

# Women Labor Force Participation and Its Impact on Economic Growth: A Study of Latin America and the Caribbean Region

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## Abstract

The problem being studied was that women were underrepresented in the labor force throughout Latin America and the Caribbean regions. In addition, although Latin America and the Caribbean regions experienced sound economic growth over the past decade, poverty levels dropped from 30% in 2021 to 28.5% in 2022. Development within low/low-middle income countries such as those within the Latin America and the Caribbean's region, is more effected because of the reduction of gender inequality. This quantitative study explored how empowering women contributed to addressing and enhancing economic challenges in Latin America and the Caribbean. Additionally, it aimed to identify the relationship between women's empowerment and economic growth, while examining the influence of relevant variables on the economic development of these countries. This study was motivated by identifying a gap in the literature that made this research viable. Study found that there is statically a significant impact of women' empowerment on economic growth, where an increase of 10 points in the women empowerment index, increases the growth of real GDP per capita by 2 percentage point per year. The data collected covers 29 countries and regions and covered metrics on women empowerment from 1982 – 2019, which spanned approximately 38 years. The study results concluded that women empowerment statistically impact GDP growth in Latin America and the Caribbean.

**Keywords:** women labor force, GDP growth, America and, the Caribbean and Logistic Regression

## 1. Introduction

Latin America and the Caribbean have experienced steady growth due to sound economic policies over the past decade (Beylis et al., 2020). However, although progress has been made, these regions must continue strengthening their middle class through innovative growth policies (Paus, 2020). Previous research has concluded that to strengthen economic growth and increase opportunities, countries must ensure that their workforce experiences gender equality (Azcona et al., 2020). Gender equality promotes macroeconomic and financial stability while stimulating economic growth (Altuzarra et al., 2021; Seguino, 2019). In addition, if countries promote gender equality in their workforce, they are more likely to boost performance in both the private and public sectors while reducing income equality (Walker et al., 2019). From a historical perspective, Duflo (2012) and Doepke et al. (2012) have all reported a strong correlation between the relative position of women in society and the level of economic growth. These conclusions highlight the need to empower women in the workforce, as it benefits both the feminist cause and society (Golla et al., 2011).

However, women in Latin America and the Caribbean have yet to be strongly represented in their workforce, possibly decreasing economic growth opportunities throughout the region. For example, in Argentina women represented approximately 39% of the workforce in 1990, compared to 42% in 2021 (The World Bank, 2022). This depicts a 3% increase in the representation of women in the workforce over 31 years. Other countries throughout Latin America and the Caribbean have experienced similar representations of women in the workforce. The Dominican Republic had approximately 31% of women representing the workforce in 1990, compared to 39% in 2021, highlighting an 8% increase over 31 years; Brazil reported approximately 34% of women in the workforce in 1990 compared to 43% in 2021, highlighting a 9% increase over 31 years; and Puerto Rico had 36% of women representing the workforce in 1990 compared to 42% in 2021, highlighting a 6% increase over 31 years (The World Bank, 2022). Although these countries have demonstrated progress for three decades, women empowerment has suffered due to the lack of

underrepresentation in the workforce, which could explain how the reduction of poverty levels and economic growth have not been substantial (Doepke et al., 2012; Duflo, 2012; Golla et al., 2011).

Other primary factors within Latin America and the Caribbean also affect women's empowerment. The low level of women's empowerment in Latin America and the Caribbean is the prevalence of patriarchal attitudes and cultural norms restricting women's access to education, employment, and decision-making roles (Laszlo et al., 2020). In many countries, women are still considered primarily responsible for household and child-rearing duties, limiting their ability to pursue higher education or participate in the workforce. Moreover, women are often excluded from political and leadership positions, which means they have little influence in decision-making processes that affect their lives (Lupien, 2021). Economic disparities have also contributed to the region's low level of women's empowerment. Women in Latin America and the Caribbean are more likely to live in poverty than men, which limits their access to resources and opportunities (Safa, 2019). Moreover, women are more likely to work in low-paying and insecure jobs, often not providing them the same benefits and opportunities for advancement as their male counterparts.

In addition, violence against women is a significant issue in Latin America and the Caribbean, which hinders women's empowerment (Bucheli & Rossi, 2019). According to the United Nations, 1 in 3 women in the region experiences physical or sexual violence in their lifetime (García-Moreno et al., 2013). This violence affects women's physical and mental health and limits their ability to participate fully in social, economic, and political life. Therefore, this study aimed to investigate the impact that women had on economic growth throughout countries located in Latin America and the Caribbean. Additionally, I planned to understand the overarching relationship between women's empowerment and economic growth in these countries. This study explored how empowering women helped address and improve economic challenges in Latin America and the Caribbean.

The purpose of the study to identify how empowering women contributed to addressing and enhancing economic challenges in Latin America and the Caribbean. Additionally, it aimed to identify the relationship between women's empowerment and economic growth, while examining the influence of relevant variables on the economic development of these countries. The outcome variable in this study was economic growth, measured as the annual percentage growth rate of gross domestic product per capita (GDP) at market prices based on constant local currency. The explanatory variable was women empowerment; the score of this variable included the average scores of each index that contained several controlling variables that included women's unemployment rate, female labor force participation, primary school completion, women in parliament, and literacy rate. I added control variables to determine the impact of the explanatory variables on the region's GDP. Data were gathered from the World Bank, an institution focused on financing, reconstruction, and development. Annual GDP growth percentage and empowerment data from the Women, Business, and the Law (WBL) survey were also used for this study.

