Laws, Aid and Change: The Effect of Gender Mainstreamed Aid on Legal Provisions Shaping Women's Economic Opportunities

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Abstract: This study examines the relationship between gender-related aid and legal frameworks governing women's economic opportunities. Using data from 116 countries (2009-2022), we analyze how significant (SGRA) and principal (PGRA) gender-related aid influence the Women, Business, and Law Index (WBL), which measures women's access to employment, credit, and entrepreneurship. Our results from panel and quantile fixed-effects models estimation approaches demonstrate that SGRA and PGRA positively impact WBL scores, with SGRA showing consistent improvements across WBL components. PGRA substantially affects marriage, parenthood, and mobility regulations while demonstrating more modest impacts on workplace conditions and entrepreneurship measures. Our observations underscore the complexity of addressing gender inequality and the necessity of targeted, multifaceted approaches to overcome legal restrictions, entrenched social norms, and economic barriers. Our research offers valuable insights for policymakers and donors on the transformative potential of gender-mainstreamed aid initiatives in fostering a more equitable world.

Keywords: Legal reforms. Gender-Mainstreamed Aid. Women. Economic Opportunities. Change.

JEL Codes: F35; J16; K38; O19; P48.

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I. **Introduction**

Empowering women involves providing them with the resources, opportunities, and support necessary to control their lives and fully participate in all aspects of society. This includes access to financial resources and employment opportunities, quality education and training, political participation, and comprehensive healthcare services. It also involves promoting gender equality in social spheres and ensuring equal legal rights and protections or undoing existing provisions that limit opportunities for women and girls at home, in the workplace, and across the social and political spectrum (Kabeer, 2005). Empirical evidence shows that countries with gender-sensitive legal frameworks achieve better outcomes in women's economic participation and overall development (Gonzales et al., 2015; Klugman et al., 2014; Hallward-Driemeier & Gajigo, 2013).

Despite this understanding, significant barriers preventing women from accessing economic opportunities persist in many countries. Inequalities often propagated by inadequate regulatory provisions (e.g., limited property and inheritance rights, regulations related to divorce settlements or in gaining custody of children, absence of laws mandating paid maternity leave or job protection for women during and after pregnancy) and gender-discriminatory laws (e.g., unequal pay and occupational segregation) constitute major hurdles that hinder women's ability to participate fully in the economy. Thus, recognizing the link and addressing the barriers is essential for empowering women and achieving inclusive growth.

The 1995 United Nations Fourth World Conference on Women, which underscored the need to incorporate gender perspectives into every facet of policy and practice, including legal and economic systems, was a significant milestone in this journey. Since then, gender-mainstreamed aid has become a powerful tool, directly supporting initiatives that seek to expand women's economic opportunities through various channels such as legal reforms, capacity building, advocacy, awareness, and strengthening institutions.

Legal reforms are pivotal in promoting equal pay laws, anti-discrimination policies, and maternity leave regulations. They establish a formal framework that safeguards women's rights and fosters economic participation. The impact of these reforms is tangible, as countries with robust anti-discrimination laws often exhibit higher female labor force participation rates and maternity leave policies that enable women to balance work and family responsibilities, increasing workforce retention rates (Kleven et al., 2019; World Bank, 2020).

Capacity building ensures policymakers, legal professionals, and enforcement agencies to have the knowledge and skills to implement gender-sensitive laws effectively. For example, training programs may help judges and lawyers interpret and apply gender equality laws better, improving legal outcomes for women. Educated policymakers about the economic benefits of gender equality are more likely to prioritize and implement relevant reforms. Duflo (2012) indicates that capacity-building initiatives have been instrumental in equipping policymakers with the tools and understanding needed to prioritize gender-sensitive reforms. Furthermore, UNDP's (2016) efforts in training legal professionals have shown well-informed enforcers' importance in ensuring that symbolic gender equality laws are actively implemented and enforced.

Advocacy and awareness campaigns can change societal attitudes and norms, often significant barriers to women's economic opportunities. By raising awareness, campaigns can garner public and political support for gender equality initiatives, leading to legislative changes and improved enforcement of existing laws. Studies demonstrate that public awareness campaigns can shift societal perceptions and create a more favorable environment for gender equality reforms (Bicchieri & Xiao, 2009). For example, the advocacy efforts by NGOs in various regions have successfully led to the adoption of gender equality laws, illustrating the power of sustained awareness campaigns (True & Mintrom, 2001).

Institutional strengthening helps enforce gender equality laws. Strong institutions are necessary for the effective implementation and enforcement of laws. This includes not only judicial institutions but also labor inspectorates and equality bodies. In addition, effective institutions ensure that laws are in the books and practiced. Providing resources and training for these bodies ensures that they can effectively carry out their mandates (North, 1990; European Institute for Gender Equality, 2018).

Cognizant of these benefits, donors have committed significant financial resources to gender-related aid over the last decade. Indicative of this commitment, approximately $200 billion in aid aimed at gender equality initiatives has been disbursed from 2010-2020 (OECD, 2021). Among others, the outlay involves funding activities that seek to reform legal and regulatory frameworks that enhance women's economic participation. For example, in 2020

alone, about $20 billion of gender-related aid was dedicated to initiatives primarily focused on legal reforms and institutional strengthening (OECD, 2021).[1]

The significant financial outlay underscores global recognition of the importance of legal and regulatory frameworks in empowering women economically and fostering inclusive growth. However, a critical question remains for policymakers and development practitioners: To what extent have these initiatives supported by gender-mainstreamed aid improved the legal and regulatory environments impacting women?

This paper addresses the question in two steps. First, we develop a theoretical framework that links gender-mainstreamed aid inflows with the legal and regulatory provisions delineating economic opportunities for women. Second, we use comprehensive data to test whether an increase in gender-mainstreamed aid inflow (lagged values) explains improvements in the Women, Business, and the Law Index (WBL) – a measure of progress in provisions affecting women's economic opportunities. We contribute to the literature in the area by enhancing the

[1] Numerous donor-funded initiatives have been implemented in multiple countries, mainstreaming gender considerations into legal and regulatory frameworks that impact women's rights and opportunities. For instance, between 2010 and 2017, a $100 million program in South Africa focused on legal reforms and support services to combat gender-based violence (South African Police Service, 2018). In Nepal, donors allocated $50 million between 2010 and 2018 to enhance women's legal rights and political participation (Inter-Parliamentary Union, 2018). A $75 million program in the Pacific Islands from 2012 to 2017 was earmarked for integrating gender-responsive measures into climate change policies (Pacific et al., 2018). Mexico received $80 million in donor funds between 2010 and 2016 to develop women-friendly public transportation policies, improving safety and accessibility (UN Women, 2017). Additionally, Kenya's efforts to reform its legal and regulatory frameworks to protect women's health and rights were supported by $150 million from international donors between 2008 and 2014 (Kenya National Bureau of Statistics, 2015). These donor-funded initiatives align closely with the recipients' national policies and strategies. South Africa's legal reforms against gender-based violence are part of its broader national strategy to reduce violence and enhance women's safety (South African Police Service, 2018). A reflection of its commitment to gender equality in governance, Nepal's programs are part of its national policies to increase women's participation in political decision-making (Inter-Parliamentary Union, 2018). The Pacific Islands' climate programs are integrated into national adaptation plans, ensuring that gender-responsive measures are part of broader climate policies (Pacific Islands Forum Secretariat, 2018). Mexico's transportation projects align with urban development plans to improve public safety and accessibility for women (UN Women, 2017). Kenya's legal and regulatory reforms for women's health and rights are embedded in its national health strategy (Kenya National Bureau of Statistics, 2015). In addition, these countries have also received substantial donor funding for other activities addressing gender parity, including programs to increase girls' access to education, support women's economic empowerment, and improve reproductive health services. For example, Bangladesh's Education for All initiative received $300 million in donor funding between 2000 and 2015 to support gender parity in education (World Bank, 2019), and Rwanda's women's economic empowerment programs saw $150 million in donor investment to increase women's labor force participation (National Institute of Statistics of Rwanda, 2018). Similarly, Ethiopia has benefited from $200 million in donor funds to empower women farmers to increase agricultural productivity and support women's economic roles (Food and Agriculture Organization, 2016). These comprehensive efforts highlight the ongoing commitment and multifaceted approaches to achieving gender parity through donor-supported initiatives.

broader understanding of whether, and if so, to what extent targeted aid can drive legal reforms that improve economic opportunities for women and promote inclusive economic growth and development. Our research also provides crucial insights into the effectiveness of current strategies, possibly guiding future policy decisions to ensure resources are directed to the most impactful initiatives. Policymakers and practitioners can utilize these insights to design more effective strategies and direct resources toward high-impact interventions.

Our results from the panel fixed effects estimation reveal that gender mainstreamed aid, lagged by one and two periods, has a statistically significant impact on the WBL index, which measures the extent to which legal and regulatory frameworks in a country support women's economic participation and rights. Specifically, significant gender-related aid (SGRA), which incorporates gender considerations into broader development projects, and principal gender-related aid (PGRA), which explicitly targets gender equality, enhance the laws that shape women's ability to participate in the workforce and engage in business activities. Indicating the robustness of our observation, the results remain consistent across estimations. These include the mixed-effects model with random intercepts (for six regions and 116 countries) and random coefficients (on the gender-related aid variables), as well as the instrumental variable (IV) regression approaches.

