

# A study on Socio-Economic Status of Women in Afghanistan- 1998 -2021.



*Um estudo sobre o status socioeconômico das mulheres no Afeganistão - 1998-2021.*

*Un estudio sobre la situación socioeconómica de las mujeres en Afganistán - 1998-2021.*

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## ABSTRACT

In the period years 1998 to 2021, Afghanistan has witnessed a notable enhancement in the status of women, largely attributable to international financial assistance and the implementation of national programs. Significant progress has been made in the area of human development, accompanied by a notable increase in the number of girls pursuing higher education and gaining access to health services. Additionally, foreign aid and globalization have played a significant role in improving the socio-economic conditions of Afghan women. The main objective of the current study is to investigate women's socio-economic conditions in Afghanistan. This research employs the autoregressive distributed lag (ARDL) modeling approach within the EViews 12 software environment to elucidate the pivotal relationships between predictor variables and the dependent variable. This study posits that economic deprivation, the human development index, foreign aid, and globalization collectively contribute to the conditions faced by women. These research findings reveal that globalization has a significant, positive long-term impact on the socioeconomic conditions of women in Afghanistan. The research uncovers a significant, positive correlation between the Human Development Index (HDI) and foreign aid with the GII in Afghanistan. These findings raise important questions about the impact of development initiatives and foreign aid on the socioeconomic conditions of women in Afghanistan.

Key Words: Gender inequality, women's condition, Auto Regressive Distributed Lag, Afghanistan

## RESUMO

No período de 1998 a 2021, o Afeganistão testemunhou uma melhoria notável na condição das mulheres, em grande parte atribuível à assistência financeira internacional e à implementação de programas nacionais. Houve progresso significativo na área do desenvolvimento humano, acompanhado por um aumento

notável no número de meninas que buscam educação superior e têm acesso a serviços de saúde. Além disso, a ajuda externa e a globalização desempenharam um papel significativo na melhoria das condições socioeconômicas das mulheres afegãs. O principal objetivo do presente estudo é investigar as condições socioeconômicas das mulheres no Afeganistão. Esta pesquisa emprega a abordagem de modelagem autorregressiva de defasagem distribuída (ARDL) dentro do ambiente de software EViews 12 para elucidar as relações centrais entre as variáveis preditoras e a variável dependente. Este estudo postula que a privação econômica, o índice de desenvolvimento humano, a ajuda externa e a globalização contribuem coletivamente para as condições enfrentadas pelas mulheres. Os resultados desta pesquisa revelam que a globalização tem um impacto significativo e positivo a longo prazo nas condições socioeconômicas das mulheres no Afeganistão. A pesquisa revela uma correlação positiva significativa entre o Índice de Desenvolvimento Humano (IDH) e a ajuda externa com o Índice de Desenvolvimento Humano (IDH) no Afeganistão. Essas descobertas levantam questões importantes sobre o impacto das iniciativas de desenvolvimento e da ajuda externa nas condições socioeconômicas das mulheres no Afeganistão.

Palavras-chave: Desigualdade de gênero, condição das mulheres, Atraso Distribuído Auto Regressivo, Afeganistão

## RESUMEN

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Palabras clave: Desigualdad de género, Condición de la mujer, Atraso Distribuido Autorregresivo, Afganistán

## 1 INTRODUCTION

The socio-economic conditions of women in Afghanistan have changed significantly over the past 23 years, with both progress and decline. It should be noted that the situation is complex and influenced by a range of factors, including modifications in political ideology, security challenges, gender inequalities, education systems, economic disparities, health issues, unemployment, aspects of globalization, and cultural

norms. Gender equality can be achieved through equal rights, opportunities, access to education and healthcare, decent work, and political and economic privileges that should be available to both men and women (Duflo et al., 2005)

Afghanistan is currently experiencing one of the worst and largest humanitarian disruptions in the world, and over 50% of the population relies on humanitarian support for survival. In poor countries like Afghanistan, the main problem against women is the overall social, institutional setting and cultural practices such as traditions, laws, norms, limited policies, and codes of conduct (World Bank, 2001). The Secretary-General of the United Nations, Kofi Annan, has claimed that achieving gender equality is a “prerequisite” for achieving the other Millennium Development Goals, including poverty eradication, reducing child mortality, achieving universal education, and ending gender disparity in education by the target year of 2015 (United Nations, 2005). Moreover, across the country, over 18.9 million people are at a critical or higher level of emergency food insecurity. Predictions are that access to food will deteriorate as a result of worsening economic effects, climate change, and global security challenges (CARE, 2022).