This study was motivated by identifying a gap in the literature that made this research viable. The problem was underrepresented women in the workforce throughout Latin America and the Caribbean (The World Bank, 2022). In addition, poverty levels in Latin America and the Caribbean had dropped from 30% in 2021 to 28.5% in 2022. These numbers remain high primarily due to the COVID-19 pandemic (The World Bank, 2022). Previous research has concluded that to strengthen economic growth and increase opportunities, countries must ensure that their workforce experiences gender equality (Azcona et al., 2020). Previous research has suggested that the equality of gender can promote macroeconomic and financial stability while stimulating economic growth (Altuzarra et al., 2021; Seguino, 2019). By promoting gender equality in their labor force, countries can significantly reduce income inequality by boosting performance in both the private and public sectors. Therefore, it was currently unknown of any relationship between women's empowerment and economic growth in countries located in Latin America or the Caribbean.

## 2. Research Questions and Hypotheses

### 2.1 Research Questions

Does women's empowerment significantly impact the economic growth in Latin America and the Caribbean? When controlling unemployment rate, labor force participation, education, foreign direct investment, export, and government expenditure.

### 2.2 Hypothesis

**H<sub>01</sub>:** Women empowerment (WEMP) has statistically significant impact on the economic growth in Latin America and the Caribbean when controlling for previously mentioned control variables

## 3. Literature Review

Empowering women has been one of the most significant and consistent goals of governments and organizations across the globe in the last few decades. Women empowerment refers to the process of providing women with the

ability to make choices and control their own lives (Doepke & Tertilt, 2019). The empowerment of women is not only a human rights issue but also an economic issue. Empowering women has a direct impact on economic growth and development (Doepke & Tertilt, 2019). This section will provide an overview of the literature that discusses the importance of women empowerment and economic growth and how COVID-19 has been identified as a major barrier for empowering women and experiencing positive economic growth. The review will then discuss women empowerment and economic growth within Latin America and the Caribbean, as well as identifying studies that have focused on barriers of women empowerment specific to that region.

### *3.1 The Importance of Women Empowerment and Economic Growth*

Women's empowerment and economic growth are inextricably linked (Doepke & Tertilt, 2019). Women's empowerment is crucial to economic growth and development, and economic growth is vital to women's empowerment. Empowering women means providing them the ability to make choices and control their own lives (Sharaunga et al., 2019). Women's empowerment is crucial for several reasons. First, it is a matter of human rights. Women have the right to make choices about their lives, including their education, career, and family. Women's empowerment means ensuring that they have the freedom and resources to make these choices.

Second, women's empowerment is essential for sustainable economic growth (Doepke & Tertilt, 2019; Sharaunga et al., 2019). Women represent half of the world's population, and their full participation in the workforce is crucial to economic development. When women have access to education and job opportunities, they are more likely to enter the workforce and contribute to economic growth (Altuzarra et al., 2019). Third, women's empowerment can lead to improved health outcomes (Kassie et al., 2020). When women have access to education and healthcare, they are better able to take care of themselves and their families. This, in turn, leads to better health outcomes and reduced healthcare costs. Finally, women's empowerment can lead to improved political participation (Kumar et al., 2019). When women are empowered, they are more likely to participate in politics and advocate for their rights. This can lead to more inclusive policies and better governance.

### *3.2 COVID-19, Women Empowerment and Economic Growth*

The COVID-19 pandemic has had a severe impact on the global economy, with many countries experiencing a significant decline in economic growth (Zayed et al., 2021). The pandemic has also exacerbated the barriers to women's empowerment, including economic, social, and political barriers (O'Donnell et al., 2021). The COVID-19 pandemic has led to significant economic barriers that have affected both men and women. However, women have been disproportionately affected by the pandemic's economic impact. Women are more likely to work in the informal sector, which has been severely impacted by the pandemic (Nguyen & Mogaji, 2021). Many women have lost their jobs or have had to reduce their working hours to take care of their families.

Women entrepreneurs have also faced significant economic barriers. The pandemic has led to reduced demand for goods and services, making it challenging for women entrepreneurs to sustain their businesses (Afshan et al., 2021). Moreover, women entrepreneurs face additional barriers, including limited access to finance, markets, and information, which have been exacerbated by the pandemic. The COVID-19 pandemic has also led to social and political barriers to women's empowerment. The pandemic has led to increased gender-based violence, with women and girls facing an increased risk of violence at home (Mittal & Singh, 2020). In addition, the pandemic has also disrupted education, with many girls dropping out of school to take care of their families or because of limited access to online learning (Duby et al., 2022). Moreover, the pandemic has led to reduced political participation for women. Many women are involved in community-based organizations, but the pandemic has made it challenging for these organizations to operate. Women's voices are essential in decision-making processes, but the pandemic has limited their ability to participate in these processes.

### *3.3 Economic Growth in Latin America and the Caribbean Regions*

Latin America and the Caribbean region need to increase their economic growth. The World Bank (2022) reported that although Latin America and the Caribbean have experienced progress over the past decade, more work still needs to be completed. The bank has recommended that the region develop and create innovative and inclusive growth policies, as the middle class is mainly ignored. Currently, the middle class throughout Latin America and the Caribbean is being ignored, example, the region should focus on accelerating digitalization because the services sector has been the hardest hit (Dini & Núñez Reyes, 2021). By accelerating digitalization, Latin America and the Caribbean can increase market competitiveness in information technology, finance, and logistics (Santiago et al., 2023; Traoré et al., 2021). Restructuring specific industries help address structural factors within the economy; if structural factors are not addressed, the economy will continue downward, increasing poverty and social tensions while decreasing economic growth (Song & Zhou, 2020).

