial resources and assets necessary for entrepreneurship, which limits their business development opportunities. In high-income economies, despite comparable or higher education levels among new female entrants to the labor market, women tend to work in lower-paid occupations and sectors, often based on temporary employment contracts. Moreover, cultural and social factors play a significant role in shaping women's integration into labor markets in both low- and high-income economies.

Women's participation in the labor market varies across low- and high-income economies, with evident challenges and opportunities in each context. In low-income economies, women often encounter barriers as well as cultural and social norms that restrict their economic engagement. These constraints can prevent women from fully participating in the labor market and realizing their economic potential. On the other hand, high-income economies have witnessed women's participation in the labor market increasing in recent years, which has led to positive changes such as economic growth, development, and reduced inequality. High-income economies regard female entrepreneurship as a key driver of their economic advancement. However, gender discrimination, limited access to resources, and cultural norms continue to challenge women's ability to participate in economic activities across both low- and high-income economies (Lechman, Okonowicz, & June, 2013).

Conceptual Foundations and Hypotheses Development

Conceptual Foundations. The WBL index is a scale that runs from zero to 100, with 100 denoting equal legal rights for men and women. Assessing how laws and regulations affect women's economic opportunities, the index operates as the mean score across the following ten areas: assets, pension, entrepreneurship, mobility, workplace, pay, marriage, safety, childcare, and parenthood (World Bank, 2024).

$$WBLindex = \sum_{i=1}^8 \frac{Components}{10} \quad (1)$$

Table 1. WBL Components and Their Significance

Component	Description
Workplace	Examines laws affecting a woman's decision to enter the labor market, including her legal capacity and ability to work, as well as protections against discrimination and sexual harassment.
Pay	Analyzes whether laws ensure equal remuneration between men and women for work of equal value and whether women can work in night shifts, industrial jobs, and dangerous jobs like men.
Marriage	Assesses legal constraints related to marriage and divorce, impacting women's economic empowerment, agency, and decision-making powers within the household.
Parenthood	Examines laws affecting a woman's work during and after pregnancy, including paid leave, and laws prohibiting firms from dismissing women because they are pregnant.
Entrepreneurship	Evaluates barriers to a woman's ability to start and run a business, considering gender differences in access to finance and legal provisions that impact women entrepreneurs.
Assets	Assesses gender differences in property and inheritance law, focusing on women's ownership, use, and control over resources, which are crucial for their economic agency and empowerment.
Pension	Examines laws affecting women's economic security after retirement, including disparities in retirement ages, pension benefits, and the consideration of caregiving responsibilities in pension calculations.
Mobility	Assesses laws governing the rights of men and women to choose where to live, travel outside the home, obtain passports, and leave the marital home at will, impacting women's economic participation and empowerment.
Safety	Examines legal frameworks addressing violence against women, including domestic violence, sexual harassment, and related criminal and civil remedies.
Childcare	Assesses legal frameworks for childcare provision, including availability, affordability, quality, and impact on labor market outcomes for women and economic growth.

Source: World Bank, 2024.

The WBL index plays a crucial role in measuring and tracking the legal rights of women in business, providing a comprehensive framework for assessing gender equality in the business sector. By identifying gaps in legal frameworks that hinder women's economic participation, the index guides policymakers in addressing these deficiencies to create a more inclusive business environment.

The outputs from the WBL index inform policy decisions, offering valuable insights for developing targeted interventions to support women in business and promoting gender-responsive reforms. Furthermore, the index promotes accountability by holding governments accountable for their commitment to gender equality, encouraging transparency, and prioritization of gender-responsive policy reforms.

Enhancing the WBL index is essential for advancing gender equality and promoting women's empowerment in the business sector. By improving the index, countries can achieve a more accurate and comprehensive measure of women's legal rights and opportunities, enabling policymakers to identify specific areas for intervention and reform. A strengthened WBL index facilitates global comparisons, offering insights into best practices and areas needing improvement across countries and regions. Moreover, enhancements to the index can have a significant impact on policy decisions, advocacy efforts, and the development of gender-responsive initiatives that support women in business. A robust WBL index ensures that efforts to enhance women's rights in business are effective and aligned with gender equality goals. Ultimately, enhancing the WBL index is crucial for creating a more inclusive, equitable, and supportive business environment that empowers women to thrive and contribute to economic growth and development.