Gender equality and the empowerment of women have been established as important dimensions in Afghanistan’s development framework and internationally in the 2030 SDG Agenda. Gender inequality in educational attainment also affects the HDI and its impact on the health component. Educated girls tend to have healthy children and family-related family members. According to the Sustainable Development Goals (SDGs), governments should take urgent action to address the root causes that have led to discrimination and women’s participation in the private and public sectors, including by transforming their role. Such actions include reforming legal frameworks and adopting laws that promote equal opportunities for women and men (United Nations, 2017a). SDG 5 highlights the significance of attaining gender equality and empowering women, not only due to its fundamental human rights nature but also because it serves as a catalyst and also because of its implications for all other areas of development (United Nations, 2021).

According to (MDGs, access to education and job opportunities has close relations and affects women’s economic empowerment (Echavez et al., 2014). Since 2001, the Afghan government, in cooperation with international organizations, has invested significant resources to ensure that women become leaders in politics, business, and civil society (Nijat & Murtazashvili, 2015). The Bonn Conference agreement and the 2004 Afghanistan constitution emphasized equal rights for women and their participation in government. The elaboration and establishment of a programmatic framework for women’s rights and gender equality clauses in constitutions through careful interpretation and consultation with interested parties and actors (Mohammad Hashim Kamali, 2008).

Gender inequality in the context of human development is still one of the most important issues in most societies, particularly in Afghanistan, where women experience much discrimination and obstacles. Knowing the condition of women and deep-diving into various aspects of this

concept is crucial for societies such as those in Afghanistan. The socio-economic status of Afghan women reflects their access to education, jobs, income, healthcare, and decision-making. It is shaped by structural, cultural, and political factors, with key indicators like literacy, employment, income, and asset ownership. Conflict, poverty, gender norms, and instability heavily impact these conditions, requiring a comprehensive analysis to understand their effects on women's lives.

In 2021, when the Taliban gained control of the country, concerns were raised about the potential reversal of progress in women's development. During their previous rule from 1996 to 2001, the Taliban imposed severe restrictions on women's fundamental rights, impacting access to education and healthcare. The current policies also continue to limit women's access to education beyond the 6th grade, higher education, and employment. In other nations, plenty of studies are related to this issue, but there is a scarcity in Afghanistan. Given the above compelling reasons, researchers intend to assess the socioeconomic conditions of women in Afghanistan. The main objective of the current study is to investigate women's socioeconomic conditions in Afghanistan. According to the gender and development theory, examine how structural inequalities in Afghanistan restricted women's agency across the last regimes, and to obtain this objective, the authors selected the Gender Inequality Index GII as the dependent variable and economic deprivation, Human Development Index, foreign aid, and Globalization as independent variables, utilizing the ARDL model.

Our hypothesis in this study is that developed independent variables like economic deprivation, the human development index, foreign aid, and globalization contribute to women's conditions in related dependent variables like employment, access to education, health services, social status, and fundamental rights. Based on intersectionality approaches, this study adopts an intersectional lens to reveal how multiple identities shaped women's unequal access to education and employment. According to HDI theory, the erosion of women's educational and health rights under the Taliban severely curtailed their development potential in Afghanistan. Based on postcolonial feminist theory, the research resists homogenizing Afghan women's experiences and highlights context-specific forms of resilience. The results will provide empirical support by highlighting which selected indicators have the most significant impact on Afghanistan's women's condition. Policymakers can make well-informed judgements about how best to allocate resources and formulate policies that will enhance women's condition with the help of this evidence.

## 2 LITERATURE REVIEW

Afghanistan is currently experiencing an accumulation of crises, including economic, humanitarian, climate-related, and political challenges. These crises are interrelated and further exacerbated by the growing crisis of women's rights. And it has been struggling with the issues of gender inequality and women's fundamental rights. Though, between 2013 and 2016, the proportion of women in the Afghanistan judiciary

increased from 8.4 percent to 11 percent, with women presiding over lower courts and adjudicating juvenile and family cases, as well as cases of violence against women and girls (Schwab et al., 2019). The status of women has been fluctuating over time, with improvements in some areas in the last 20 years, but also setbacks within the recent three years, as recent survey, nearly 16 million Afghans are affected by poverty, increased in fertility has a deleterious impact on the welfare of households, as evidenced by significantly elevated poverty rates among larger households and those with more children. Conversely, educational attainment and literacy, and unemployment have a deleterious impact on the household. The correlation between employment and higher levels of poverty indicates that employment is not a guarantee of protection from poverty (Central Statistics Organization, 2018).

In 2020, Care, an international organization, surveyed 320 individuals in Afghanistan. The findings revealed that 67% of women are unable to access health services without the accompaniment of a male relative, and 73% of women reported a lack of knowledge regarding family planning, and 87% of women had experienced some form of gender-based violence. Additionally, 55% of women indicated that they would prioritize cash to make up for income losses, and only 8% of women have received social assistance (CARE, 2020).