Our findings are especially relevant given the substantial investments in gender-mainstreamed aid and the focus of the United Nations Sustainable Development Goals (SDGs) on gender equality and women’s empowerment as critical elements of sustainable development. The SDGs stress empowering women and girls and ensuring full economic participation are essential for creating inclusive and sustainable economies. Our results demonstrate that gender-mainstreamed aid supports these global objectives, serving as an effective tool to advance them.

The remainder of the paper is structured as follows: Section 2 briefly reviews the relevant literature. Section 3 develops the theoretical framework underpinning our empirical analysis. Section 4 presents descriptive statistics of variables along with the empirical results. Section 5 concludes with a discussion of the implications of our findings for practice in international development and gender equality.

2. Related literature

Numerous studies emphasize the legal and regulatory barriers impacting women's economic participation. Gonzales et al. (2015) highlight that legal restrictions on women's rights reduce their participation in the labor market and entrepreneurship. Their cross-country analysis shows that countries with fewer legal barriers have higher female labor force participation rates. Islam et al. (2020) similarly investigate the impact of discriminatory laws on women's labor market participation using data from over 59,000 firms in 94 economies. They identify the barriers associated with gender disparities, such as limited access to finance, property ownership, and business registration, disempowering women, and restricting their engagement in the private sector. Their findings reveal that unequal laws significantly hinder women's participation in the workforce and reduce their chances of becoming managers or business owners.

Annen and Asiamah (2023) investigate the relationship between women in African parliaments and foreign aid allocations by exploring the intersection of foreign aid and women's political representation. They find a significant and statistically robust correlation: increasing the proportion of women legislators from 15% to 20% is associated with a roughly 4% rise in aid flows over current aid levels. The authors attribute this increase to the donor community's growing emphasis on gender equality and women's empowerment over the past two decades to the greater female representation in parliament can enhance policies, legal structures, and institutional frameworks as women advocate for beneficial reforms.

The effectiveness of gender-mainstreaming aid in improving health and education outcomes for women and girls is another area of focus. Arndt et al. (2015) find that gender-targeted aid significantly improves health and education outcomes for women and girls, laying the foundation for their economic participation. Their study includes a case analysis of Mozambique, where gender-mainstreamed aid has substantially improved girls' education and women's health outcomes, enabling women to participate more in economic activities. Similarly, Dreher et al. (2016) provide empirical evidence indicating that targeting gender equality positively impacts gender-related outcomes, including legal reforms. They highlight Rwanda, where gender-focused aid has supported implementing progressive gender laws and policies, leading to gender parity in political representation and significant improvements in women's economic opportunities.

Berlin et al. (2024) investigate the impact of foreign aid on female empowerment using geo-coded data from Malawi. Their study reveals that foreign aid, especially gender-targeted aid, has a positive and significant effect on various dimensions of female empowerment (e.g., improvements in women's agencies and attitudes towards sexual and fertility preferences). The effects are less pronounced in patrilineal communities, where traditional gender norms constrain effectiveness. Their research underscores the importance of tailoring foreign aid initiatives to the specific socio-cultural contexts of recipient communities to maximize impact on gender equality.

Busse et al. (2017) assess the impact of foreign aid on regulatory quality in developing countries. Using data from 77 countries between 2002 and 2012, they find that targeted and sector-specific aid, especially Aid for Business, significantly improves regulatory quality, while general aid or aid aimed at broad governance does not have the same effect. Their study underscores the importance of focused aid interventions in enhancing regulatory frameworks.

The role of institutional quality in influencing the effectiveness of legal reforms has also been a central theme in related literature. Acemoglu et al. (2001) argue that strong institutions are essential for sustainable economic development and the enforcement of laws. Their hypothesis suggests that legal reforms may not translate into real-world improvements in economic opportunities for women without robust institutions. Hallward-Driemeier and Hasan (2013) also show that countries with better regulatory quality and institutional strength tend to have more effective implementation of gender equality laws, leading to improved economic outcomes for women.

Donno et al. (2022) discuss the influence of international incentives on reforms associated with women's rights in autocracies. They find that autocracies often implement gender-related legislation to comply with international norms, driven by foreign aid dependence and pressure from international NGOs. However, these regimes avoid more politically risky reforms related to elections and political pluralism. The study concludes that autocrats strategically use women's rights reforms to maintain power while signaling compliance with international expectations.

The effect of societal attitudes and norms in shaping gender equality is also well-documented. Ferrant et al. (2014) note that deep-rooted cultural norms impede the progress of gender equality, even with favorable laws. Hence, they emphasize the importance of advocacy and awareness campaigns in changing societal attitudes towards gender roles. Based on a

detailed examination of India, where cultural norms have traditionally restricted women's economic participation, the authors note that targeted awareness campaigns are gradually changing public perceptions and improving gender equality. Jayachandran (2015) similarly highlights how social norms and gender biases can restrict women's economic activities and how interventions to change these norms can have significant positive impacts.

Observations from these studies underscore the importance of addressing legal, institutional, and cultural barriers that limit women's economic opportunities. By leveraging gender-mainstreamed aid to target specific areas of interest, countries may create an inclusive environment that supports women's participation in the economy, thereby driving overall economic growth and development. Although they highlight the critical role of gender-mainstreamed aid and robust institutions, the available studies rarely develop a theoretical model that permits gender-mainstreaming aid inflows with improvements in the legal and regulatory frameworks that characterize the environment under which women live and work. Our study aims to fill this void by providing a theoretical framework linking gender-mainstreaming aid to enhanced legal protections for women and the mechanisms guiding more effective policy interventions.

3. Theoretical Framework and Empirical Model

3.1 Theoretical Model

Utility Maximization Framework: Consider a representative woman who chooses between work and leisure, with her utility derived from consumption (C) and leisure (L). Wages and non-wage factors, such as cultural, legal, and institutional environment, shape her labor market decisions.[2]

The utility function, U is defined as:

$$U = U(C, L, Js, Jq, D) \tag{1}$$

[2] Women's workforce participation is shaped by factors beyond wages, including workplace conditions, legal protections, social norms, job security, and parental leave policies (World Bank, 2023). Codazzi et al. (2018) emphasize how these non-wage elements significantly impact female labor force engagement. Dahl et al. (2016) show the positive effect of paid maternity leave on women's workforce attachment. Saha & Singh (2024) note that labor market dynamics like employer discrimination and job security can promote or hinder female participation, especially for highly educated women.

C is consumption, L is leisure, Js represents job security and safety, Jq reflects job quality (e.g., parental leave policies, flexible working conditions), and D represents the absence of workplace discrimination and harassment.

Budget Constraint

Consumption is financed by wages earned from working hours (h), and the total time endowment is normalized to 1, such that $L + h = 1$. The woman faces the following budget constraint:

$$C = w \cdot h + T \tag{2}$$

Here, w, the wage rate for women and T is non-labor income.

Wage Determination Function: We derive the wage equation as a function of several variables that affect women's wages in the labor market. These include human capital (H), the legal environment (Φ), and labor market characteristics (M). Thus, we specify the wage as:

$$w = f(H, \Phi, M) \tag{3}$$

Where, H is human capital (e.g., education, skills), Φ represents the strength and quality of legal frameworks (e.g., anti-discrimination laws, equal pay laws, maternity rights), M refers to labor market conditions (e.g., labor demand, employment rates). We consider that Φ, representing the legal framework directly influences wage rates by ensuring gender equality and reducing discriminatory practices. Stronger legal protections (higher Φ) should increase wages for women by leveling the playing field in the labor market.

Non-Wage Factors Influencing Labor Force Participation: Besides wages, job security, safety, and quality, workplace conditions drive women's workforce participation. Thus, we introduce an employment quality index (Q):

$$Q = Q(Js, Jq, D) \tag{4}$$

The index captures job characteristics such as security (Js) — the stability and assurance that the job will be available in the long term, reducing the risk of sudden unemployment; job quality

(Jq) — factors such as access to benefits (e.g., parental leave, health insurance), work-life balance, and opportunities for career advancement; and the absence of discrimination and harassment (D) — policies that guarantee employees are treated fairly and with respect in the workplace, free from harassment or biased treatment, which can significantly affect their well-being and job satisfaction.

Labor Supply Decision: Given the wage w and employment quality Q, the woman maximizes utility by choosing the optimal amount of labor hours (h):

$$\max_{h} \; U(C, J_s, J_q, D)$$
$$\text{subject to } \; C = w \cdot h + T \text{ and } L = \; 1 - h \tag{5}$$

The first-order condition of this maximization problem gives the optimal labor supply decision, h^*:

$$h^* = g(w, Q) = g(f(H, \Phi, M), Q(Js, Jq, D)) \tag{6}$$

The model presents that labor force participation h^* is a function of wages (influenced by the legal framework, Φ), and non-wage factors captured by the employment quality index Q.