In the context of the WBL index, the classification of economies into high- and low-income is important for understanding how legal frameworks impact women's rights and opportunities in different economic contexts. Analyzing data from both high- and low-income economies will help policymakers and stakeholders to tailor interventions to address the specific challenges that women experience in the business sector across a diverse range of economic settings.

To promote gender equality through the WBL index, this article focuses on developing regression models adapted for high- and low-income economies using predictive analytics. These models are essential for evaluating policy impacts, directing resource allocation decisions, monitoring progress, and providing guidance for strategic planning endeavors in low-income environments, which have limited resources and more pronounced disparities. In the same way, the models are helpful in high-income economies for tracking progress, optimizing resources, ensuring continued progress toward gender equality, and ensuring policy efficacy. By developing regression models within the unique economic environments, our study attempts to offer practical insights for decision-makers in business, government, non-governmental organizations, and other sectors dedicated to global gender equality advancement.

Hypotheses Development. These hypotheses emphasize low- and high-income nations and seek to understand how different predictor factors affect the WBL index. The alternative hypothesis (H1) states that each predictor variable strongly impacts the WBL index. These predictor variables include pay equality, entrepreneurship opportunities, mobility rights, safety, and access to assets. By employing these hypotheses, we aim to gain insight into how changes to these variables may change the legal and economic landscape for women at different levels of income.

Table 2. Hypotheses

Hypotheses	Predictor variable	Alternative hypothesis
H1	Safety	Safety significantly affects the WBL index.
H2	Workplace conditions	Workplace conditions significantly affect the WBL index.
H3	Mobility rights	Mobility rights significantly affect the WBL index.
H4	Entrepreneurship Opportunities	Entrepreneurship opportunities significantly affect the WBL index.
H5	Pay equality	Pay equality significantly affects the WBL index.
H6	Access to assets	Access to assets significantly affects the WBL index.

Source: Own elaboration.

Research Method and Material

To perform our regression models, we used secondary data from the WBL index of 2024. The data included information from 164 nations, with all the data classified as either high-income (53 countries) or low-income (111 countries) according to the World Bank's 2024 classifications. We utilized multiple linear regression analysis to investigate the complex relationship that exists between several independent variables that are closely aligned with economic activities, namely: safety, mobility, workplace, pay, entrepreneurship, and assets. In our research, we used IBM SPSS Statistics version 27, a powerful program well-known for its expertise in statistical analysis.

Results

The following paragraphs will outline in detail the findings of our examination of the predictors' effect on the WBL index. The article will discuss notable trends or patterns found in the data, along with the statistical significance and size of the coefficients for each predictor variable. With a thorough analysis of these findings, we plan to learn more about the factors impacting women's empowerment and gender equality at all economic levels.

Table 3. Model Summary

High-income countries

Model Summary ^{a, c}					
Model	R	R square	Adjusted R square	Std. error of the estimate	Durbin-Watson
1	.932 ^b	.869	.852	3.918210	1.927

a. Income = High income

b. Predictors: (Constant), assets, safety, mobility, entrepreneurship, workplace, pay

c. Dependent variable: the WBL index

Source: Own elaboration.

The regression analysis highlights a significant positive relationship between several predictor variables (assets, safety, mobility, entrepreneurship, workplace, and pay) and the WBL

index in high-income nations. The high coefficient of determination ($R^2 = 0.869$) indicates that these predictors can explain almost 87% of the variability in the WBL index. This finding suggests that high-income countries tend to have higher WBL scores.

The Durbin-Watson coefficient, which is close to two (1.927), suggests that there is no strong positive or negative autocorrelation of residuals in the regression model. This finding reinforces the validity of the regression results and indicates that prediction errors do not follow a systematic pattern over time, which strengthens the reliability of the conclusions drawn from the analysis. In sum, these results underline the crucial role of factors such as assets, safety, mobility, entrepreneurship, working conditions, and pay in fostering a favorable legal and economic environment for women in high-income nations, as reflected in the WBL.

Table 4. The ANOVA Test

ANOVA ^{a, b}						
	Model	Sum of squares	df	Mean Square	F	Sig.
1	Regression	4676.574	6	779.429	50.769	.000 ^c
	Residual	706.209	46	15.352		
	Total	5382.783	52			

a. Income = High income

b. Dependent variable: the WBL index

c. Predictors: (Constant), assets, safety, mobility, entrepreneurship, workplace, pay

Source: Own elaboration.