A study conducted by the World Bank and the International Finance Corporation in 2008 revealed that women's participation in business, the proportion of female top managers, the number of permanent full-time workers who were female in Afghanistan were significantly lower than the average South Asia, regional and global (Echavez et al., 2014). Amānullāh Khan, former King of Afghanistan, has considered a series of reforms at the administrative, economic, and social levels to enhance women's rights. He established new educational institutions for both girls and boys, prohibited forced marriages, and publicly denounced polygamy and mandatory dress codes. Queen Soraya removed her veil and established the inaugural women's journal in Afghanistan, advocating for gender equality. By the early 1990s, it was estimated that nearly 70% of school teachers, 50% of government workers and university students, and 40% of doctors in Kabul were women (Gabiya Leclerc and Rosamund Shreeves, 2023).

According to the UNDP Report 2021 related to gender inequality, revealed that maternal mortality rate in Afghanistan was 638 per 100,000 live births in 2017, the adolescent birth rate is 82.6 as per 1,000 women ages (15-19) in 2021, population with least some secondary education is 6.4 female, and 14.9 for male ages 25 and older, and labor participation rate is 14.8 for female and 66.5% for male ages 15 and older in 2021 (UNDP, 2023). According to the figure related to the gender development index, Afghanistan is in group 5 by absolute deviation from gender parity in HDI values 0.678, the data was collected in the recent year 2021 and cleared some socio-economic aspects developed on SDG dimensions of gender development in Afghanistan (UNDP, 2023), the Human Development Report in 2021, elucidated the gender inequalities between Afghanistan and neighboring countries, Afghanistan has the highest gender disparity

with a GII value of 0.655, and after that Pakistan, Iran, and China also have the lowest gender disparities among neighboring countries (United Nation, 2021)

(Kathleen, et.al., 2012). They have done a review of title lessons from women's programs in Afghanistan and Iraq that revealed that in the economic sphere, women in Afghanistan should not be limited to the lowest-paying jobs.

The research findings indicate that Afghan women encounter obstacles in reaching out beyond urban elites to non-elite women, especially those women who are in provinces and remote areas. The influence of culture and religion has been observed to impede the advancement of women's education, economic autonomy, and political participation. It was revealed that women in both countries confronted significant barriers to education and awareness of their rights (Ashraf & Ali, 2018). The research found a positive and significant relationship between women's status and the human development index. It showed that a 1% increase in human development causes a 0.586% decrease in gender inequality (Jütting et al., 2008). Also found similar results; however, economic deprivation has a negative and significant impact on women's status in the context of Pakistan. The findings indicate that as the level of education increases, the overall status of women also increases. The results show that a 1% increase in secondary school enrollment changes the status of women by 0.22%. This is supported by (Malik & Courtney, 2011) and (Faridi Mohammad Zahir, et. al, 2009) who argue that higher enrollment in secondary and higher education improves the status of women in society.

On December 24, 2022, the Ministry of Economy enacted a prohibition on Afghan women working for national and international NGOs in Afghanistan. This ban on women NGO workers has a direct impact on the more than 15,000 women employed in Afghanistan across 183 national and international NGOs (Michelle Gehrig and Caitlin Willisroff, 2024) the same (Van Bijler Martine, 2021) In August 2020, was conducted a qualitative survey with a coalition of 400 Afghan women and activists under the name "Our Voice, Our Future." As a result of this interview, two open letters were sent to "Women World Leaders." These letters called on the recipients to support the ongoing fight to secure the rights of Afghan women and their children. Additionally, the letters were addressed to the Taliban leadership, using the phrase "Our Voice, Our Future (Lerch et al., 2022) found that in the majority of domains, female participation is observed to be lower in countries with established links to illiberal international organizations, particularly in recent times.

Rasmane Ouedraogo (2018) and Elodie Marlet (2018), observed a correlation between foreign direct investments and two indices: The Gender Development Index (GDI) and the Gender Inequality Index (GII). These indices are used to measure gender development and gender inequality in developing countries. The evidence suggests that high levels of FDI inflows per capita are associated with higher values of gender development indices and with lower values of gender inequality indices over the period 1990–2015. Furthermore, the relationship between



FDI inflows per capita and GDI appears to be more pronounced in middle-income countries, while the relationship with GII is more pronounced in low-income countries. And found that the evidence suggests that there is a positive association between FDI and female entrepreneurship. Furthermore, the association between female entrepreneurship and industry FDI is on average statistically insignificant, indicating that intra-industry FDI crowding-out effects do not appear to apply in the case of female entrepreneurship, and in Afghanistan, there are just 2.42% female managers in 2018.