Education is also a current factor in Latin American and Caribbean economic growth. Previous research has depicted that if countries increase their education investment, they will most likely experience economic growth (Sodirjonov, 2020). Increased education helps to provide citizens with higher salaries, improved effectiveness in the workforce, and higher GDP (Bawono, 2021). However, in Latin America and the Caribbean, the quality of education has decreased, with students losing as much as one and a half years of education since the beginning of the COVID-19 pandemic (Seusan & Maradiegue, 2020). If educational factors are not addressed throughout the region, current students risk losing up to 12% of their lifetime earnings because of decreased educational opportunities (The World Bank, 2022). If the educational sector is not addressed, the region can experience poor economic growth, perhaps not immediately, but in the years to come, because graduating students will not have the strong scientific literacy to be successful within the workforce (The World Bank, 2022). When exploring economic growth in the Latin America and Caribbean regions, it is imperative to examine other factors, such as the representation of women and the barriers they experience. These barriers include social norms and cultural attitudes, gender-based violence, and a decreased representation of women in the workforce, all which effect economic development in the Latin American and Caribbean region.

### *3.4 Barriers to Women Empowerment in Latin America and the Caribbean*

Women's empowerment is crucial for sustainable development in Latin America and the Caribbean. However, despite progress in recent years, women in Latin America and the Caribbean still face significant barriers to empowerment. Social norms and cultural attitudes remain significant barriers to women's empowerment in Latin America and the Caribbean (Drewry & Garcés-Palacio, 2020). These attitudes perpetuate gender stereotypes that limit women's opportunities and restrict their access to education, employment, and leadership positions. In some communities, women are expected to prioritize their domestic duties over their education or career aspirations, leading to limited opportunities for professional development (Huyer, 2019).

### *3.5 Societal and Cultural Norms and the Influence of Women Empowerment*

Societal and cultural norms in the Latin American and Caribbean region often perpetuate gender stereotypes and limit women's opportunities for empowerment. Women are expected to prioritize their domestic duties over their education or career aspirations, leading to limited opportunities for professional development (Nopo, 2012). In addition, societal and cultural norms have also influenced women empowerment by promoting gender-based violence. Gender-based violence is also a significant social barrier to women's empowerment. High levels of violence against women, including domestic violence and femicide, limit women's mobility, restrict their access to education and employment, and undermine their physical and emotional wellbeing throughout the Latin American and Caribbean regions. For example, Bucheli and Rossi (2019) conducted a study that focused on attitudes toward intimate partner violence in Latin America and the Caribbean and found that women residing in rural areas, as well as those who experience disadvantaged socio-economic situations are more apt to experience domestic violence. However, the authors found that situations and experiences of intimate partner violence decreases if women have access to the Internet. The authors also cautioned that fertility rates and the level of gender-equality in the region of Latin America and the Caribbean also can determine the level of domestic violence experienced. That is, if there are lower fertility rates and decreased gender-equality in the region, women are more likely to experience increased domestic violence (Bucheli & Rossi, 2019).

Women in the Latin American and Caribbean regions also face significant economic barriers to empowerment based upon societal and cultural norms that are built around economic and financial situations. For example, many women face challenges accessing credit, financial services, and other resources needed to start and sustain businesses, decreasing their level of empowerment and ability to become independent (Alecchi, 2020). Alecchi (2020) conducted a study that focused on the barriers and challenges that women entrepreneurs experience within Latin America and the Caribbean. The authors found that women within this region include the inability to obtain financing, hindering their ability to start and maintain businesses. Furthermore, the authors also reported that societal and cultural norms of the region also effect their level of empowerment through entrepreneurship activities, such as gender norms, balancing work and family life, and negative perceptions of women as entrepreneurs. These societal and cultural norms prohibit women-owned businesses being as successful as a man's. The identification of societal and cultural norms also directly influences women empowerment in Latin America and the Caribbean region due to their representation in the workforce.

### *3.6 Latin American and Caribbean Women and Barriers of Representing the Workforce*

Historically, women have been underrepresented in the labor force within the Latin American and Caribbean regions. For example, in Argentina, women only occupy 39% of parliament (The World Bank, 2022), compared to only 6% of women representing parliament in 1990. Nevertheless, the experienced growth over the past two decades does not

represent women equally when holding governmental positions. In the private sector, the World Bank (2022) reported that in Argentina, women represented approximately 39% of the workforce in 1990, compared to 42% in 2021. This depicts a 3% increase in the representation of women in the workforce over 31 years.

Other countries throughout Latin America and the Caribbean have experienced similar representations of women in the workforce. The Dominican Republic had approximately 31% of women representing the workforce in 1990, compared to 39% in 2021, highlighting an 8% increase over 31 years; Brazil reported approximately 34% of women in the workforce in 1990 compared to 43% in 2021, highlighting a 9% increase over 31 years; and Puerto Rico had 36% of women representing the workforce in 1990 compared to 42% in 2021, highlighting a 6% increase over 31 years (World Bank, 2022). Although these countries have demonstrated progress over three decades, women are still underrepresented in the workforce, which could explain how the reduction of poverty levels and economic growth have not been substantial (Doepke et al., 2012; Duflo, 2012; Golla et al., 2011).