This analysis of variance (ANOVA) aimed to assess the overall significance of the regression model in predicting the dependent variable, the WBL index, based on specific predictors such as assets, safety, mobility, entrepreneurship, workplace, and pay in the context of high-income countries. The results revealed a significant F statistic ($F(6,46) = 50.769, p < .001$), indicating that the regression model as a whole was statistically significant in predicting the WBL index. Indeed, the sum of squares of the regression was 4676.574, representing significant variation explained by the model, while the sum of squares of the residuals was 706.209, suggesting unexplained variation. These results suggest that the specified predictors have a significant effect on the WBL index in high-income countries, underscoring their importance in promoting gender equality in advanced economic contexts.

A closer look at regression coefficients reveals important nuances in the impact of each predictor on the WBL index in high-income countries. Based on the t -values, we can rank these factors in order of importance in predicting the WBL index. At the top of the list is the safety variable, which displays both a significant coefficient and a high t -value ($t = 4.525, p < 0.001$). These results underline the variable's crucial role in promoting gender equality in the economic context. Next come workplace and mobility, both showing significant t -values ($t = 4.189$ and $t = 3.665$, respectively, $p < 0.001$), which highlights their importance in determining the WBL index. Next follows entrepreneurship with a moderate t -value ($t = 3.016, p = 0.004$), which indicates its substantial impact on gender equality. In contrast, although the pay and assets variables have positive coefficients, their p -values are not significant ($t = 1.585, p = 0.120$ and $t = 1.811, p = 0.077$, respectively), which suggests a potentially limited impact on the WBL index in this specific context. Therefore, this detailed analysis offers a better understanding of the

Table 5. The Coefficients Table

Coefficients ^{a, b}								
Model		Unstandardized coefficients		Standardized coefficients			Collinearity statistics	
		B	Std. error	Beta	t	Sig.	tolerance	VIF
1	(Constant)	-13.945	13.607		-1.025	.311		
	Safety	.146	.032	.302	4.525	.000	.639	1.564
	Mobility	.322	.088	.200	3.665	.001	.958	1.044
	Workplace	.227	.054	.378	4.189	.000	.350	2.857
	Pay	.076	.048	.145	1.585	.120	.340	2.938
	Entrepreneurship	.152	.051	.218	3.016	.004	.547	1.829
	Assets	.193	.107	.114	1.811	.077	.715	1.399

a. Income = High income

b. Dependent variable: the WBL index

Source: Own elaboration.

relative importance of each factor in promoting gender equality in high-income countries, providing valuable insights for the development of policies and strategies aimed at strengthening women's rights and opportunities in business and law. We can depict the regression equation as follows:

$$WBL = -13.945 + 0.146(SAFETY) + 0.322(MOBILITY) + 0.227(WORKPLACE) + 0.076(PAY) + 0.152(ENTREPRENEURSHIP) + 0.193(ASSETS) \quad (2)$$

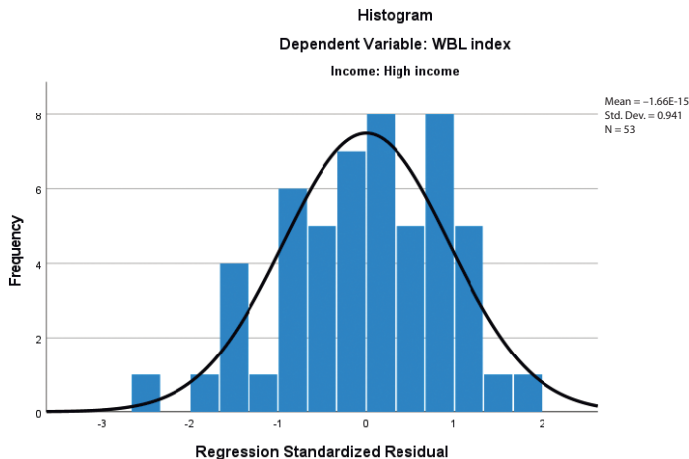
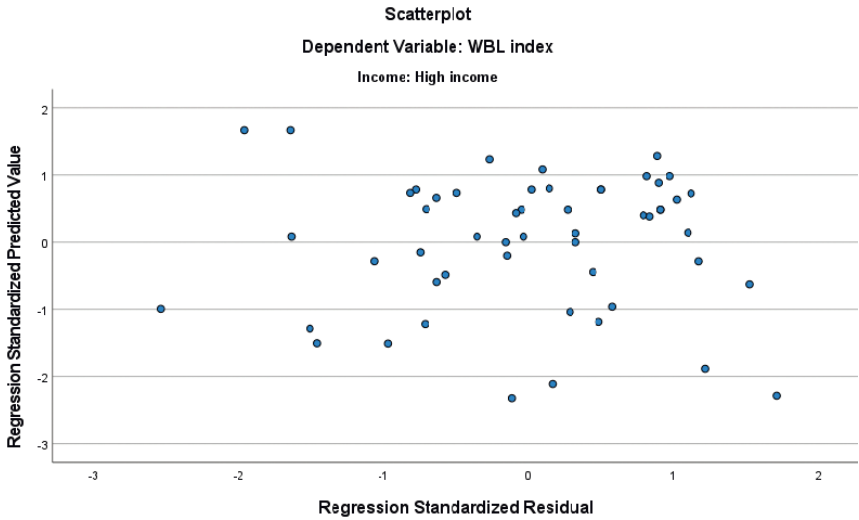