Incorporating Gender-Mainstreamed Aid: We hypothesize that by supporting legal reforms, advocacy, and enforcement of gender-equal laws, gender-mainstreamed aid (A) leads to improved legal frameworks. Thus, the strength of the legal framework, Φ depends on gender-related aid (A), and other factors, such as government effectiveness (G) and cultural norms (C):

$$\Phi = \Phi(A, G, C) \tag{7}$$

Where A is gender-mainstreamed aid, G is government effectiveness (e.g., capacity to implement and enforce laws), and C represents cultural norms that may support or hinder gender equality.[3]

[3] The derived theoretical relationships show that Wages (w) for women depend on human capital, the legal framework (Φ), and labor market conditions; legal frameworks (Φ) are influenced by gender-mainstreamed aid (A) and other institutional and cultural factors; and labor force participation (h) is influenced by wages and non-wage factors related

3.2. The Empirical Model

Based on the theoretical model, we construct a reduced-form empirical model that enables us to test whether gender-mainstreamed aid (A) inflow that a country receives, conditional on a vector of control variables (Z), influence the WBL index.

$$WBL_{it} = \beta_0 + \beta_1 A_{it} + \theta_i' Z_{it} + \epsilon_{it} \quad (8)$$

where WBL_{it} is the WBL score in country i at time t, A_{it} is the amount of gender-mainstreamed aid received by the given recipient, Z_{it} is a vector of control variables (e.g., economic development, educational attainment, political stability, cultural norms), and ϵ_{it} is an independently and identically distributed error term. To address potential reverse causality between gender-related aid (A_{it}) inflow and the Women, Business, and Law index (WBL_{it}), we use a two-period lagged value of aid (A_{it-2}). [4]

4. Empirical results

4.1. Descriptive Statistics

The determinants of the legal and regulatory environment that women often navigate through their working lives are multifaceted, encompassing political, economic, social, cultural, and institutional factors. Table 1 presents the panel descriptive statistics of the variables in our empirical model.

Our primary dependent variable of interest is the WBL score, a composite metric ranging from 0 to 100, with higher values reflecting the availability of better legal and regulatory frameworks facilitating women's economic opportunities. The score is derived from eight indicators: *Mobility* (assesses freedom of movement); *Workplace* (examines employment regulations); *Pay* (focuses on equality in remuneration); *Marriage* (evaluates rights within marriage and after divorce); *Parenthood* (considers the impact of laws on work post-childbirth);

to job quality. Thus, gender-mainstreamed aid impacts female labor force participation through its effect on legal frameworks, affecting wages and employment conditions.

[4] By doing so, we ensure that the current value of the WBL index (WBL_{it})—which reflects the legal framework—does not directly influence the gender-related aid received in the same period. In other words, using A_{it-2} helps prevent the possibility of the prevailing legal framework or its improvements forming the basis for a country receiving higher aid. We also employ the instrumental variable (IV) regression approach for robustness check.

Entrepreneurship (addresses constraints on business ownership; *Assets*, scrutinizing property, and inheritance rights; and *Pension* (covers pension entitlements). Data are sourced from the World Bank (2024).

[Insert Table 1 here]

The panel descriptive statistics of the Women, Business, and Law (WBL) Index and its component dimensions presented in Table 1 provide a comprehensive overview of the legal and regulatory frameworks impacting women among the 116 countries in the study. The overall mean score for the WBL Index is 68.964, with a standard deviation of 15.702, indicating moderate variability in how countries score on gender-related legal protection. The "between" variability (15.424) is significantly higher than the "within" variability (3.581), suggesting that differences between countries are more pronounced than changes within individual countries over time. The highest mean score among the dimensions is observed in *Mobility* (84.148), with the lowest variability within countries (4.518), implying relatively consistent legal conditions related to women's mobility. On the other hand, *Parenthood* has the lowest mean score (45.628) with significant variability between (26.451) and within countries (7.077), indicating substantial disparities in legal and regulatory support for women regarding parenthood.

Examining the other dimensions, we observe that *Workplace* (71.675) and *Marriage* (71.594) both show high mean scores but also considerable overall variability (31.644 and 30.242, respectively), suggesting that while some countries have robust frameworks in these areas, others lag significantly. The *Pay* dimension has the lowest mean score (54.390) among the higher-ranking areas, with high between-country variability (28.247), reflecting significant global disparities in pay equity. The *Entrepreneurship* (79.519) and *Assets* (78.207) dimensions exhibit relatively high mean scores with moderate variability, indicating generally favorable legal conditions for women in these areas, but still with notable differences between countries. Lastly, the *Pension* dimension has a mean score of 66.550, with considerable variability between (25.222) and within (7.385) countries, suggesting diverse legal frameworks affecting women's pension rights. Overall, the data reveal significant achievements in some legal and regulatory

provisions that impact women's lives while exhibiting persistent gaps and disparities in others, underscoring the need for targeted policy interventions to achieve gender equality.[5]

Our control variables include per capita income and mean years of schooling (from UNDP, 2022), institutional quality (Kaufmann et al., 2021), and cultural and economic globalization indices (Gygli et al. (2019). The descriptive statistics for the respective variables reveal the divergence of socio-economic and institutional contexts among the 116 countries in our study. The years of schooling have an overall mean of 7.163 and a standard deviation of 2.861, indicating moderate variability. The average per capita income among the countries in our study stands at $9,013.257, with a substantial standard deviation of 6,565.725, reflecting significant economic disparities among countries. Notably, the between-country variability (7,166.382) far exceeds the within-country differences (1,313.597), highlighting pronounced economic differences across nations. Institutional Quality, with a mean of 0.004 and minimal variability (0.006), suggests relatively consistent institutional conditions, though differences exist between countries (0.007). A mean (standard deviation) of 43.955 (15.947) for cultural and 56.572 (9.932) for economic globalization showcases that the typical country in our study has relatively higher economic than cultural integration.

The inclusion of these variables as control factors is guided by established literature. Higher educational attainment fosters greater awareness of women's rights and the importance of gender equality, which can lead to the creation and enforcement of supportive laws (Barro &

[5] Appendix Table 1 presents the breakdown of the corresponding measures of legal and regulatory environments facing women by the regional location of the countries in the study. Countries in Europe and Central Asia, Latin America, and the Caribbean have the highest WBL Index scores of 79.86 and 79.12, respectively, indicating more favorable legal and regulatory environments for women. In contrast, the Middle East and North Africa score the lowest at 45.10, highlighting regions where women face more challenging conditions. South Asia also scores relatively low at 57.63, while East Asia, the Pacific, and Sub-Saharan Africa have moderate scores of 71.24 and 68.86, respectively. The overall average for all regions is 69.63, reflecting a wide range of experiences and legal environments impacting women worldwide. Further disparities across the regions can also be gleaned from the components. Mobility is highest, on average, among countries in Europe and Central Asia, scoring a perfect 100, with those in the Middle East and North Africa scoring significantly lower at 51.04. Workplace conditions also vary, with Europe and Central Asia scoring 81.43 and the Middle East and North Africa trailing at 44.79. Pay equity also differs, with Latin America and the Caribbean at 68.95 and the Middle East and North Africa at 35.76. Marriage-related legal conditions are most favorable in Europe and Central Asia (94.76) and least favorable in the Middle East and North Africa (23.47). Parenthood scores show Europe and Central Asia leading at 74.86, while South Asia scores the lowest at 20.40. Entrepreneurship and Asset ownership rights are highest in Europe and Central Asia (90.24 and 100, respectively), with South Asia, the Middle East, and North Africa scoring lower. Pension scores also vary considerably, with the lowest score, 44.8, observed in South Asia. These variations underscore the diverse legal and regulatory landscapes affecting women's economic opportunities across different regions.

Lee, 2013). Education empowers women with the knowledge and skills necessary to advocate for their rights and participate actively in the economy, resulting in more robust legal protections (Klasen & Lamanna, 2009). Empirical evidence suggests that countries with higher average educational attainment tend to have more robust legal frameworks supporting women's economic participation (Schultz, 2002).

Higher-income levels correlate with more resources for enforcing and improving legal protections. For example, wealthier countries tend to have more comprehensive and effectively implemented gender equality laws (Duflo, 2012). Economic development provides the fiscal capacity to support institutions that uphold these laws and policies, which are critical for enhancing women's economic opportunities (Kabeer, 2016). While higher per capita income may enable a supportive legal environment for women (Dollar & Gatti, 1999), socio-cultural factors can significantly inhibit the effectiveness and acceptance of legal reforms (Inglehart & Norris, 2003).

The institutional quality, encompassing government effectiveness, rule of law, and corruption control, is crucial in determining the legal and regulatory frameworks women must navigate (Acemoglu et al., 2001). High-quality institutions are more likely to enforce laws fairly and efficiently, ensuring that legal protections for women are practical. Effective institutions can close the gap between legal provisions and their implementation (North, 1990), thus consistently upholding women's rights. Moreover, strong institutions correlate with better gender equality outcomes, providing the necessary infrastructure for enforcing women's legal rights (Hall & Jones, 1999).

Cultural and economic globalization levels can influence the legal and regulatory frameworks defining women’s economic opportunities by exposing countries to global norms and practices regarding gender equality and women's rights. Globalization can lead to the adoption of international standards and best practices in legal frameworks, which are driven by international agreements and global pressure (Inglehart & Norris, 2003). Through increased trade and foreign investment, economic globalization introduces multinational corporations that adhere to higher gender equality standards, influencing local practices and policies (Potrafke & Ursprung, 2012). Studies also show that globally integrated countries adopt more progressive gender-related laws and policies, improving the WBL index (True & Mintrom, 2001).