Women in Latin America and the Caribbean bear a disproportionate burden of unpaid care work, which limits their ability to participate in the labor force and access education and training opportunities. These economic barriers perpetuate gender inequalities and limit women's opportunities for professional and economic advancement. Studies have been conducted in the Latin American and Caribbean region that have addressed the underrepresentation of women in the workforce in specific fields. For example, Garca-Holgado et al. (2019) studied how women in Latin America are encouraged to work within the science, technology, engineering, and mathematics fields (STEM). The authors reported that throughout the last two decades, women have continued to experience an underrepresentation in the STEM field throughout Latin America. The authors reported that women experience this underrepresentation due to biases, cultural norms, and a lack of campaigns focused on secondary schools where women can be encouraged to enter STEM in higher education. The authors' study highlighted several barriers of biases and cultural norms, which depicts the importance of discussing barriers that cause such underrepresentation throughout the Latin American and Caribbean regions.

In addition, the COVID-19 pandemic has not helped the representation of women in the workforce within the Latin America and Caribbean region. During the COVID-19 pandemic, Latin America and the Caribbean regions experienced a 20-point reduction in unemployment; however, this figure has increased again to what was experienced pre-pandemic, but several issues must be identified. First, formal employment has decreased by seven percentage points (Acevedo et al., 2021). Formal employment in the region is contractual agreements between employees and organizations, including manufacturing, services, and the extractive industry (Webb et al., 2020). The reduction in formal employment has indicated more informal job positions. Informal employment opportunities have increased exponentially throughout Latin America and the Caribbean, especially for women (Benavides et al., 2022). It is important to note that an increase in informal positions can wreak havoc on a region's economy simply because it significantly decreases a country's productivity and standard of living (Cardenas & Ayala, 2020).

Since the COVID-19 pandemic, over 4 million women have been unable to return to work. Throughout Latin America and the Caribbean, women have had a 16.4% unemployment rate (Cepal, 2022). There are many barriers that women experience that cause such underrepresentation. For example, within the Caribbean, cultural influences can act as a barrier to employment; women tend to have their obligations of running the household and taking care of children taking the forefront of all responsibilities (Green-Briggs, 2022). Culturally, if a woman has a child, they perceive the child to be a source of their identity, and they are expected to provide care and support for the child, which frequently means they are unable to work.

Additionally, throughout Latin America, the region's welfare system plays a role in the barriers to the underrepresentation and decline of empowerment of women. Because of decreased labor market participation, women experience more significant vulnerabilities at every phase of their lives, especially when older (Mariscal et al., 2019). Therefore, because they do not earn money or earn less money than their male counterparts, women in the Latin American region have less bargaining power and can experience higher rates of domestic violence (lvarez-Garavito & Acosta Gonzalez, 2021).

Finally, throughout the region, there are fewer opportunities for women in the labor market (Safe, 2019). This lack of opportunity can promote more women experiencing poverty as they have little to no financial assistance if they are single women or leave their husbands. To promote this poverty level, women have limited access to resources, such as credit and the owning of land (Larson et al., 2019). Suppose countries throughout the Latin American and Caribbean regions do not address these barriers. In that case, women will continue to be underrepresented in the labor force, and economic growth will be stifled, increasing poverty for all because of such poor economic development (The World Bank, 2022)

The literature review provides a comprehensive overview of women's empowerment, its economic impacts, and the role of COVID-19 in exacerbating existing challenges and does not offer concrete policy recommendations or solutions. However, these previous studies acknowledge that empowerment and economic growth are linked, but does not critically controlling for verity of variables such education, labor force, and other macroeconomic aspects. These nuanced factors were addressed in this study to present a more balanced view of empowerment's impact in different contexts. In addition, this study will contribute by providing academics and policymakers with important information.

#### 4. Data

The data collected covered 29 countries and regions, which included: Argentina, Bahamas, Barbados, Belize, Bolivia, Brazil, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Grenada, Guatemala, Guyana, Haiti, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, Puerto Rico, Saint Lucia, Saint Vincent and the Grenadines, Suriname, Trinidad, and Tobago, Uruguay, and Venezuela. The data covers metrics on women's empowerment from 1982 – 2019, about 38 years. The study variables included women empowerment as the independent variable and economic growth per capita as dependent variable proxied by Annual percentage growth percentage of GDP per capita at market prices based on constant local currency. Aggregates are based on constant 2015 prices, expressed in U.S. dollars. In our study we have used real GDP growth percentage to control for inflation, the data was gathered from the World Bank.

To understanding the overarching relationship between women's empowerment and economic growth, we sought to understand the impact of women's empowerment on economic growth from different domains and perspectives, like mobility, workplace, etc. Therefore, we required data that measures how empowered women are to make choices in different domains that affect how they live and work in their country, as well as measuring their overall empowerment. Our explanatory variable is women's empowerment, the data was gathered from World Bank, an institution focused on financing, reconstruction, and development empowerment data from the Women, Business, and the Law (WBL) survey were used for this study. The WBL dataset is a longitudinal survey that focuses on whether women are permitted to have the same rights as men in their designated country. The independent variables were developed from 26 binary variables from the WBL dataset grouped in six categories which are, mobility, workplace, entrepreneurship, pay, marriage, and assets variables. These 26 variables indicate whether women are afforded the same rights, choices, and opportunities as men, such as the ability to apply for a passport, open a bank account, or choose where to live, in addition, if woman can get a job, be head of household, register a business in the same way as a man. These 26 variables were coded 1 or 0: 1 = yes to 0 = no. For analysis, the 26 empowerment variables were categorized into six groups: mobility, workplace, entrepreneurship, pay, marriage, and assets. Each group has score from 0-100 where scores closer to 100 mean that women are more empowered in that country for that year. Our explanatory variable, women empowerment, calculated from these six categories, where the scores were summed then divided by the number of these categories to create our explanatory variable with a scale score that ranged from 0 to 100. Scores closer to 100 mean that women are more women empowered in that country for that year.