Figure 1. Normal Distribution of Residuals
Residual Distribution

Source: Own elaboration.

Figure 1 shows that the regression residuals follow a normal distribution, providing crucial validation of the regression model's quality. The random distribution of errors around zero



confirms that the model accurately reflects the trends and relationships present in the data. Consequently, the regression results offer a reliable basis for informed decision-making and forecasting in comparable contexts. The normality of the residuals confirms the validity of the coefficient estimates and associated confidence intervals, reinforcing the credibility of the conclusions drawn from the model.

Figure 2 shows a plot of the standardized residuals against the predicted values in the regression model. The residuals show a random distribution around zero over the entire range of predicted values, without any discernible patterns, trends, or shapes. This visual pattern confirms that the regression model respects the assumption of homoscedasticity. This finding indicates that the variance of the residuals remains constant across different predicted values, implying that the model distributes errors evenly and maintains forecast accuracy regardless of the levels of the independent variables.

The fact that the residuals lie between -2 and 2 and follow no trend visually confirms the homoscedasticity of the residuals in the regression model. This observation is positive, as it reinforces the validity of the model's estimates and the reliability of the conclusions drawn from the model. Moreover, this observation confirms that the residuals in the regression model are homoscedastic, which is a crucial aspect for the validity of the regression results.

The analysis of the regression model reveals a remarkable fit to the data. The results indicate a significant association between the predictor variables (assets, safety, workplace, mobility, pay, entrepreneurship) and the WBL index for low-income countries. The multiple correlation coefficient (R) of 0.962 highlights a strong association between these variables, suggesting a robust ability of the model to explain the variance of the WBL index. Furthermore, the coefficient of determination (R -squared) of 0.926 indicates that the predictors included in the model can explain nearly 92.6% of the WBL index's variance. The adjusted R -squared of 0.922 , which considers the complexity of the model, supports this interpretation.

Table 6. Model Summary**Low-income countries**

Model summary ^{a, c}					
Model	R	R square	Adjusted R square	Std. error of the estimate	Durbin-Watson
1	.962 ^b	.926	.922	4.536953	1.957

a. Income = Low income

b. Predictors: (Constant), assets, safety, workplace, mobility, pay, entrepreneurship

c. Dependent variable: the WBL index

Source: Own elaboration.

The standard error of the estimate (4.536953) reveals the accuracy of the model's predictions for the WBL index in low-income countries. Finally, the Durbin-Watson statistic of 1.957 indicates little autocorrelation in the residuals, reinforcing the reliability of the regression results. In sum, this regression model demonstrates an excellent ability to predict the WBL index in low-income countries, in consideration of various predictive factors. This finding makes it a valuable tool for understanding and improving the economic and legal conditions of women in these countries.

Table 7. The ANOVA Test

ANOVA ^{a, b}						
	Model	Sum of squares	df	Mean square	F	Sig.
1	Regression	26937.352	6	4489.559	218.11	.000 ^c
	Residual	2140.730	104	20.584		
	Total	29078.083	110			

a. Income = Low income

b. Dependent variable: the WBL index

c. Predictors: (Constant), assets, safety, workplace, mobility, pay, entrepreneurship

Source: Own elaboration.