Gender inequality remains a global issue, which results in the fundamental denial of basic rights and opportunities for women and girls. Achieving gender equality and promoting the empowerment of women and girls necessitates further advocacy to challenge widely entrenched gender-based discrimination rooted in patriarchal attitudes and societal norms (United Nation, 2017b) Since 1947, the United States has been hosting the world's most important intergovernmental commission dedicated exclusively to the promotion of gender equality and the empowerment of women. It creates proposals to the Economic and Social Council on advancing women's rights in political, economic, social, and educational domains (Castillejos-Aragón, 2021). The labor market presents a number of challenges for women. They are less likely to be employed, they earn less than men in similar roles, and they are more likely to be in poverty even when they are working. Furthermore, women spend almost twice as much time on housework, almost five times as much time on childcare, and about half as much time on market activities as men do (Esther Duflo, 2012)

The results indicate that the relative participation of women in the economically active labor force tends to increase with the level of globalization. The positive interaction term between gender and globalization in ( $b = 4.25$ ,  $p < .01$ ) corroborates the hypothesis that women's likelihood of engaging in paid work, in comparison to men, is positively correlated with globalization (Roll et al., 2024) and (Akhter & Ward, 2009) and (Ben-Nun Bloom et al., 2017) had studied related to globalization and gender equality, the results demonstrate that the global economy exerts disparate influences on gender empowerment, and The process of economic globalization has the effect of enhancing gender equality (Potrafke & Ursprung, 2012) In their research, they discovered that economic and social globalization exert a decidedly positive influence on social institutions that reduce female subjugation and promote gender equality. (Richards & Gelleny, 2007) discovered that the relationship between economic globalization and women's status is contingent upon the specific type and era under examination. In the majority of cases, economic globalization is associated with an improvement in women's status.

Meyer (2003), investigates the impact of economic globalization on work-related gender differences and inequalities. The results of this study illustrate that economic globalization reduces occupational gender discrimination and inequality. Moreover, trade liberalization increases job opportunities for both men and women, which reduces gender inequality.

(Moghadam, 1999) analyzes the impact of globalisation on women's labor force participation and women's mobilization. The results of the study show that globalizations contribute to women's empowerment.

Duflo (2011) has revealed that a mutual relationship between economic development and women's empowerment is defined as the improvement of women's ability to access the elements of development, including health, education, income, rights, and political participation. It was further recommended by the researchers that policymakers focus their attention relationship. In the 2019 Asia Foundation report on perceived gender challenges, it was noted that women faced greater obstacles than men in various areas, including access to education, access to rights/participation, violence, and economic crisis (Clara Albrecht et.al 2022).

### 3 RESEARCH DATA AND METHODOLOGY

#### 3.1 Introduction of the Auto Regressive Distributed Lag Model

In this study, the authors examine the methodology of the United Nations Development Program (UNDP) gender inequality index. economic deprivation, Globalization, human development index, and Foreign aid have some selected explanatory variables in Afghanistan using the ARDL econometric model. The ARDL model is commonly used for Log analysis (Pesaran and Smith, 1995). According to the theoretical foundations and experimental studies conducted, and also quoted from (Pesaran et al., 2001). The ARDL model is described as follows:

$$GII_t = \alpha_0 + \sum_{i=1}^p \alpha_{1i} GII_{t-i} + \sum_{i=1}^{q1} \alpha_{2i} ECD_{t-i} + \sum_{i=1}^{q2} \alpha_{3i} GLO_{t-i} + \sum_{i=1}^{q3} \alpha_{4i} HDI_{t-i} + \sum_{i=1}^{q4} \alpha_{5i} ODA_{t-i} + LGII_{t-1} + LECD_{t-1} + LGLO_{t-1} + LHDI_{t-1} + LODA_{t-1} \quad (1)$$

After confirming the existence of a long-term relationship between the variables, a model with a conditional autoregressive distribution interval can be performed, which can be used to estimate the long-term coefficient in the model.

$$GII_t = \alpha_0 + \sum_{i=1}^p \alpha_{1i} \times GII_{t-i} + \sum_{i=1}^{q1} \beta_i \times ECD_{t-i} + \sum_{i=0}^{q2} \theta_i \times GLO_{t-i} + \sum_{i=0}^{q3} \delta_i \times HDI_{t-i} + \sum_{i=0}^{q4} \gamma_i \times ODA_{t-i} + u_t \quad (2)$$

This research is a long-term relationship after confirmation as follows:

$$GII = \alpha_0 + \beta_1 ECD + \beta_2 GLO + \beta_3 HDI + \beta_4 ODA + U_t \quad (3)$$

In the above relation

*The dependent variable:*

GII: Gender Inequality Index.