In addition, we have included several control variables such as unemployment rate, labor force participation, School primary completion rate, foreign direct investment, export, and government expenditure. Unemployment refers to the share of the labor force that is without work but available for and seeking employment and Labor force participation rate is the proportion of the population ages 15 and older that is economically active. foreign direct investment shows net in the reporting economy from foreign investors and is divided by GDP. Exports of goods and services represent the value of all goods and other market services provided to the rest of the world. School primary completion rate, or gross intake ratio to the last grade of primary education, is the number of new entrants in the last grade of primary education, regardless of age, divided by the population at the entrance age for the last grade of primary education. Finally, government expenditure is general government final consumption expenditure includes all government current expenditures for purchases of goods and services.

#### 5. Methodology

This study employed a longitudinal design and a quantitative technique in this investigation. The purpose of quantitative research is to analyze correlations and effects of variables using numerical computational approaches; hence a quantitative methodology is acceptable for this topic (Apuke, 2017). Before the hypothesis testing stage, the first step in the data analysis process was to remove every unnecessary data point and convert the data to a more readable form. The data cleaning process was essential as it removed biases in the data.

The resulting econometric model for the regression analysis is given as follows:

$$\text{GDP} = \beta_0 + \beta_1 \text{W. Empowerment} + \beta_2 \text{Unemployment} + \beta_3 \text{Labor F} + \beta_4 \text{FDI} + \beta_5 \text{Primary Sch} + \beta_6 \text{Export} + \beta_7 \text{Gov. Spend} + U$$

Where:

*Real GDP per capita percentage growth* = GDP

*Women Empowerment* = W. Empowerment

*Unemployment Rate* = Unemployment

*Labor Force Participation* = Labor F

Foreign direct investment = FDI

*Primary School Completion rate* = Primary Sch

*Exports of goods and services as percent of GDP* = Export

*Government spending as percent of GDP* = Gov. Spend

*Error Term* = U

## 6. Regression Analysis and Results

This section of this research covers the analysis and result discussion of the research following the methods outlined in the previous section. The section starts with a descriptive analysis where the variables will be briefly described giving the reader an overview of the variables and the nature of the data through values and charts where necessary. The descriptive analysis section is essential in any research to prepare the reader's mind before heading into the analysis properly. The discussion of results will relate the study's results to other past literature.

The hypotheses guided this study:

**H<sub>01</sub>:** Does women's empowerment significantly impact the economic growth in Latin America and the Caribbean when controlling unemployment rate, labor force participation, education, foreign direct investment, export, and government expenditure?

The summary statistics in Table 1 covered 29 countries from year 1982 to 2019 divided by two groups, based on the growth of GDP per capita percentage, less than two percent and greater than two percent. Countries with less than 2% in GDP per capita growth among years show that women are more empowered with average of 71.8 point, while 74.6 point in average is for the other countries' group. Unemployment rate in the first group tend to be higher with 8.9% comparing to 8.6% in the second group. About 2.8% in FDI growth in countries in the first group and more growth with average of 4% in the second group. Primary school completion rate is higher for the second group with 91.5% comparing to 86.7%. About 30.9% in exporting and 12.8% in government expenditure for the first group, while 32.8% and 12.1% for exports and government expenditure in the second group.

Table 1. Summary Statistics

	1 <sup>st</sup> Group		2 <sup>nd</sup> Group	
	GDP per capita growth > 2%		GDP per capita growth > 2%	
	Mean	Std. Dev.	Mean	Std. Dev.
GDP per Capita	-1.05	2.88	4.49	2.19
W. Empowerment	71.81	13.62	74.64	12.61
Unemployment	8.95	4.79	8.66	4.84
Labor F.	62.48	6.47	62.62	6.07
FDI	2.83	4.05	3.98	5.50
Primary Sch	86.70	19.44	91.47	31.26
Export/GDP	30.90	16.11	32.83	15.01
Gov. Spend/GDP	12.76	4.57	12.08	3.16

Summary statistics within two groups, less than two percentage and more then tow percentages in GDP per capita growth

Table 2. Difference in the Mean Values of the Key Covariates at Different Levels of Real GDP per Capita (Greater Than 2%, 3%, 4%, 5%)

	Two Percent	Three Percent	Four Percent	Five Percent
W. Empowerment	2.821*** (0.796)	2.592*** (0.837)	1.754* (0.951)	2.593*** (0.837)
Labor F	0.139 (0.387)	0.261 (0.408)	0.191 (0.464)	0.261 (0.408)
FDI	1.147*** (0.294)	1.641*** (0.307)	1.288*** (0.349)	1.641*** (0.307)
Primary Sch	4.766*** (1.038)	4.907*** (1.093)	5.423*** (1.233)	4.901*** (1.093)
Export/GDP	1.935* (1.021)	2.944*** (1.084)	1.577 (1.248)	2.944*** (1.084)
Gov. Spend/GDP	0.676*** (0.261)	0.823*** (0.278)	1.216*** (0.318)	0.823*** (0.278)

Notes: \*\*\*(\*\*)[\*] denotes 0.01(0.05)[0.10] level of significance. The numbers in parentheses are the standard errors. The coefficients are the mean difference between years with greater and less than 2%, 3%, 4%, and %5 change in the real GDP per capita.