The analysis of variance (ANOVA) reveals significant variation, which we can explain by the predictors included in the regression model ($F(6, 104) = 218.110, p < 0.001$). The predictor variables (assets, safety, workplace, mobility, pay, and entrepreneurship) demonstrate a statistically significant contribution to explaining the variance in the WBL index for low-income countries. The sum of squares of the regression is 26937.352 with six degrees of freedom, and the associated mean square is 4489.559. In contrast, the residual variation, representing the error of the model, is also significantly different from the model ($F(104) = 20.584, p < 0.001$), indicating a relatively low residual variance compared to the variance that the predictors explain. In sum, these results confirm the validity and relevance of the regression model to explain variation in the WBL index in low-income countries.

The analysis of coefficients in the regression model reveals several significant predictors for the WBL index in low-income countries. Mobility tops the list with a standardized coefficient of 0.241 and a t -value of 5.942 ($p < 0.001$), with assets following closely with a coefficient of 0.248

Table 8. The Coefficients Table

Coefficients ^{a,b}								
Model		Unstandardized coefficients		Standardized coefficients			Collinearity statistics	
		B	Std. error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	8.961	1.549		5.783	.000		
	Safety	.141	.026	.186	5.428	.000	.602	1.662
	Mobility	.152	.026	.241	5.942	.000	.431	2.318
	Workplace	.103	.033	.141	3.133	.002	.348	2.876
	Pay	.156	.031	.212	5.018	.000	.398	2.511
	Entrepreneurship	.155	.028	.243	5.598	.000	.376	2.657
	Assets	.145	.022	.248	6.712	.000	.518	1.929

a. Income = Low income

b. Dependent variable: the WBL index

Source: Own elaboration.

and a t -value of 6.712 ($p < 0.001$). These two predictors play a crucial role in explaining the variance of the WBL index, and their contribution is statistically significant. Entrepreneurship, safety, and pay also present significant and positive coefficients, with t -values of 5.598, 5.428, and 5.018, respectively ($p < 0.001$). Finally, although significant, workplace displays a slightly lower t -value of 3.133 ($p = 0.002$), indicating a smaller but nonetheless significant contribution to the WBL index. We can present the regression equation as follows:

$$WBLindex = 8,961 + (0,141 \times SAFETY) + (0,152 \times MOBILITY) + (0,103 \times WORKPLACE) + (0,156 \times PAY) + (0,155 \times ENTREPRENEURSHIP) + (0,145 \times ASSETS) \quad (3)$$

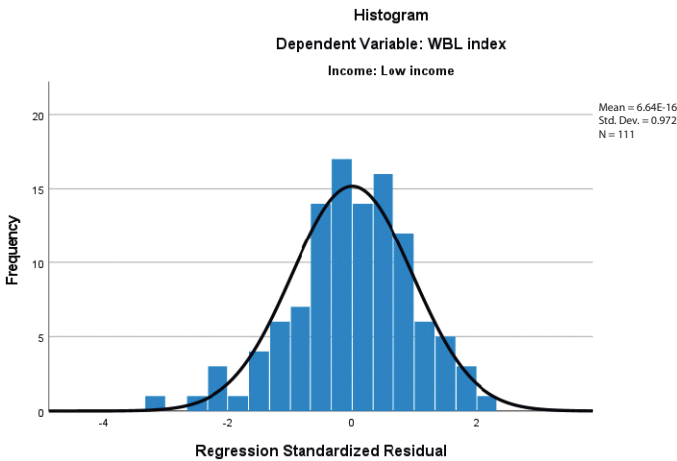


Figure 3. Normal Distribution of Residuals
Residual Distribution

Source: Own elaboration.

The normal distribution of residuals, which the histogram (Figure 3) illustrates, is a reassuring indicator of the regression model's validity. A Gaussian distribution of residuals suggests that model errors are random and unbiased, which is crucial for a reliable interpretation of regression results. The observation of a symmetrical bell shape centered around zero in the histogram confirms that the residuals display a good distribution around the mean, with no obvious tendency toward positive or negative extremes. This symmetry indicates that the model's errors display an even distribution around the mean, reinforcing confidence in the accuracy of the model's predictions over the whole range of predicted values.