*Independent variables:*

ECDt: = Economic Deprivation.

GLOt: Globalization.

HDI<sub>t</sub>: Human Development Index.

ODAt: Foreign aid. The index *t* represents time.

*3.2 Gender Inequality Index*

The Gender Inequality Index (GII) is a measure introduced by the United Nations Development Programme (UNDP) in its Human Development Report. It reflects gender-based inequalities in three dimensions: reproductive health, empowerment, and economic activity. Each dimension is measured using sub-indicators such as life expectancy, mortality ratio, secondary education enrolment, and labour market participation. The Gender Inequality Index (GII) and its related dimensions are considered dependent variables. The Gender Inequality Index (GII) is calculated by combining three dimensions to produce a composite index that ranges from 0 (perfect gender equality) to 1 (maximum inequality). The GII value decreases as the level of gender inequality decreases.

*3.3 Human Development Index*

The Human Development Index (HDI) and Gender Inequality Index (GII) are frequently examined in combination to understand the relationship between overall human development and gender inequality. The HDI assesses a country's average achievements in three fundamental dimensions of human development: health (measured by life expectancy at birth), education (measured by mean years of schooling and expected years of schooling), and standard of living (measured by GNI per capita). Socioeconomic factors, such as income levels, can also influence gender inequalities as addressed by the Human Development Index (HDI). Policies that focus on economic development may help to reduce gender gaps in income and employment opportunities. And improving access to education and health has a significant relation with the household economy and social lives.

*3.4 Economic Deprivation*

In Afghanistan, economic deprivation is affecting women, who have limited access to income-generating projects, experiencing conflict, displacement, and restrictions. Here, Economic Deprivation is an independent variable, and GII is a dependent variable. Examining the relationship between economic deprivation and gender inequality can provide valuable insights into the factors that influence gender disparities and inform strategies for promoting gender equality. This index was introduced by Arthur Okun in 1960. He constructed the Misery Index by adding the annual rate of inflation and adjusted rate of unemployment, which are used to analyze the economic well-being of any country.

**3.5 MI = Inf + Une**

In the above questions, MI represents the misery index, INF is the Inflation rate, and Un shows the Unemployment rate.

### 3.6 Foreign Aid

Afghanistan is financially dependent on other countries to fund the projects to support the socio-economic conditions of women in the country. Examining the correlation between foreign aid and the Gender Inequality Index (GII) as a dependent variable could be fruitful for this research. This analysis can provide valuable insights into the effectiveness of aid in promoting gender equality.

### 3.7 Globalization

Globalization before 2021 brought exposure to global norms for Afghan women on related gender equality, creating opportunities to hire in NGOs, supporting women entrepreneurs, funding projects to work with media, and supporting socially and politically. Analyzing the relationship between globalization and the Gender Inequality Index (GII) requires exploring how the degree of globalization in a country or region is associated with gender disparities. The relationship between globalization and gender inequality is complex, and findings may vary based on the specific indicators used and the unique characteristics of the countries or regions under study.

## 4 EMPIRICAL RESULTS AND DISCUSSION

*4.1 presents a summary of descriptive statistics on the variables used in EViews 12 software*

Table 1: Descriptive Statistics

| Variables   | LGII      | LECD      | LGIO      | LHDI      | LODA      |
|-------------|-----------|-----------|-----------|-----------|-----------|
| Mean        | 0.502077  | 2.872655  | 3.471504  | 0.368773  | 4.414635  |
| Median      | 0.530031  | 2.948747  | 3.544347  | 0.382189  | 4.724056  |
| Maximum     | 0.562469  | 3.521311  | 3.656211  | 0.412772  | 5.411563  |
| Minimum     | 0.359072  | 2.192823  | 3.164795  | 0.294906  | 1.878739  |
| St.Dev.     | 0.077380  | 0.325162  | 0.184658  | 0.041185  | 1.076518  |
| Skewness    | -0.219474 | -0.406500 | -0.630326 | -0.619607 | -1.469048 |
| Kurtosis    | 1.779604  | 2.807137  | 1.763687  | 1.960971  | 3.880241  |
| Jarque-Bera | 5.997041  | 0.698167  | 3.117716  | 2.615236  | 9.407233  |
| Probability | 0.249861  | 0.705334  | 0.210376  | 0.270464  | 0.209062  |
| Sum         | 12.04986  | 68.94373  | 83.31609  | 8.850551  | 105.9512  |
| Sum Sq.Dev. | 0.137715  | 2.431802  | 0.784263  | 0.039012  | 26.65451  |
| Observation | 24        | 24        | 24        | 24        | 24        |

Source: Authors' calculation

The provided data in Table 1 indicates that the gender inequality index (GII) has a mean of 0.502 and a standard deviation of 0.077. Economic deprivation (ECD) is reported to have an average of 2.87 with a standard deviation of 0.32, and the globalization variable (GIO) has an average of 3.47 with a standard deviation of 0.184. In the research model, the mean for the Human Development Index (HDI) is 0.368 with a standard deviation of -0.619. Furthermore, the mean for the foreign aid (ODA) is stated to be 4.414 with a standard deviation of 1.076. The research also notes that the elasticity, skewness, and probability statistics of the Jarek test are within normal ranges for all variables in the study.