Table 2 shows that women empowerment was higher in countries that exceeded the 2% to 5% economic growth per capita. FDI and primary education were substantially higher in countries with higher economic growth. While export and government spending were higher in those who achieved higher economic growth, the labor force participation did not show a statistically significant difference.

Table 3. Regression Estimates of the Effect of Women Empowerment on the Growth of Real GDP per Capita and the Probability of Achieving Economic Growth Greater Than Two, Three, and Four Percent

	OLS	Two Percent	Three Percent	Four Percent	Five Percent
W. Empowerment	0.0211*** (0.0098)	0.0031** (0.0015)	0.0017 (0.0014)	0.0002 (0.0011)	0.0017* (0.0014)
Unemployment	-0.0077 (0.0337)	0.0011 (0.0065)	0.0058 (0.0063)	0.0060 (0.0055)	0.0058 (0.0063)
Labor F.	-0.0432 (0.0245)	-0.0034 (0.0054)	-0.0014 (0.0055)	-0.0027 (0.0050)	-0.0014 (0.0055)
FDI	0.1351*** (0.0298)	0.0034 (0.0044)	0.0077* (0.0041)	0.0051 (0.0034)	0.0077** (0.0040)
Primary Sch.	0.0243***	0.0025	0.0010	0.0006	0.0011



	(0.0082)	(0.0017)	(0.0017)	(0.0015)	(0.0017)
Export/GDP	0.0316***	0.0051***	0.0072***	0.0062***	0.0072***
	(0.0089)	(0.0018)	(0.0018)	(0.0016)	(0.0018)
Gov. Spend/GDP	-0.1655***	-0.0228***	-0.0205***	-0.0154***	-0.0205***
	(0.0305)	(0.0048)	(0.0044)	(0.0038)	(0.0045)

Note. \*  $p < .1$ , \*\*  $p < .05$ , \*\*\*  $p < .01$ . The first column is the regression result of the Ordinary Least Squares regression (OLS) model, where both women empowerment and real GDP per capita growth are continuous variables. The coefficients reported in columns 2 to 5 are the estimates of a Linear Probability Model (LPM). The outcome variable in columns 2 to 5 is binary equals one if the achieved growth in the real GDP per capita is greater than or equals two, three, four, and five percent, respectively, and zero otherwise. The numbers in parentheses are the standard errors. The coefficients displayed in the table are for the women empowerment index, the key independent variable, unemployment rate, labor force participation, foreign direct investment (FDI) as a percentage of the GDP, the participation rate in primary school education, the ratio of export to GDP, and the percent of government spending to GDP.

The first column in Table 4 displays the regression estimates of the effect of women empowerment and key covariates on the economic growth measured by the percentage change in the real GDP per capita. After controlling for various macroeconomic variables such as the unemployment rate, labor force participation, FDI, education attainment, export, and government spending, Table 3 shows that an increase of 10 points in the women empowerment index (on a scale of 1 to 100) increases the growth of real GDP per capita by .21 percentage point per year. Expectedly, a rise in the unemployment rate causes a decline in economic growth. One percentage point increase in the unemployment rate is associated with a decline of .007 in annual economic growth (statistically insignificant). FDI, primary education attainment, and export are significantly associated with positive economic growth. One percentage point increase in the FDI/GDP, primary school participation, and export/GDP ratio increases the real GDP per capita growth by .14, .024, and .03 percentage point, respectively. There is no statistical evidence of an impact of labor force participation and government spending on GDP growth; however, the negative coefficients' signs conform with previous literature findings as labor force participation and government spending increase during the economic downturn.

I employ Linear Probability Model (LPM) to measure the probability of increasing economic growth due to women empowerment. I construct four different models where the outcome variable in each model is binary equals one if the real GDP per capita increases by two, three, four, and five percent per year, respectively. The results of the probability models are comparable to the OLS. The real GDP per capita is more likely to increase by two, three, four, and five percent per year by 3.1, 1.7, .2, and 1.7 percentage points when the women empowerment index increase by 10 points, respectively. Expectedly, government spending negatively affects economic growth across all probabilities' models. The unemployment rate shows significant effect across all probabilities models. The FDI shows a slight but statistically significant effect on economic growth at three and five percent per year. In comparison, the impact of primary school participation turns statistically insignificant in the two to five percent economic growth per year.

Table 4. Logistic Regression Estimates of the Impact of Women Empowerment and Other Key Covariates on the Change in Real GDP per Capita by Two, Three, Four and Five Percent per Year

	Two Percent	Three Percent	Four Percent	Five Percent
W. Empowerment	0.0034***	0.0023**	0.0013	0.0023**
	(0.0014)	(0.0013)	(0.0011)	(0.0013)
Unemployment	-0.0046	0.0054	0.0091***	0.0054
	(0.0045)	(0.0041)	(0.0033)	(0.0041)
Labor F.	-0.0042	-0.0042	-0.0032	-0.0042
	(0.0032)	(0.0029)	(0.0023)	(0.0029)
FDI	0.0071*	0.0112***	0.0059*	0.0112***
	(0.0045)	(0.0044)	(0.0033)	(0.0044)