Turning to our independent variable of interest, the gender-related aid is extended to the 116 countries in our study at the aggregate (*TGRA*) along with its components, the principal (*PGRA*) and significant (*SGRA*) gender-related aid. We observe that the typical country in our study during the reference period (2009-2022) received, on average, a minimum of US$0.521 million to US$$203.544 million in total aid targeting gender equality and women's empowerment). Of this amount, US$26.207 million was extended as principal gender-related aid (PGRA), and a larger amount, US$177.451 million, was disbursed as significant gender-related aid (SGRA). The data on gender-related aid is from the OECD (2024) credit reporting system.

Aid activities to address gender disparity, including legal and regulatory protections for women, can be extended as principal and/or significant aid (Koester et al., 2016). Principal gender-related aid finances activities specifically designed to promote gender equality and women's empowerment as the main purpose. Such activities may include projects enhancing women's access to education, increasing female participation in political processes, improving legal rights, or addressing gender-based violence. Significant gender-related aid, on the other hand, includes activities that address gender equality and women's empowerment as important but secondary objectives. While these activities have other primary goals, they also encompass promoting gender equality and strengthening legal and regulatory protections for women. For example, an agricultural development project might include components that ensure women farmers have equal access to resources and training and advocate for legal reforms that protect women's property rights. While the primary aim is agricultural development, these projects can significantly contribute to gender equality and legal protections, thus being defined as gender-related aid.

[Table-2 here]

Table 2 shows the average annual Overseas Development Aid (ODA) and the breakdown of the gender-related aid inflows into its components (SGRA and PGRA) and their proportions across the countries in our study. First, apart from a few exceptions like Nepal (57.3%), Ethiopia (43.9%), Burkina Faso (47.0%), Nigeria (47.6%), and Guinea (45.5%), where the values exceed 40%, the share of total gender-related aid (TGRA) in the annual ODA inflows to most countries in our study is relatively low (generally in the low to mid-30% range). This implies that gender-related aid constitutes a relatively small portion of overall aid. Second, principal gender-related

aid (PGRA), which funds activities explicitly designed to promote gender equality and women's empowerment as a primary objective, represents a relatively meager share of the TGRA. For example, in Zambia, which has the highest share, PGRA accounts for 26.4% of TGRA. In Mali, Tanzania, and Liberia, the corresponding shares stand at 21.3%, 20.6%, and 20.4%, respectively.

In all other countries, the share of PGRA in TGRA is in the low teens, indicating that a substantial proportion of TGRA is devoted to activities that address gender equality and women's empowerment as important but secondary objectives (i.e., SGRA). For instance, in Guyana, Mongolia, and Gabon, PGRA accounts for two to five percent of TGRA, while SGRA accounts for 36.0%, 96.3%, and 96.8%, respectively. This observation highlights that the primary focus of a larger share of gender-related aid extended to many countries lies elsewhere, while aid funding activities that address gender equality and women's empowerment are just as important.

Second, there is a strong correlation among the WBL components: a correlation coefficient (ρ) of 0.921 between average annual ODA and TGRA inflows, 0.932 between ODA and SGRA receipts, 0.733 between TGRA and PGRA inflows, and 0.842 between SGRA and PGRA inflows. The high correlation values suggest that countries with significant ODA inflows are also where gender-related issues are being systematically addressed through principal and significant aid activities. While this focused effort can lead to a more holistic and integrated approach to gender equality, leveraging broader development initiatives to support specific gender-focused interventions, it also calls for a careful evaluation of whether the funds are leading to tangible improvements in gender equality outcomes such as better legal protections and increased economic opportunities for women (i.e., the effectiveness of gender-related aid).

4.2. Does Gender-Related Aid Enhance the Legal and Regulatory Protections for Women?

Table 3 presents estimation results from the panel fixed-effects model in which we control for the unobserved heterogeneities associated with the data's cross-sectional (between countries) and time-series dimensions.[6] The results are derived using one-year lagged values of

[6] By controlling for the cross-sectional dimension, we account for time-invariant characteristics unique to each country, including geographical factors, cultural aspects, and institutional frameworks characterized by slow changes. This helps to isolate the effects of our variable of interest from the unobserved factors. Controlling for the time dimension enables us to account for global trends and events (e.g., economic cycles, international policies, or technological advancements) that might influence all countries in the study.

gender-related aid, allowing for the assessment of delayed impacts.[7] Column (a) shows the results from the specification, which includes the control variables and total gender-related aid (TGRA). Column (b) presents the results from the specification that includes only the significant component of gender-related aid (SGRA). Column (c) includes only the principal gender-related aid (PGRA) component. In column (d), we present results from the specification, which includes the SGRA and PGRA components. In contrast, column (e) reports results from the specification in which we control for the interaction effects of the SGRA and PGRA.

[Table-3 here]

The overall performance of the estimated models is robust, as indicated by several key statistics. The R-squared values range from 0.235 to 0.259, suggesting that the models explain about 23.5% to 25.9% of the variation in the WBL index within countries over time. The F-statistics for all models are highly significant ($p < 0.01$), confirming that the models are statistically significant and that the included variables jointly explain the variation in the dependent variable. Additionally, the log-likelihood values (ranging from 2248 to 2379) and the very low Root Mean Square Error (RMSE) values (from 0.0548 to 0.0560) indicate a good fit of the models to the data. The unobserved country-specific heterogeneity (sigma u) ranges from 0.255 to 0.263, with an average rho value of 0.96. This indicates that the unobserved country-specific effects account for a substantial portion of the variance in the legal and regulatory frameworks affecting the economic lives of women in the countries included in our study, highlighting the importance of controlling for these effects in the analysis.

Except for a few cases where some control variables lack statistically discernible effects, all columns show that the variables have the theoretically expected *a priori* positive effects. Accordingly, higher average education levels are associated with higher WBL index scores, with the mean years of schooling variable maintaining a consistently positive and highly significant effect ($p < 0.01$) across all models, with coefficients ranging from 0.215 to 0.237. Using the

[7] We also obtain results using contemporaneous values of gender-related aid to help differentiate between the immediate and lagged effects and provide a more comprehensive understanding of how such aid influences changes in legal and regulatory protections for women over time. However, for brevity, we limit our discussion to results obtained from the lagged values of gender-related aid.

coefficient reported in column (c) as an example, we observe that a 1% increase in mean years of schooling in a typical country is associated with a 0.237% increase in the WBL index in that country. The observation underscores the crucial role of educational achievements in improving women's legal protection. As a priori expected, per capita income also shows a positive and significant effect in most models, with coefficients ranging from 0.0207 to 0.0257. Using the results in column (b) as an example, we find that a 1% increase in per capita income is associated with a 0.0233% increase in the WBL index, highlighting the effect of a country's economic prosperity in enhancing women's legal and regulatory environments.

The measure of institutional quality (IQ), the only variable that enters the model in levels, has a large and highly significant effect ($p < 0.01$) in all models, with its coefficients ranging from 3.393 to 4.415, again highlighting the critical role of well-functioning institutional capabilities in enhancing women's legal protections. Using the coefficient reported in column (e), for example, we compute that a 1% increase in institutional quality results in a 4.168% [$(exp^{-4.082 \text{x} 0.01}$-1) x100] increase in the WBL index, indicating that robust institutions are critical for advancing women's legal protections. Economic globalization has consistently positive and highly significant ($p < 0.01$) effects, with coefficients ranging from 0.260 to 0.316, suggesting that countries with higher economic globalization levels have improved legal and regulatory environments for women. Using the results in column (c), we observe that a 1% increase in economic globalization leads to a 0.316% increase in the WBL index, a critical depiction of the global economic integration's role in improving the legal frameworks defining opportunities for women. Higher cultural globalization has a positive and significant effect ($p < 0.10$) in most models, indicating that the more culturally integrated countries are with the rest of the world, the higher their WBL index scores.

Turning to our main variables of interest, we observe that a rise in gender-related aid inflow at the aggregate (TGRA) and disaggregate levels (SGRA and PGRA) is associated with statistically discernible improvements in the WBL index. For example, the result in column (a) indicates that a 1% increase in the TGRA inflows yields a 0.017% increase, on average, in the WBL score a year later. While a 1% increase in the SGRA yields a 0.0169% (column b) increase in the WBL index, a proportionate increase in PGRA yields a much lower but statistically significant 0.00662% increase in the WBL index, on average. When controlling for the potential

effects of both components of gender-related aid inflows, without (column d) and with interaction effects (column e), in addition to each component maintaining their statistical significance, indicating that targeted interventions are effective in enhancing the legal protections for women, they have a statistically significant positive interaction effect. The observation highlights the synergy in the aid strategies addressing both primary and secondary gender-related objectives, reinforcing each other to produce substantial improvements in legal and regulatory frameworks for women. For policymakers and donors, this would mean that allocating resources to both broad and specific gender-related initiatives can significantly enhance women's empowerment and legal protections.