#### 4.2 Unit Root Tests

The Dick-Fuller unit root test and the Phillips and Peron test are the most important tests for examining the stability of time series data.

Table 2: Unit Root Tests

|          | At level                      |                      |
|----------|-------------------------------|----------------------|
| Variable | Dickey-Fuller (ADF)           | Phillips Perron (PP) |
| LGII     | -3.507**                      | -1.951               |
| LECD     | -2.963*                       | -2.983*              |
| LGLO     | -2.348                        | -1.224               |
| LHDI     | -2.327                        | -2.336               |
| LODA     | -2.963*                       | -2.983*              |
|          | At 1 <sup>st</sup> difference |                      |
| LGII     | -3.148**                      | -3.148**             |
| L LECD   | -5.630***                     | -8.266***            |
| LGLO     | -3.132**                      | -3.062**             |
| LHDI     | -3.385**                      | -2.520*              |
| LODA     | -5.630***                     | -8.266***            |

Source: Authors' calculation

The results of the unit root test are presented in Table 2, utilizing the Dickey-Fuller (ADF) and Phillips-Perron Piron PP methods. The analysis indicates that the Gender Inequality Index, as the dependent variable, rejects the unit root hypothesis according to the Dickey-Fuller method, while accepting it based on Phillips-Perron, implying that this variable is stationary I(0). Upon examination of the independent variables, both economic deprivation and foreign aid reject the unit root hypothesis at a 90% confidence level using both methods, suggesting their stationarity I(0). Conversely, globalization and the human development index accept the unit root hypothesis, utilizing both tests, implying that these variables are nonstationary and possess a unit root. Subsequently, after differencing, these two variables reject the unit root hypothesis at the 90% confidence level, indicating their stationarity I (1). Consequently, based on

these findings, we can conclude that all variables are either I (0) or I (1), allowing for the accurate use of the autoregressive distributed lag (ARDL) model for estimation. In summary, the comprehensive examination of the unit root tests using the Dickey-Fuller (ADF) and Phillips-Perron (PP) methods is crucial for determining the stationarity of variables, which is essential for precise modeling and forecasting purposes.

#### 4.3 Represents the results of the ARDL bounds testing technique.

Table 3: Bound testing

| ARDL Bound testing approach             |      |                 |      |      |      |
|-----------------------------------------|------|-----------------|------|------|------|
| Dependent Variable GII ARDL (3.3.3.3.2) |      |                 |      |      |      |
| F-Statistics: 4.0078                    |      | Critical values |      |      |      |
| 0.10                                    |      | 0.5             |      | 0.01 |      |
| I(0)                                    | I(1) | I(0)            | I(1) | I(0) | I(1) |
| 2.2                                     | 3.09 | 2.56            | 3.49 | 3.29 | 4.37 |

Source: Authors' calculation

The null hypothesis has been rejected, revealing a co-integration pattern or long-term equilibrium relationship among the variables of gender inequality index (GII), economic deprivation (ECD), foreign aid (ODA), human development index (HDI), and globalization (GIO). This conclusion is supported by the F-statistic test, which indicates that the calculated value surpasses the upper limit at both the 5% and 10% significance levels.

Table 4: Long-Run Relationships

| ARDL Long Run Results ARDL (3.3.3.3.2)    |              |                |                    |
|-------------------------------------------|--------------|----------------|--------------------|
| Dependent Variable LGII Period 1998- 2021 |              |                |                    |
| Variable                                  | Co-efficient | Standard-error | T-statistics(prob) |
| LECD                                      | 0.012377     | 0.004764       | 2.60021(0.0115)    |
| LGLO                                      | -1.345540    | 0.175407       | -7.670975(0.0166)  |
| LHDI                                      | 4.770794     | 0.470963       | 10.12986(0.0096)   |
| LODA                                      | 0.088659     | 0.007793       | 11.37653(0.0076)   |
| C                                         | 0.020728     | 0.423438       | 7.133818(0.0191)   |

Source: Authors' calculation,

The findings in Table 4 demonstrate that all variables significantly impact the Gender Inequality Index (GII) over the long term. However, the interpretation of the estimation coefficients and their impact on the dependent variable varies. The estimation results indicate that globalization (GLO) is negatively and significantly correlated with gender inequality. This means that a 1% increase in globalization leads to a (1.345) decrease in gender inequality, suggesting that globalization has a positive effect on improving conditions for women in Afghanistan. Conversely,

economic deprivation has a positive and significant association with the gender inequality index. This implies that a 1% increase in economic deprivation leads to a 0.0048% increase in the gender inequality index, indicating that economic deprivation worsens the situation for women in Afghanistan. It is evident that as economic deprivation increases, women's participation in the labour market decreases.