Primary Sch	0.0039*** (0.0012)	0.0043*** (0.0012)	0.0047*** (0.0010)	0.0043*** (0.0012)
Export/GDP	0.0019 (0.0012)	0.0028*** (0.0011)	0.0016* (0.0009)	0.0028*** (0.0011)
Gov. Spend/GDP	-0.0214*** (0.0053)	-0.0253*** (0.0052)	-0.0254*** (0.0042)	-0.0253*** (0.0052)

Note. \*  $p < .1$ , \*\*  $p < .05$ , \*\*\*  $p < .01$ . The reported coefficients are the marginal effects calculated at means in logistic regression. The outcome variable is binary equals one if the real GDP per capita growth is greater than or equals two, three, four, and five percent, respectively, and zero otherwise. The numbers in parentheses are the standard errors. The coefficients displayed in the table are for women empowerment index, the key independent variable, unemployment rate, labor force participation, foreign direct investment (FDI) as a percentage of the GDP, the participation rate in primary school education, the ratio of export to GDP, and the percent of government spending to GDP.

As a robustness to the analysis, I employ logistic regression and report the marginal effects in Table 4. The results in Table 4 are comparable to those in the LPM models in Table 3; however, the logistic regression shows a stronger impact of the women empowerment on economic growth than the LPM model. The real GDP per capita is more likely to increase by two, three, four, or five percent per year by 3.4, 2.3, 1.3, and 2.3 percentage points when the women empowerment index increase by 10 points, respectively. Moreover, the FDI and the primary school participation show a consistent statistically and positive economically significant impact across all models. While the export to GDP ratio increases economic growth, government spending negatively correlates with economic growth across all models. All results are highly comparable to my findings in Table 3.

## 7. Discussion

The explanatory variable was women empowerment; the score of this variable included the average scores of each index that contained several variables on women's mobility, workplace, entrepreneurship, pay, marriage, and assets. According to the study findings, empowering women is a critical aspect of addressing the economic issues faced by Latin America and the Caribbean. With the addition of the control variables that we included in our study the significant nature of the study variable suggest that empowering women is a critical aspect in addressing the economic growth faced by Latin America and the Caribbean.

In entrepreneurship, female business owners are the increasing demographic globally. Thus, many researchers have continued to investigate this growing phenomenon. The growing body of research demonstrates that women can significantly contribute to economic growth and entrepreneurial activity in terms of creating new jobs while increasing the gross domestic product (GDP), with positive effects on reducing poverty and social exclusion (Kelley et al., 2017; Hechevarra et al., 2019).

According to Ali and Salisu (2019), the study of women's entrepreneurship and empowerment was conducted to aid the nation's development. It was discovered that cultural presumptions, unequal access to education, and a lack of resources all influenced the entrepreneurship and empowerment of women. The support of the sociocultural environment and female empowerment is at the foundation of a new type of female entrepreneurship in the Arab world, according to Alexandre and Kharabsheh's (2019) research into the rise of female entrepreneurship in the Gulf Cooperation Council. Three intersecting political economy logics—the logic of socioeconomic organization, the logic of development narratives, and the logic of economic structure—have been described by Ennis (2019). These defenses presented conflicting demands on women business owners and showed how their deeds reinforced some gender norms while encouraging new kinds of reliance. The characteristics of women business owners in Oman, their contributions to the economy and plans, and the challenges they faced, such as limited market access, domestic responsibilities that limited their online time, and a lack of understanding of social media marketing, were evaluated by Chaudhry and Paquibut (2021).

According to Nurbatra and Hartono (2020), the life skill program for women's empowerment had a beneficial impact on women's entrepreneurship and innovation, which enhanced the economy. In addition, Thapa Karki and Xheneti (2018) reported that it is commonly recognized that women's economic empowerment through entrepreneurship is vital for achieving sustainable development goals (SDGs). Entrepreneurs have created plans to enhance their market share, and Jakkula (2017) advised empowering such businesspeople. The same author suggested that for the general

development of rural entrepreneurship, they should be included in the various entrepreneurship associations.

Chatterjee et al. (2019) also noted that increasing the number of female entrepreneurs could enhance economic growth while providing women more power. As a result, it was determined how important psychological, social, skill- and resource-related aspects affected the success of female entrepreneurs. Su et al. (2020) employed dimensions to investigate women's empowerment in a qualitative study to comprehend how heritage and tourism are included in the empowerment of rural women. The political, social, psychological, and economic spheres were among these factors. The authors found that an essential element was economic empowerment. Other characteristics included education, self-esteem, positive self-evaluation, acknowledgment of one's value, family contribution, and particular talent and worth.

According to a World Bank report, India can see double-digit growth if more women work in the economic sector. Nevertheless, just 7 out of every 100 business owners in India are female (Economic Times, 2022). The relationship between entrepreneurship and development is still far from fully understood, even though it is universally acknowledged that entrepreneurship contributes to a nation's economy and causes a change in the business (Kelley et al., 2017). Hence, it appears a challenge and a call to action that the entire community is expected to respond to various levels to recognize the elements and idiosyncrasies that also influence the field of female entrepreneurship. This could aid in improving the circumstances for women in business by providing academics and policymakers with important information.