4.3. Dimensional Variations in the Observed Effects

While the above results provide valuable insights into the effectiveness of gender-related aid on legal and regulatory frameworks affecting women's lives, a meaningful and policy-relevant understanding requires a detailed examination of its effects across the different dimensions of the overall index (WBL), as aid could be highly effective in certain areas while potentially less impactful in others. [8]

[Table- 4 here]

Table 4 presents estimates of the effects of each TGRA, SGRA, and PGRA inflow extracted from 24 different panel fixed-effect specifications using each of the eight component dimensions of the WBL Index. The results highlight that gender-related aid significantly impacts the aggregate WBL index, but its effectiveness varies across the different dimensions of the

[8] An improvement in the overall WBL index does not necessarily imply uniform progress across all its components and all countries. For example, India made notable strides in its WBL index score, improving from 95th in 2010 to 117th in 2020, mainly due to legislative reforms such as the Maternity Benefit (Amendment) Act of 2017, which extended paid maternity leave and mandated crèche facilities (IASPOINT, 2024; World Bank, 2020). Despite these advancements in the Parenthood indicator, India still faces significant challenges in areas such as Marriage and Assets, where discriminatory laws and practices persist (World Bank, 2020). Similarly, in Saudi Arabia, reforms have led to significant improvements in the WBL index. The country improved its score from 31.1 in 2010 to 70.6 in 2020 following comprehensive legal reforms to increase women's workforce participation. These reforms included lifting the ban on women driving and changes to guardianship laws, which enhanced women's mobility and workplace opportunities; however, despite these improvements, women continue to face challenges in areas such as Marriage and Parenthood due to deeply rooted cultural norms and legal restrictions that limit women's full economic participation (World Bank, 2020).

index. For instance, total gender-related aid (TGRA) significantly improves the legal constraints related to marriage (0.0299%) and laws affecting women's work after having children, i.e., parenthood (0.0303%) with a high degree of statistical significance ($p < 0.01$), indicating that aid positively influences legal frameworks that affect these areas. However, it has a weaker and statistically insignificant impact on the workplace, laws affecting women's decisions to work (0.0192), and entrepreneurship, imposing constraints on women's ability to start and run businesses (0.00712). Hence, aid in these areas may require more targeted interventions, or other factors may be at play.

Similarly, significant gender-related aid (SGRA), which incorporates gender considerations into broader development projects, shows positive and significant effects on mobility (constraints on women's freedom of movement) (0.0109%, $p < 0.10$, legal constraints related to marriage (0.0261%, $p < 0.01$), and parenthood (laws affecting women's work after having children (0.0264%, $p < 0.05$). SGRA's influence on laws and regulations affecting women's compensations (i.e., pay) (0.0217) and entrepreneurship (0.00757) is less pronounced and only marginally significant or not significant.

Principal gender-related aid (PGRA), which explicitly targets gender equality, has a statistically significant effect on fewer components, notably on marriage (0.0114%, $p < 0.05$), parenthood (0.0103%, $p < 0.10$), and on laws and regulations affecting the size of a woman's pension (0.0183%, $p < 0.01$). However, its impact on other dimensions, like mobility (0.00398) and entrepreneurship (0.000788), is not statistically discernible.

These observations suggest that the impact (statistical and practical) varies across dimensions. Thus, policymakers and donors must consider these variances when designing aid programs, ensuring that resources are allocated effectively across different areas to maximize improvements in the legal and regulatory frameworks affecting women. As indicated earlier, comprehensive strategies targeting gender equality as a primary and secondary objective can synergize, leading to broader and more substantial improvements in women's legal protections and economic opportunities.

4.4. Distributional Impact Variations

The fluence may also vary among countries at different stages (distribution) of the legal and regulatory development. Thus, analyzing the variation in the observed effects of gender-

related aid across countries situated at different loci on the WBL index distribution can help identify where aid is most beneficial and inform a more targeted and strategic allocation of resources.

[Table- 5 here]

Accordingly, Table 5 presents results obtained using the Machado and Silva (2019) panel fixed effects quantile regression estimation approach. By depicting the effect of a percentage increase in the given variable of interest on the WBL index, compared to the panel fixed effects results in Tables 3 and 4, the quantile regression results permit a more comprehensive examination of the effectiveness of gender-related aid across countries. This is particularly valuable when dealing with heterogeneous data such as the WBL index, where the relationship between the primary variables of interest may differ among countries at various points in the distribution.[9]

Panel A (the upper part) of Table 5 presents results from the specification in which only the SGRA component enters the model. In contrast, Panel B (the bottom part of the table) presents the corresponding results when PGRA is the only gender-related aid component that enters the model. [10] Given that the observed effects for most of the variables remain consistent with the results obtained from the panel fixed effect regression results, for brevity, we limit our discussion to the breakdown of our main variables of interest: SGRA and PGRA.

The coefficients for SGRA (panel A) are positive and statistically significant across all quantiles (q5 to q95), with the magnitude of the observed effect of a 1% increase in SGRA gradually increasing from 0.012%(q5) to 0.022% (q95). While the consistently significant coefficients across all quantiles establish the robustness of the impact of SGRA on the WBL Index at all levels, the rise in the observed effects underscores that as SGRA increases, the WBL index, indicating better conditions for women in business and law, also improves.

[9] For instance, countries with lower initial WBL scores might experience different impacts from gender-related aid than those at the upper end of the WBL score. By providing insights into how aid impacts countries at the different loci of the WBL index, the analysis may help tailor policies and interventions more to effectively address the specific needs and conditions of countries at different stages of legal and regulatory development.

[10] Apart from the difference in the estimation approach (the quantile fixed effects), the specifications correspond with those presented in columns (b) and (c) of Table 3.

The PGRA (panel B) coefficients are also positive and statistically significant from the lower end of the distribution (the 5th quartile to the 75th quartile), ranging from 0.010 at the 5th quartile to 0.005 at the 75th quartile. However, the coefficients become statistically insignificant at the upper ends of the WBL distribution (the 85th to 95th quartiles). This indicates that PGRA positively impacts the WBL Index, particularly at the lower and middle levels, but its effect diminishes at higher levels. Therefore, while PGRA improves conditions for women, its impact is less pronounced at the higher quantiles of the WBL Index.

[Insert Fig. 1 here]

Comparing the observed effect, while increased SGRA and PGRA inflows positively affect the WBL Index, SGRA has a more consistent and more considerable impact, especially at the higher end of the quantiles. For instance, at the 95th quartile, a 1% increase in the SGRA is associated with a 0.022% increase in the WBL index. The corresponding effect of PGRA is not statistically discernible, indicating that SGRA is more effective for comprehensive improvements in gender-related business and law conditions affecting women. Conversely, the observation that PGRA significantly impacts the WBL index at the lower to middle quantiles indicates that perhaps complementary measures are needed to enhance its effectiveness across countries at various ends of the legal and regulatory contexts. To aid visual observation of the patterns of the observed effects, Figure 1 presents the visualization of the coefficients of the SGRA and PGRA along with that of mean years of schooling and per capita income.

Comparing the patterns of the observed effects of mean years of schooling and per capita income in both specifications, while the years of schooling exhibit similarities to that of SGRA (with positive and significant coefficients across all quantiles), the impact of per capita income is more nuanced (positive and significant at lower quantiles, but diminished impacts at the higher end of the distribution), indicating that income improvements have a more substantial effect at lower levels of the WBL Index.

4.5. Robustness Checks

To ensure the robustness of our results, we also employ two alternative estimation approaches: The random intercepts (for six regions and 116 countries) and random coefficients (for the gender-related aid variables) mixed effects model, and the instrumental variable (IV)

regression methods. The mixed-effects model addresses unobserved heterogeneity by including random intercepts for regions and countries, capturing baseline differences in the Women, Business, and the Law Index (WBL) across contexts. It also includes random coefficients for gender-related aid, allowing for variation in aid effectiveness across countries. The IV approach addresses potential endogeneity by using Maternal mortality rate as an instrument that correlates with gender-related aid but is uncorrelated with WBL errors, enhancing causal inference. These methods ensure our results are not biased by unobserved differences or reverse causality, reinforcing our conclusions about the role of gender-mainstreamed aid.

Tables 6 and 7 display the results from the respective estimation approaches. Table 6 shows results from the mixed-effects model, and Table 7 illustrates findings from the IV regression model (using maternal mortality rate as an instrument for aggregate gender-related aid inflows). These indicate that our main variable of interest, the gender-related aid variables, along with several control variables, maintain consistently positive and statistically significant effects across all specifications.

[Tables 6 and 7 here]

In table 6, we observe that the coefficients of the mean years of schooling is statistically significant and positive, indicating that higher levels of educational attainment in a country strongly associated with improvements in the rules and regulatory environments affecting economic opportunities for women. Per capita income also shows a consistent positive and significant effect on the WBL Index across most specifications. The coefficients remain significant at the 5% level in models (a), (b), (d), and (e). In comparison, column (c) shows significance at only the 10% level, indicating that increased protections for women also result from income improved income levels. However, the effect size diminishes slightly in column (c), consistent with the results obtained from the quantile regression models. The stability of these coefficients across specifications in columns (a) to (e) underscores the robustness of our primary findings.