The relationship between the Human Development Index (HDI) and the Gender Inequality Index (GII), as well as the connection between Official Development Assistance (ODA) and GII, both demonstrate positive and significant correlations. This means that a 1% increase in HDI results in a 4.77% increase in GII, and similarly, a 1% increase in ODA leads to a 0.088% increase in GII. These findings indicate that as HDI and ODA increase, gender inequality, as measured by the GII, also increases, signaling a lack of improvement in the status of women. These results were unexpected and contradicted general assumptions. However, it may be attributed to the systematic discrimination against Afghan women that is deeply rooted in the cultural and societal norms of the Afghan community. Additionally, the current regime and existing conditions in Afghanistan provide additional support for our findings and assertions.

#### 4.4 Assessing the Short-Term Gender Inequality

Once a long-term relationship has been identified, the next crucial step is to calculate the error correction equation. This involves incorporating a time-lagged regression error term with other explanatory variables and utilizing the least squares method to determine the error correction coefficient. This coefficient signifies the pace at which adjustments move towards the long-term equilibrium. Essentially, it quantifies the degree to which any disparities from the long-term relationship in the previous period are being rectified in the current period. A positive coefficient signifies divergence, while a negative coefficient implies convergence.

#### 4.5 Commentary on the Error Correction Model

Table 5: Error Correction Model.

| Variables   | Coefficient | Std. Error | t-Statistic | Prob   |
|-------------|-------------|------------|-------------|--------|
| D(LGII(-1)) | -0.213887   | 0.033252   | -6.432235   | 0.0233 |
| D(LGII(-2)) | -0.264678   | 0.023819   | -11.11217   | 0.0080 |
| D(LECD)     | -0.006371   | 0.001566   | -4.067737   | 0.0555 |
| D(LECD(-1)) | 0.006460    | 0.001347   | 4.794786    | 0.0409 |
| D(LECD(-2)) | 0.003331    | 0.001303   | 2.556809    | 0.1249 |
| D(LGIO)     | -0.023376   | 0.030062   | -0.777567   | 0.5182 |
| D(LGIO(-1)) | 0.661975    | 0.027757   | 23.84850    | 0.0018 |
| D(LGIO(-2)) | 0.387509    | 0.023132   | 16.75182    | 0.0035 |
| D(LHDI)     | 0.173894    | 0.077062   | 2.256567    | 0.1527 |

| Variables                  | Coefficient           | Std. Error | t-Statistic           | Prob      |
|----------------------------|-----------------------|------------|-----------------------|-----------|
| D(LHDI(-1)                 | -1.511916             | 0.186307   | -8.115170             | 0.0148    |
| D(LHDI(-2)                 | -1.896854             | 0.156542   | -12.11719             | 0.0067    |
| D(LODA)                    | 0.008675              | 0.001826   | -4.752363             | 0.0415    |
| D(LODA(-1)                 | -0.085700             | 0.004094   | -20.93267             | 0.0023    |
| CointEq(-1)*               | -0.865718             | 0.023860   | -36.28343             | 0.0008    |
| Prob(F-statistic) = 0.0002 | R <sup>2</sup> = 0.91 |            | R <sup>2</sup> = 0.90 | DW = 1.87 |

Source: Authors' calculation

Upon analysing the data presented in Table 4, it is evident that the variables being studied have a significant impact on Afghanistan's Gender Inequality Index (GII) in the short term. The GII variable exhibits two intervals with a substantial negative impact, while the ECD variable demonstrates two intervals with a positive and significant impact. Similarly, the Globalization variable shows two intervals with a positive and significant effect. The HDI variable displays two intervals with a negative and significant impact, and the ODA variable indicates one interval with a negative and significant effect. These findings underscore the critical impact of economic deprivation, globalization, the human development index, and foreign aid on Afghanistan's GII in the short term.