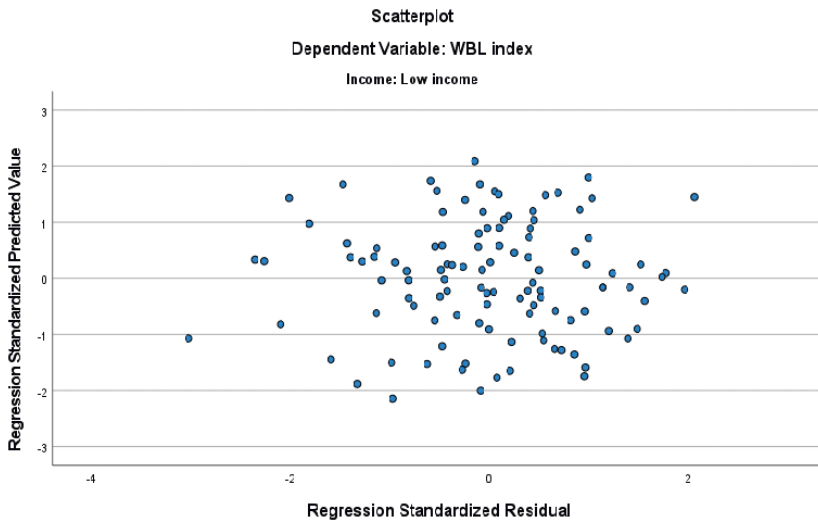


Figure 4. Homoscedasticity Visualization
Homoscedasticity Assessment

Source: Own elaboration.

The observation of scattered points in the scatterplot, with values between -2 and 2 and following no particular trend, is a favorable indicator of residual homoscedasticity. The presence of a uniform dispersion of points around zero over the entire range of predicted values, with no apparent patterns or trends, suggests that the variance of the residuals is constant across the different predicted values. This finding is consistent with the assumption of homoscedasticity, indicating that the model's prediction errors display an even distribution across the levels of the independent variables. Thus, the random dispersion of the points in the scatterplot reinforces confidence in the validity of the homoscedasticity of the residuals, thereby supporting the reliability of the regression results.

Table 9 offers a thorough analysis of the two regression models, utilizing t-values to classify the predictors according to significance. In both high-income and low-income nations, the descending order of predictor importance allows us to understand how each predictor contributes to explaining the variance in the WBL index.

Regression models for high- and low-income nations can serve as subjects of comparison to provide important insights into the variables affecting the WBL index in various economies. The predictors in both models, with R-squared values of 0.926 for the low-income model and

0.869 for the high-income model, together account for a significant portion of the variance in the WBL index. The important predictors in the two models vary significantly from one another.

Table 9. Models Assessments

Model	R-squared	Important predictors	Durbin-Watson	Residuals (Normality)	Homoscedasticity	ANOVA (F-statistic, p-value)	VIF (Variance Inflation Factor)
High-income	0.869	✓ Safety ($t = 4.525$), ✓ Workplace ($t = 4.189$), ✓ Entrepreneurship ($t = 3.016$) ✓ Mobility ($t = 3.665$)	1.927	Verified	Homoscedastic	$F(6, 46) = 50.769$, $p < 0.001$	< 3
Low-income	0.926	✓ Assets ($t = 6.712$), ✓ Mobility ($t = 5.942$), ✓ Entrepreneurship ($t = 5.598$) ✓ Safety ($t = 5.428$), ✓ Pay ($t = 5.018$), ✓ Workplace ($t = 3.133$)	1.957	Verified	Homoscedastic	$F(6, 104) = 218.110$, $p < 0.001$	< 3

Source: Own elaboration.

With a t -value of 4.525, safety tops the list of significant predictors in the high-income model. Workplace ($t = 4.189$), entrepreneurship ($t = 3.016$), and mobility ($t = 3.665$) follow. With a t -value of 6.712, assets lead the low-income model as the most significant predictor. Mobility ($t = 5.942$), entrepreneurship ($t = 5.598$), safety ($t = 5.428$), and pay ($t = 5.018$) follow. These differences highlight the distinct economic obstacles and concerns that countries with varying incomes display when trying to promote gender parity and women's empowerment.

Both models adhere to the assumptions of normality and homoscedasticity, show statistical significance in ANOVA tests, and have minimal autocorrelation in the residuals. Durbin-Watson statistics of 1.957 for the low-income model and 1.927 for the high-income model provide the necessary evidence. Furthermore, the low multicollinearity among the variables improves the reliability of the regression analysis. Variance Inflation Factor (VIF) values below three in both models confirm the above.