Moreover, the coefficients of the gender-related aid variables in both tables further affirm the robustness of our findings. In Table -6, column (a), the coefficient for TGRA is 0.0193 and significant ($p<0.01$), suggesting a 1% increase in total gender-related aid is associated with

approximately a 0.019% improvement in the WBL Index, demonstrating the overall efficacy of such aid. In Column (b), the coefficient for SGRA is 0.0196 and significant ($p<0.01$), indicating a 1% increase in SGRA leads to a 0.0196% improvement in the WBL Index, highlighting the substantial positive effect of targeted gender-related initiatives. The effect of PGRA is also significant ($p<0.01$), indicating a 1% increase in PGRA results in an approximately 0.0.0824% improvement in the WBL Index.

In Table 7, the coefficient of TGRA, SGRA, and PGRA are respectively 0.0281 ($p<0.01$), 0.0282($p<0.01$), and 0.0157($p<0.01$), indicating that a 1% increase in gender-related aid inflow (aggregate, significant, and principal), driven by changes in the maternal mortality rate, is associated with a 0.281%, 0.282% and 0015% increase in the WBL Index. This indicates a causal relationship where increased gender-related aid inflow leads to positive changes in the legal and regulatory environment for women's economic participation, as measured by the WBL Index. Using MMR as an instrument addresses potential endogeneity concerns and allows us to interpret this coefficient as the causal effect of gender-related aid on women's legal rights and economic opportunities.

Overall, the results from both estimation approaches (the mixed-effects models with random coefficients and the IV regression) corroborate our primary findings, suggesting that gender-related aid has a significant and beneficial impact on enhancing the legal frameworks that affect women's ability to participate in the economy.

5. Conclusion and Implications

This study provides empirical evidence on the effectiveness of gender-related aid in enhancing legal and regulatory protections for women across 116 countries from 2009 to 2022. The findings reveal that increased inflows of gender-related aid are associated with statistically significant improvements in the Women, Business, and the Law (WBL) index (measuring the legal environment impacting women's economic opportunities).

At the aggregate level, an increase in TGRA is linked to positive advancements in the overall WBL index score. When disaggregated, both the SGRA component that mainstreams gender considerations into broader development projects and the PGRA component explicitly targeting gender equality exhibit positive and statistically significant effects on the WBL index.

Notably, the impact of SGRA appears more consistent and substantial across countries at different levels of WBL development.

The analysis further indicates that while gender-related aid positively impacts the aggregate WBL index, its effectiveness varies across the dimensions constituting it. TGRA and SGRA strongly impact aspects like marriage, parenthood, and mobility but have relatively weaker effects on workplace conditions and entrepreneurship. In comparison, PGRA significantly impacts marriage, parenthood, and pension-related legal provisions.

Moreover, the quantile regression analysis uncovers intriguing distributional patterns. While the impact of SGRA is positive and significant across all quantiles of the WBL distribution, with increasing magnitude towards the higher quantiles, the effect of PGRA is significant at the lower and middle quantiles but diminishes at the upper end. This heterogeneity suggests that SGRA may be more effective for comprehensive legal reforms benefiting countries at various developmental stages, whereas PGRA may require complementary measures to enhance its impact, particularly in countries with already advanced legal frameworks for women.

These findings carry important implications for policymakers, donors, and development practitioners working towards gender equality and women's economic empowerment. First, the positive association between gender-related aid and improvements in legal protections for women underscores the potential of such aid to drive tangible progress in this critical area. Donors and multilateral agencies should continue prioritizing and increasing funding for gender-mainstreaming initiatives that can catalyze legal and regulatory reforms benefiting women.

Second, the analysis highlights the distinct roles and impacts of SGRA and PGRA, suggesting that a comprehensive approach integrating both components may be most effective. While SGRA demonstrates consistently positive impacts across countries, PGRA is crucial for targeted advancements in specific areas, such as marriage, parenthood, and pensions. A balanced allocation of resources to broad gender-mainstreaming efforts and initiatives explicitly focused on gender equality could yield synergistic effects.

Third, the dimensional variation in the impact of gender-related aid calls for nuanced, context-specific strategies tailored to different countries' or regions' legal and regulatory landscapes. For instance, in areas where TGRA and SGRA show weaker effects, such as workplace conditions and entrepreneurship, additional targeted interventions or complementary measures may be necessary to drive meaningful progress.

Fourth, the distributional analysis provides valuable insights for prioritizing aid allocation. Countries at the lower and middle quantiles of the WBL distribution may benefit most from increased PGRA, while those at the higher quantiles could see greater gains from SGRA. Tailoring aid strategies based on a country's position on the WBL spectrum could enhance the overall effectiveness of gender-related aid.

Finally, given the importance of a conducive socio-economic and institutional environment in translating legal reforms into practical improvements for women, gender-related aid initiatives should be implemented with broader efforts to enhance education, economic development, and institutional quality. A holistic approach addressing these interlinked factors could amplify the impact of legal reforms on women's economic empowerment.

In conclusion, this study contributes to the growing body of literature on the effectiveness of gender-related aid by providing empirical evidence of its positive association with legal and regulatory reforms benefiting women. The findings underscore the value of continued and strategic investment in gender-mainstreaming initiatives while highlighting the need for nuanced, context-specific approaches that consider the diverse legal landscapes, developmental stages, and socio-economic conditions across countries. Informing more effective aid strategies, the research strongly supports global efforts towards achieving gender equality, empowering women, and unlocking their economic potential for inclusive and sustainable development.

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Table-1: Panel Descriptive Statistics

VARIABLES		Mean	Std. dev.	Min	Max	Observations
Dependent variable(s):						
Women, Business, and Law Index	overall	68.96	15.70	26.25	96.88	N = 1418
	between		15.42	26.88	94.95	n = 116
	within		3.58	52.33	92.43	T = 11.7328
Dimensions of WBL:						
Mobility	overall	84.15	25.60	0.00	100.00	N = 1418
	between		25.33	0.00	100.00	n = 116
	within		4.52	50.81	107.22	T = 11.7328
Workplace	overall	71.68	31.64	0.00	100.00	N = 1418
	between		29.54	0.00	100.00	n = 116
	within		12.19	21.68	123.60	T = 11.7328
Pay	overall	54.39	29.29	0.00	100.00	N = 1418
	between		28.25	0.00	100.00	n = 116
	within		7.51	8.24	100.54	T = 11.7328
Marriage	overall	71.59	30.24	0.00	100.00	N = 1418
	between		29.35	0.00	100.00	n = 116
	within		6.49	44.93	105.44	T = 11.7328
Parenthood	overall	45.63	27.01	0.00	100.00	N = 1418
	between		26.45	0.00	100.00	n = 116
	within		7.08	1.01	101.01	T = 11.7328
Entreprenuership	overall	79.52	14.66	0.00	100.00	N = 1418
	between		15.23	0.00	100.00	n = 116
	within		5.13	10.29	102.60	T = 11.7328
Assets	overall	78.21	26.34	0.00	100.00	N = 1418
	between		26.20	0.00	100.00	n = 116
	within		3.45	41.28	111.54	T = 11.7328
Pension	overall	66.55	26.10	0.00	100.00	N = 1418
	between		25.22	21.15	100.00	n = 116
	within		7.38	21.10	108.86	T = 11.7328
Independent Variable(s):						
Total Gender Realated Aid (TGRA)	overall	203.54	274.53	0.52	2,308.42	N = 1418
	between		246.18	0.79	1,632.63	n = 116
	within		112.63	-452.86	1,087.57	T = 10.9652
Significant GRA (SGRA)	overall	177.45	243.81	0.52	2,149.84	N = 1418
	between		218.36	0.60	1,485.26	n = 116
	within		100.85	-392.87	842.04	T = 10.9652
Principal GRA (PGRA)	overall	26.21	41.10	0.00	339.07	N = 1418
	between		34.68	0.06	162.01	n = 116
	within		20.74	-93.07	203.27	T = 10.8783
Control Variables:						
Years of Schooling	overall	7.16	2.86	1.02	13.34	N = 1418
	between		2.86	1.45	12.65	n = 116
	within		0.48	5.38	9.45	T = 11.7241
Percapita Income	overall	9,013.26	6,565.73	715.98	40,284.54	N = 1418
	between		7,166.38	781.42	39,596.13	n = 116
	within		1,313.60	-1,243.36	17,398.35	T = 11.7328
Institutional Quality	overall	0.00	0.01	0.00	0.04	N = 1418
	between		0.01	0.00	0.04	n = 116
	within		0.00	-0.01	0.01	T = 11.7328
Cultural Globalization	overall	43.95	15.95	9.58	83.00	N = 1418
	between		16.04	9.70	80.69	n = 116
	within		3.05	30.83	55.53	T = 11.7328
Economic Globalization	overall	56.57	9.93	32.34	81.06	N = 1418
	between		9.88	36.52	79.83	n = 116
	within		1.90	48.18	63.15	N = 1418

Table-2: Average Annual Gender-Related Aid Inflows by Recipients in Millions of USD (2009-2022)