To provide an example, when the performance of micro, small, and medium-sized businesses was compared in Vietnam, it was discovered that while women tended to lead medium-sized businesses with higher value-added and labor productivity for the formal sector, their average value-added was lower for firms in the informal sector (Bui & Long, 2021). Women-only entrepreneurial networks provide support, mentors, and access to resources, according to Harrison et al. (2020). Regional economic development plans have heavily emphasized fostering and developing women's entrepreneurship. The significance of empowering women and engaging them in society was discussed by Manzoor et al. (2020). Female entrepreneurs work in the informal sector for several reasons: poverty, growing expenses, the need to provide for their children, and the desire to increase family income. Dahlum et al. (2022) asserted that another essential aspect of women's empowerment is the increased involvement of women in politics; political empowerment increases technological progress, and there is a strong link between economic development and women's political empowerment. Research has further demonstrated that gender equality and women empowerment influence economic outcomes, including growth (Cuberes & Teignier, 2014; Bertay et al., 2020; Altuzarra et al., 2021; Santos Silva & Klasen, 2021). Launching a business using social capital and shared responsibility creates opportunities for female business actors to grow their businesses and keep a viable entrepreneurial position. Through sustainable entrepreneurship, female entrepreneurs can advance professionally and obtain flexibility to balance work and family obligations (Yudiastuti et al., 2021).

Women's pay or wage is also crucial in the study's explanatory variable. Throughout the past 20 years, the gender wage disparity in the US has been broadly steady. According to a recent Pew Research Center examination of the median hourly wages of full-time and part-time workers in 2022, women made 82% of what men made on average. These findings mirrored the wage gap in 2002, when women earned 80% more than males (Carolina, 2023). This is a cause for concern as this study finds women's pay as a critical empowerment factor to address the economic issues faced by Latin America and the Caribbean. According to the International Monetary Fund (2018), economies grow as women enter the workforce. Women's economic empowerment increases productivity, broadens the economy, and promotes income equality, among other positive development outcomes.

## **8. Limitations**

The study is only limited to the dataset presented here. To improve the study, a different study research approach might be needed. Future researchers might seek to use a qualitative research methodology that will help drive the opinion of women in these regions to understand the factors that militate women's empowerment and how to improve it. The study can also be improved by adding more variables that will broaden the research scope and improve the quality of the research. Further, future researchers can broaden the scope of the study by not limiting the research to Latin America and the Caribbean alone to offer a global perspective.

## **9. Conclusion and Recommendations**

Women's empowerment is the process of enabling women to make crucial decisions for their advancement. It aims to liberate women from societal and familial constraints to become autonomous in all facets of life. Empowering women can create a society where men and women are treated equally in all spheres of life. Empowering women is crucial for

a nation's promising future and for society and the family to prosper. Women must be accorded equal status to males for the nation to thrive since accounts of ancient studies indicate that they were not treated in the same manner as men.

This study concludes that empowering women through women's mobility, workplace, entrepreneurship, pay, marriage, and assets can increase the chances of an improved economic situation in the 29 Latin American and Caribbean countries being studied. The study found that increase of 10 points in the women empowerment index (on a scale of 1 to 100) increases the growth of real GDP per capita by .21 percentage point per year.

This study recommends that a strong emphasis on policy and program innovation should be the approach of choice by Latin American and Caribbean governments because, to develop innovative gender programming approaches, research and design interventions that do not conform to the norms can successfully address the barriers that hinder women from achieving as well as men in crucial areas will be required. The policy should support women's growth, emancipation, and advancement. Eradicating racism and violence against women and young girls are also necessary. The participation of women in decision-making, which needs to be improved, is the most critical component of socioeconomic success. Findings from this study suggest that empowering women will promote economic development and progress, although not with factors of the control variable. Therefore, government programs and policies can be beneficial for ensuring the empowerment of women.

Cabeza et al. (2018) discovered a favorable association between the participation of women in parliament and economic development. Therefore, cultural and educational factors have prevented women from engaging in politics in developed and underdeveloped economies (Kunovich et al., 2007; Kassa, 2015). As a result, more should be done to encourage women to attend school. The results of this study also have significant ramifications for actions intended to solve the economic problems Latin America and the Caribbean are now experiencing.

The services provided by credit and saving institutions in Latin America and the Caribbean for women's economic empowerment could be improved by cooperation with the town administration's office for women's affairs and other non-government groups that work on women's empowerment. The amount of credit supplied to females and the rate policy of credit and saving institutions should be changed to attract more female customers and achieve the objective of women's economic empowerment.

Some studies have backed women empowerment recently given specific reasons for low empowerment in some areas, such as Morsy (2020), who asserted that due to gender differences in educational attainment, information disproportionateness about loans, an increase in state-owned banks, and a decrease in foreign-owned banks, women were more likely to be left out from the financial industry. Due to all these factors, women have less access to the financial sector. Brixiov áet al. (2020) claimed that simple access to financing would enable more women to start and run successful businesses. Jaim (2020) also asserted that gendered regulations that require loans to be provided to spouses prevent female business owners from obtaining bank loans. The inconsistent application of the law is one of the obstacles for women seeking employment. These challenges are found to be critical factors in our study and should be dealt with appropriately by the appropriate bodies.

Unless more women work in business and finance, it will be difficult to understand their importance to economic development. According to the financial element argument, women who have easy access to credit are more likely to experience financial difficulties and receive loans and credit while starting their businesses. Key steps to promote women in business include digitalizing economic policy, equal access to education, flexibility in the employment market, and established salary norms. The social aspect idea is concerned with societal standards generally and those that restrict women's advancement specifically. Governments must invest in women if they want them to participate in the mainstream economic agenda and attain self-sufficiency and sustainable development.

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No additional data are available.

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