Discussion

The findings of this study reveal the multifaceted and context-sensitive nature of gender equality and women's economic empowerment. Drawing on the WBL index, the analysis underscores the varying impact of several legal and socioeconomic dimensions at different income levels and across different countries. These dimensions include workplace safety, working conditions, mobility rights, entrepreneurship opportunities, and access to assets.

A key insight is that the relative importance of these factors differs between high- and low-income contexts, suggesting that no single factor universally dominates the empowerment landscape. This finding supports the growing academic consensus that gender-related reforms must match the specific realities of each country.

The study confirms that in high-income countries workplace safety and working conditions play a crucial role in women's empowerment. These countries often possess mature insti-

tutional frameworks and stricter labor laws that directly impact women's experiences in the workforce. According to Ani et al. (2018), ensuring workplace safety is fundamental for enhancing women's participation in formal employment sectors. These safeguarding efforts include addressing harassment, discrimination, and health-related risks, which are key to creating inclusive and productive work environments.

In contrast, low-income countries show a stronger dependence on mobility rights and entrepreneurship opportunities as levers of economic empowerment. These findings reflect the constraints that women face due to inadequate infrastructure, limited access to safe public transportation, and legal or cultural barriers to free movement. Enhancing mobility, therefore, becomes a precondition for economic inclusion. Simultaneously, entrepreneurship serves as a critical pathway for women in economies where formal employment opportunities are scarce or inaccessible. As Aydin, Benghoul, and Balacescu (2019) argue, promoting mentorship programs, financial inclusion, and business-friendly policies can significantly strengthen women's entrepreneurial potential in both developing and developed settings.

Access to assets, such as property and financial services, is another factor that cuts across both high- and low-income countries. However, the problem varies in nature and severity. In low-income countries, women often lack access to land ownership and face exclusion from formal financial systems, which creates significant structural obstacles to attaining independence and accumulating wealth. In high-income contexts, while legal barriers may be less visible, unequal access to investment resources or capital still exists and continues to limit economic opportunities for women.

The issue of wage disparities also varies across different contexts. In low-income countries, wage inequality is a direct and significant obstacle to women's economic empowerment. As Munin (2012) explains, wage gaps in these contexts are not only an issue of fairness but also a fundamental barrier to women's economic autonomy and overall development. Although wage gaps may be narrower in high-income countries, they persist due to structural issues such as occupational segregation, underrepresentation in leadership roles, and the "motherhood penalty."

The findings indicate that a universal approach to gender equality is insufficient. Policy-makers must develop effective strategies based on an in-depth understanding of local conditions. For example, low-income countries may need legal reforms to strengthen labor rights and promote wage equality, while high-income countries might prioritize removing glass ceilings, supporting entrepreneurship, and improving work-life balance for women.

Furthermore, these empowerment factors closely interconnect. Mobility enables access to safer work environments and entrepreneurial spaces, while asset ownership can facilitate financial inclusion, which in turn supports business creation or educational investments. This interconnectedness demands integrated policy approaches rather than isolated reforms.

Finally, the success of gender-related reforms depends not only on legal changes but also on effective implementation and cultural transformation. As Naililhaq and Udasmoro (2021) emphasize, without enforcement and social buy-in, even the most progressive laws may fail to translate into real improvements in women's lives. Therefore, complementary actions such as public awareness campaigns, community education, and institutional capacity building are essential to ensure sustainable and inclusive progress.

Conclusion

This comparative analysis underscores the nuanced and context-dependent nature of women's empowerment and gender equality. The WBL index highlights that while key factors like workplace safety, working conditions, mobility rights, entrepreneurial opportunities, and access to assets are universally important, their relative influence varies considerably between low- and high-income countries.

In low-income settings, mobility rights and entrepreneurship emerge as critical levers of empowerment, with women often facing systemic gaps in infrastructure and institutional constraints. These factors are instrumental in overcoming barriers to economic participation and self-reliance. In contrast, high-income countries tend to place greater emphasis on safety standards and workplace conditions, reflecting more mature regulatory systems aimed at safeguarding women's roles in formal economies.

Although aspects such as wage disparities and access to assets cut across both income categories, they present diverse challenges. In low-income countries, wage inequality remains a substantial impediment to women's economic agency. In wealthier nations, the issue is often an inherent part of broader structural or cultural frameworks, requiring more sophisticated policy interventions.