Recipient	Total Official Development Assistance (TODA)	Amount (Proportion) Total Gender Related Aid (TGRA)	Significant Gender Related Aid (SGRA)	Principal Gender Related Aid (PGRA)
Afghanistan	4,028.01	1,579.69(0.439)	1,473.82(0.954)	157.43(0.105)
Albania	310.58	64.06(0.203)	59.2(0.922)	4.73(0.074)
Algeria	233.05	58.52(0.246)	55.01(0.932)	3.34(0.069)
Angola	184.59	87.03(0.471)	71.2(0.812)	16.07(0.191)
Argentina	95.21	16.69(0.193)	15.39(0.925)	1.31(0.076)
Armenia	236.56	39.97(0.176)	36.71(0.912)	2.73(0.073)
Azerbaijan	164.22	20.4(0.129)	18.91(0.911)	1.5(0.092)
Bangladesh	1,818.86	934.19(0.513)	840.25(0.894)	101.85(0.126)
Barbados	10.20	0.62(0.061)	0.57(0.92)	0.05(0.08)
Belarus	118.97	19.48(0.172)	18.09(0.931)	1.42(0.07)
Belize	19.93	3.33(0.185)	2.74(0.838)	0.55(0.144)
Benin	395.62	153.06(0.403)	129.05(0.845)	24.1(0.155)
Bhutan	48.71	13.62(0.288)	13.62(1.002)	0.43(0.037)
Bolivia	371.93	180.71(0.498)	147.69(0.814)	32.63(0.184)
Bosnia and Herzegovinia	456.41	72.3(0.162)	64.63(0.894)	7.12(0.099)
Botswana	120.33	30.83(0.201)	29.03(0.885)	1.79(0.115)
Brazil	928.40	174.23(0.184)	160.36(0.916)	14.2(0.087)
Burkina Faso	590.72	268.93(0.47)	240.72(0.899)	30.56(0.118)
Burundi	248.14	141.6(0.582)	118.55(0.845)	19.26(0.134)
Cabo Verde	97.54	15.41(0.182)	14.21(0.94)	1.22(0.062)
Cambodia	639.19	252.63(0.396)	220.14(0.865)	34.82(0.146)
Cameroon	492.07	112.94(0.228)	96.62(0.852)	9.34(0.09)
Chad	309.79	137.79(0.533)	101.38(0.803)	16.23(0.126)
Chile	134.82	28.22(0.181)	27.12(0.916)	0.89(0.063)
China	1,519.35	169.15(0.105)	160.99(0.956)	6.7(0.038)
Colombia	1,259.00	435.14(0.326)	331.86(0.722)	98.19(0.268)
Congo	191.27	19.74(0.214)	18.08(0.891)	1.45(0.093)
Costa Rica	93.93	9.12(0.109)	8.05(0.89)	0.98(0.104)
Croatia	160.97	10.3(0.064)	9.56(0.919)	0.74(0.081)
Côte d'Ivoire	444.91	81.82(0.199)	65.28(0.79)	17.71(0.241)
Dominican Rep.	238.58	108.54(0.389)	99.52(0.877)	8.88(0.12)
Ecuador	284.24	89.5(0.328)	82.38(0.912)	7.04(0.085)
Egypt	1,395.17	245.1(0.174)	220.01(0.889)	26.33(0.116)
El Salvador	260.28	91.65(0.39)	73.45(0.8)	14.98(0.177)
Eswatini	99.04	28.85(0.289)	23.13(0.798)	5.6(0.192)
Ethiopia	2,080.47	891.52(0.439)	761.28(0.873)	141.28(0.155)
Fiji	109.86	38.33(0.415)	31.98(0.828)	6.34(0.171)
Gabon	92.51	12.45(0.149)	12.13(0.968)	0.37(0.039)
Gambia	52.80	11.85(0.229)	10.83(0.883)	1.07(0.119)
Georgia	578.04	157.15(0.252)	147.41(0.919)	6.85(0.051)
Ghana	765.72	338.24(0.452)	291.1(0.863)	47.5(0.138)

Guatemala	340.57	171.05(0.512)	124.4(0.724)	44.5(0.263)
Guinea	211.23	96.67(0.455)	82.92(0.85)	14.4(0.156)
Guinea-Bissau	51.72	21.91(0.425)	19.3(0.879)	3.17(0.147)
Guyana	45.71	11.71(0.36)	11.33(0.963)	0.3(0.026)
Haiti	728.97	226.41(0.344)	213.57(0.958)	18.61(0.085)
Honduras	292.47	125.11(0.431)	114.43(0.918)	10.84(0.087)
India	3,335.92	1,077.73(0.317)	1,032.01(0.946)	44.27(0.052)
Indonesia	2,053.05	616.6(0.31)	514.72(0.845)	66.37(0.123)
Iran	124.46	12.21(0.094)	15.54(1.391)	0.79(0.118)
Iraq	1,517.98	326.43(0.281)	377.05(1.297)	38.4(0.16)
Jamaica	91.42	19.23(0.235)	17.9(0.936)	1.34(0.065)
Jordan	1,427.18	403.42(0.269)	339.54(0.83)	67.41(0.168)
Kazakhstan	91.35	8.58(0.113)	7.84(0.905)	0.75(0.097)
Kenya	1,707.50	643.15(0.379)	533.31(0.834)	126.92(0.193)
Kyrgyzstan	193.06	63.88(0.326)	61.64(0.958)	2.06(0.037)
Laos	316.06	112.66(0.352)	101.23(0.893)	11.51(0.108)
Lebanon	720.23	249.35(0.343)	260.71(1.164)	19.2(0.081)
Lesotho	130.81	19.64(0.182)	16.66(0.828)	3.44(0.199)
Liberia	421.66	172.66(0.443)	137.03(0.799)	35.25(0.198)
Libya	218.46	47.16(0.224)	47.68(1.005)	3.33(0.101)
Madagascar	327.84	130.02(0.406)	111.41(0.86)	14.74(0.112)
Malawi	728.06	352.58(0.491)	281.87(0.797)	67.9(0.188)
Malaysia	115.31	5.16(0.06)	4.64(0.908)	0.48(0.096)
Maldives	19.77	4.94(0.261)	4.32(0.892)	0.61(0.107)
Mali	790.67	420.57(0.545)	320.32(0.767)	90.29(0.213)
Mauritania	149.95	46.03(0.318)	41.35(0.927)	5.65(0.119)
Mauritius	122.01	34.62(0.191)	32.59(0.86)	1.7(0.096)
Mexico	726.96	127.14(0.175)	121.48(0.933)	5.72(0.065)
Moldova	287.70	79.73(0.272)	65.51(0.853)	14.32(0.149)
Mongolia	288.16	69.28(0.243)	66.73(0.963)	2.46(0.036)
Montenegro	126.41	17.75(0.129)	16.46(0.909)	1.56(0.097)
Morocco	1,633.37	326.91(0.204)	293.37(0.898)	31.82(0.097)
Mozambique	1,396.63	538.99(0.395)	462.23(0.857)	80.39(0.149)
Myanmar	1,263.05	549.23(0.446)	528.34(0.953)	64.36(0.127)
Namibia	224.99	68.45(0.328)	62.64(0.903)	5.8(0.097)
Nepal	611.57	347.06(0.573)	290.19(0.844)	51.67(0.146)
Nicaragua	267.52	106.8(0.415)	88.61(0.83)	18.13(0.169)
Niger	492.12	239.58(0.517)	200.41(0.806)	30.34(0.15)
Nigeria	1,229.01	586.72(0.476)	482.08(0.816)	95.65(0.171)
North Macedonia	214.94	35.73(0.166)	31.44(0.893)	4.33(0.108)
Oman	8.77	0.92(0.108)	0.36(0.428)	0.56(0.572)
Pakistan	1,604.28	642.03(0.42)	557.61(0.888)	101.45(0.16)
Panama	57.04	8.57(0.175)	6.62(0.885)	1.95(0.113)
Papua New Guinea	555.62	267.16(0.495)	247.34(0.925)	21.15(0.08)
Paraguay	128.90	40.13(0.317)	35.39(0.875)	4.68(0.123)
Peru	546.91	180.33(0.334)	162.1(0.896)	18.49(0.105)
Philippines	964.62	328.42(0.32)	313.98(0.942)	16.17(0.064)
Rwanda	654.04	326.93(0.5)	289.36(0.884)	39.05(0.12)