For a more comprehensive understanding of the data, it is essential to examine the estimated coefficients. Notably, the CointEq coefficient (-1) emerges as the most significant coefficient in the short term, illustrating the speed at which the short-term equilibrium moves towards the long-term equilibrium. The results from Table 4 show that the estimated coefficient (-1) of CointEq in the model equates to -0.86, indicating a primarily negative and statistically significant value. This suggests that the short-term model is imbalanced, with an error that is corrected by approximately 86% in each period. Therefore, due consideration must be given to the CointEq coefficient when analysing the impact of the variables studied on Afghanistan's GII in the short term.

#### 4.6 Represent the results of classical tests.

Table 6: Classical tests

| Null-Hypothesis                                 | F- Statistics | P- value |
|-------------------------------------------------|---------------|----------|
| LM Test: Breusch-Godfrey Serial Correlation     | 0.446         | 0.103    |
| Heteroscedasticity Test: Breusch Pagan- Godfrey | 0.563         | 0.540    |
| The normality of waste                          | 0.907         | 0.635    |

Source: Authors' calculation

In Table 6, an analysis of the model's performance in relation to heterogeneity variance and autocorrelation is presented. The findings demonstrate that the model is not affected by either of these issues. Specifically, the test for heterogeneity variance indicates that the



calculated F statistic is lower than the F table, supporting the acceptance of the null hypothesis based on homogeneity of variance. This suggests that the variance of the dependent variable remains consistent across different levels of the independent variable.

Furthermore, the non-autocorrelation test reveals a probability exceeding 0.005, affirming the null hypothesis based on non-autocorrelation. This suggests that the residuals are not correlated over time, which is a desirable characteristic for a model. Additionally, the normality test for residuals, based on the Jarque-Bera probability statistic, indicates that the residuals are normally distributed. This indicates that the errors are randomly distributed around the true values, a crucial assumption for valid statistical inference. Collectively, these findings underscore the model's reliability and validity, confirming that its results can be interpreted with precision.

## 5 CONCLUSION AND POLICY IMPLEMENTATION

The current study's central and main objective is to assess women's socio-economic conditions in Afghanistan from 1998 to 2021. To investigate this, the researchers selected the Gender Inequality Index as the dependent variable and the Human Development Index, Globalization, Economic Deprivation, and Foreign Aid as independent variables, utilizing the ARDL model.

Our research findings reveal that globalization has a significant, positive long-term impact on the socioeconomic conditions of women in Afghanistan. Specifically, our analysis demonstrates that a 1% increase in globalization is associated with a 1.345% decrease in the Gender Inequality Index (GII), indicating a clear enhancement in women's socioeconomic status. This suggests that increased global integration has the potential to improve the well-being of women in Afghanistan. Additionally, our study highlights the adverse effect of economic deprivation on gender inequality. We found that a 1% increase in economic deprivation in Afghanistan resulted in a 0.0048% increase in GII, signaling a detrimental impact on women's socioeconomic conditions. This emphasizes the urgency of addressing economic disparities to uplift the status of women in the country.

Furthermore, our research uncovers a significant, positive correlation between the Human Development Index (HDI) and foreign aid with the GII in Afghanistan. This implies that both HDI and foreign aid contribute to increased gender inequality in the Afghanistan context. Specifically, we observed that a 1% increase in HDI led to a 4.77% increase in GII, while a 1% rise in Official Development Assistance (ODA) resulted in a 0.089% increase in GII. These findings raise important questions about the impact of development initiatives and foreign aid on the socioeconomic conditions of women in Afghanistan. In conclusion, our findings highlight the need for further research to understand the underlying mechanisms driving these observed trends. This understanding is crucial for developing targeted interventions to enhance the socioeconomic well-being of women in Afghanistan.

Based on the study's results, the authors propose the following recommendations for policymakers and the government of Afghanistan. The study indicates that globalization has had a positive and substantial impact on the socio-economic status of women. To further promote this, it is essential to support trade liberalization, international cooperation, education and skills development, foreign direct investment, and technology and innovation. Additionally, the government should address economic deprivation by implementing poverty reduction programs, especially designed for women, such as providing microfinance and entrepreneurship support, and creating job opportunities for women.

The policymakers and government need to review the human development strategies in Afghanistan. The current strategy may not adequately address gender inequality. It is crucial to identify gaps and areas where policies may unintentionally perpetuate gender inequality and ensure that human development policies are gender-sensitive. Specific efforts should be made to empower women through healthcare, education, and social services. Additionally, foreign aid should be targeted effectively towards projects that directly support women and indicate the main reason for gender inequality. Furthermore, it needs to work on strengthening institutional frameworks to better support and protect women's rights and promote gender equality.

To foster the advancement of women's socio-economic conditions in Afghanistan, policymakers and the government can create a more supportive environment by implementing these recommendations. This will contribute to achieving greater gender equality and sustainable development in the country.

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