Recognizing these contextual differences is vital for designing effective policy responses. In low-income economies, efforts should prioritize strengthening labor protections, enforcing equal pay, and expanding access to ownership and financial tools. High-income countries, on the other hand, should focus on enhancing support for women entrepreneurs, advancing legal mobility frameworks, and promoting equity through institutional reforms.

Developing context-specific reforms that are responsive to each country's unique challenges and opportunities will help create more inclusive and enabling environments for women. Such targeted approaches are essential to advancing gender equality and fostering sustainable development on a global scale.

References

- Ani, F., Abu Samah, A., Damin, Z. A., Jaes, L., Isa, K., Md. Yusoff, R., Sarawati, S., & Hamzah, J. S. (2018). Participation and women's economic empowerment: Clarifying their relationship in community based organization. *International Journal of Engineering & Technology*, 7(4.9), 211. <https://doi.org/10.14419/ijet.v7i4.9.20676>
- Aydin, H. I., Benghouli, M., & Balacescu, A. (2019). Women's role in economic development: A significant impact in the EU countries? *International Journal of Sustainable Economies Management*, 8(1), 29–38. <https://doi.org/10.4018/ijsem.2019010103>
- Brophy, M., McAdam, M., & Clinton, E. (2023). Vying for and forgoing visibility: Female next gen leaders in family business with male successors.
- Early Childhood Caries Advocacy Group, Folayan, M. O., El Tantawi, M., Vukovic, A., Schroth, R., Gaffar, B., Al-Batayneh, O. B., Amalia, R., Arheiam, A., Obiyan, M., & Daryanavard, H. (2020). Women's economic empowerment, participation in decision-making, and exposure to violence as risk indicators for early childhood caries. *BMC Oral Health*, 20(1), 54. <https://doi.org/10.1186/s12903-020-1045-5>
- IWRAW. (2004). Equality and women's economic, social and cultural rights. A guide to implementation and monitoring under the International Covenant on Economic, Social and Cultural Rights. <https://hrlibrary.umn.edu/iwraw/CESCRMANUAL.pdf>
- Kanji, S., & Vershinina, N. (2024). Gendered transitions to self-employment and business ownership: a linked-lives perspective. <https://doi.org/10.1080/08985626.2024.2310107>
- Kosumi, MSc. 2017. Discrimination of women in the private sector. *ILIRIA International Review*, 7. <https://doi.org/10.21113/iir.v7i1.301>

- Lechman, E., Okonowicz, A., & June, J. (2013). Are women important for economic development? Evidence on women's participation in labor market and their contribution to economic growth in 83 world countries *Working Paper Series A: Economics, Management, Statistics* 13/2013. <https://doi.org/10.13140/2.1.4593.6325>
- Munin, N. (2012). Enhancing women's integration in labor markets – A global economic interest: The (limited) role of international economic organizations. *Journal of Multidisciplinary Research*, 4(1), 21–43. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2641482
- Naililhaq, F. N., & Udasmoro, W. 2021. Women economic participation in *Novel Tentang Kamu* by Tere Liye. *Leksika: Jurnal Bahasa, Sastra Dan Pengajarannya*, 15(1), 27. <https://doi.org/10.30595/lks.v15i1.9107>
- Osinubi, T., & Asongu, S. (2021). Globalization and female economic participation in MINT and BRICS countries. *Journal of Economic Studies*, 48(6), 1177–1193. <https://doi.org/10.1108/JES-08-2020-0381>
- Sanchez-Riofrio, A. M., Lupton, N. C., Camino-Mogro, S., & Acosta-Ávila, Á. (2023). Gender-based characteristics of micro, small and medium-sized enterprises in an emerging country: Is this a man's world? *Journal of Entrepreneurship in Emerging Economies*, 15(3), 652–673. <https://doi.org/10.1108/JEEE-07-2021-0273>
- Sepashvili, E. (2019). Gender dimension of economic decision-making: Women on top management. *Economia Aziendale Online*, 10(2), 385–399. <https://doi.org/10.13132/2038-5498/10.2.1954>
- Sever, C. (2022). Gendered laws and labor force participation. <https://ssrn.com/abstract=4077808>
- Vravec, J., & Bačik, R. (2012). Discrimination of women in the labour market of SR and models of discrimination. *Polish Journal of Management Studies*, 5, 266–278. <https://pjms.zim.pcz.pl/article/130712/en>
- World Bank. (2023). *Women, business and the law 2023*. The World Bank. <https://hdl.handle.net/10986/39462>

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Conflict of Interest

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