Saint Lucia	14.19	5.02(0.365)	4.37(0.901)	0.64(0.099)
Samoa	62.60	21.43(0.354)	19.89(0.927)	1.73(0.083)
Senegal	727.39	271.42(0.382)	240.55(0.886)	33.01(0.122)
Serbia	827.87	106.93(0.134)	96.24(0.912)	10.03(0.081)
Sierra Leone	278.29	122.68(0.477)	103.09(0.875)	17.12(0.134)
South Africa	1,263.13	206.53(0.165)	184.66(0.882)	22.14(0.119)
Sri Lanka	439.76	114.22(0.267)	101.07(0.884)	8.38(0.076)
Sudan	608.95	237.71(0.628)	221.39(0.885)	31.15(0.139)
Suriname	35.93	5.7(0.296)	5.61(0.986)	0.1(0.016)
Syrian Arab Rep.	1,127.06	362.93(0.448)	234.13(0.949)	20.39(0.072)
Tajikistan	169.55	64.7(0.385)	57.53(0.891)	6.59(0.099)
Tanzania	1,609.67	699.61(0.442)	543.24(0.789)	150.74(0.204)
Thailand	362.84	52.11(0.14)	52.65(1.048)	1.97(0.064)
Togo	157.11	37.17(0.283)	33.82(0.904)	3.46(0.096)
Tonga	60.34	10.96(0.185)	10.78(1.021)	1.65(0.149)
Trinidad and Tobago	5.26	0.84(0.167)	0.67(0.798)	0.08(0.094)
Tunisia	982.19	197.4(0.19)	179.69(0.909)	17.16(0.091)
Türkiye	2,787.20	574.42(0.221)	554.77(0.894)	42.41(0.13)
Uganda	1,215.60	500.81(0.409)	429.91(0.861)	81.7(0.161)
Ukraine	989.61	215.92(0.218)	198.25(0.921)	18.02(0.08)
Uruguay	39.79	4.61(0.134)	3.64(0.809)	0.96(0.187)
Uzbekistan	274.17	58.34(0.167)	57.51(0.965)	0.82(0.034)
Venezuela	61.61	18.44(0.287)	17.96(0.936)	1.71(0.111)
Viet Nam	1,958.32	352.01(0.192)	335.27(0.947)	16.63(0.053)
Yemen	702.75	293.94(0.668)	188.56(1.033)	28.53(0.105)
Zambia	771.71	309.46(0.403)	223.88(0.733)	84.67(0.265)
Zimbabwe	520.93	281(0.55)	245.6(0.872)	40.61(0.144)
Total	647.38	210.54(0.314)	184.5(0.898)	26.33(0.118)

Figures in parenthesis are share of respective columns in TODA, and TGRA.

Table-3: Fixed Effects Panel Estimation Results

	Dependent variable: WBL Index (in Logs)				
VARIABLES	(a)	(b)	(c)	(d)	(e)
Mean years of school	0.229***	0.230***	0.237***	0.222***	0.215***
	(0.0194)	(0.0194)	(0.0200)	(0.0199)	(0.0199)
Percapita Income	0.0257**	0.0233*	0.0207	0.0239*	0.0226*
	(0.0128)	(0.0127)	(0.0133)	(0.0132)	(0.0131)
Institutional Quality Index	3.393***	3.403***	4.074***	3.686***	4.415***
	(0.850)	(0.849)	(1.150)	(1.138)	(1.158)
Cultural Globalization	0.0219*	0.0229*	0.0235*	0.0197	0.0201*
	(0.0112)	(0.0123)	(0.0134)	(0.0156)	(0.0115)
Economic Globalization	0.295***	0.295***	0.316***	0.280***	0.260***
	(0.0509)	(0.0508)	(0.0528)	(0.0525)	(0.0527)
TGRA (t-1)	0.0170***				
	(0.00271)				
SGRA (t-1)		0.0169***		0.0168***	0.0147***
		(0.00261)		(0.00289)	(0.00296)
PGRA (t-1)			0.00662***	0.00424**	-0.00142
			(0.00167)	(0.00170)	(0.00247)
SGRA#PGRA (t-1)					0.00215***
					(0.000682)
Constant	2.222***	2.243***	2.212***	2.298***	2.395***
	(0.183)	(0.183)	(0.190)	(0.188)	(0.190)
Observations	1,418	1,418	1,353	1,353	1,353
No. of Countries	116	116	115	115	115
sigma_u	0.258	0.257	0.263	0.256	0.255
sigma_e	0.0548	0.0547	0.0560	0.0553	0.0551
rho	0.957	0.957	0.957	0.955	0.955
R-Squared(within)	0.249	0.250	0.235	0.253	0.259
Log Likelihood	2378	2379	2248	2267	2272
RMSE	0.0548	0.0547	0.0560	0.0553	0.0551
F-statistic	77.88***	78.45***	68.86***	65.28***	58.74***

Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

All variables, except for the institutional quality index, are in logarithmic form.

Table 4: Coefficient Estimates of the Effects of TGRA, SGRA, and PGRA on Component Dimnesions of the Women, Business, and Law Index extracted from Panel Fixed Effects Estimations

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Component Dimension Scores (in logs) used as Dependent Variable							
VARIABLES	Mobility	Work	Pay	Mariage	Parenthood	Enterprenuership	Asset	Pension
TGRA(-2)	0.0125*	0.0192	0.0162	0.0299***	0.0303***	0.00712	0.00609*	0.0171**
	(0.00739)	(0.0128)	(0.0121)	(0.0108)	(0.0108)	(0.00460)	(0.00332)	(0.00748)
SGRA(-2)	0.0109*	0.0218*	0.0217	0.0261***	0.0264**	0.00757*	0.00408	0.0117
	(0.00576)	(0.0126)	(0.0134)	(0.00977)	(0.0102)	(0.00437)	(0.00318)	(0.00737)
PGRA (-2)	0.00398	0.00928	0.0104	0.0114**	0.0103*	0.000788	0.00568**	0.0183***
	(0.00336)	(0.00925)	(0.00642)	(0.00542)	(0.00587)	(0.00181)	(0.00285)	(0.00672)
Observations	1,353	1,353	1,242	1,274	1,134	1,353	1,353	1,353

See notes on Table 3

Table-5: Quantile Fixed Effects Estimation of the Effects of Gender-Related Aid on WBL Index (In logs)

Panel A: Significant Gender-related Aid, SGRA; N=1551

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)
VARIABLES	q5	q15	q25	q35	q45	q55	q65	q75	q85	q95
Mean years of school (log)	0.253***	0.246***	0.241***	0.237***	0.233***	0.227***	0.222***	0.218***	0.214***	0.205***
	(0.052)	(0.040)	(0.033)	(0.029)	(0.026)	(0.026)	(0.030)	(0.035)	(0.040)	(0.056)
Percapita Income (log)	0.043	0.037*	0.033*	0.030*	0.026*	0.021	0.017	0.014	0.011	0.003
	(0.023)	(0.018)	(0.015)	(0.013)	(0.012)	(0.012)	(0.014)	(0.016)	(0.018)	(0.025)
Institutional Quality Index	4.125*	3.905**	3.764***	3.643***	3.497***	3.324***	3.170***	3.053**	2.934*	2.650
	(1.636)	(1.263)	(1.054)	(0.911)	(0.807)	(0.817)	(0.945)	(1.093)	(1.272)	(1.762)
Cultural Globalization (log)	0.032	0.027	0.025	0.032	0.042*	0.046**	0.043**	0.039*	0.691*	0.004
	(0.045)	(0.035)	(0.029)	(0.025)	(0.022)	(0.022)	(0.021)	(0.030)	(0.035)	(0.048)
Economic Globalization (log)	0.329**	0.319***	0.312***	0.306***	0.299***	0.291***	0.284***	0.278***	0.272**	0.259*
	(0.113)	(0.088)	(0.073)	(0.063)	(0.056)	(0.057)	(0.066)	(0.076)	(0.088)	(0.122)
Lagged SGRA (log)	0.012*	0.014***	0.015***	0.015***	0.016***	0.017***	0.018***	0.019***	0.020***	0.022***
	(0.005)	(0.004)	(0.003)	(0.003)	(0.002)	(0.002)	(0.003)	(0.003)	(0.004)	(0.005)

Panel B: Principal Gender-related Aid, PGRA; N=1486

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)
VARIABLES	q5	q15	q25	q35	q45	q55	q65	q75	q85	q95
Mean years of school (log)	0.262***	0.254***	0.250***	0.245***	0.240***	0.234***	0.229***	0.225***	0.221***	0.212***
	(0.057)	(0.044)	(0.038)	(0.032)	(0.027)	(0.026)	(0.028)	(0.033)	(0.038)	(0.052)
Percapita Income (log)	0.046**	0.038**	0.034**	0.029*	0.024**	0.018	0.017*	0.009	0.005	-0.004
	(0.023)	(0.019)	(0.017)	(0.015)	(0.012)	(0.012)	(0.011)	(0.015)	(0.017)	(0.024)
Institutional Quality Index	4.338	4.258	4.211*	4.165*	4.103**	4.045**	3.995**	3.952*	3.913*	3.817
	(2.929)	(2.276)	(1.935)	(1.638)	(1.373)	(1.324)	(1.457)	(1.676)	(1.929)	(2.664)
Cultural Globalization (log)	0.035	0.030	0.028	0.025	0.029**	0.039***	0.046*	0.049*	0.612*	0.067 **
	(0.051)	(0.039)	(0.034)	(0.028)	(0.014)	(0.013)	(0.022)	(0.029)	(0.031)	(0.032)
Economic Globalization (log)	0.291*	0.298**	0.303***	0.307***	0.313***	0.319***	0.324***	0.328***	0.332***	0.341**
	(0.125)	(0.097)	(0.083)	(0.070)	(0.059)	(0.056)	(0.062)	(0.071)	(0.082)	(0.114)
Lagged PGRA (log)	0.010**	0.009**	0.008***	0.008***	0.007***	0.006***	0.006**	0.005*	0.004	0.003
	(0.004)	(0.003)	(0.003)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.003)	(0.004)

See notes on Table 3

Fig.1. Relative Impacts of the Control Variables on Rules and Regulatory Frameworks Affecting Women. Results from the Quantile Regression Model

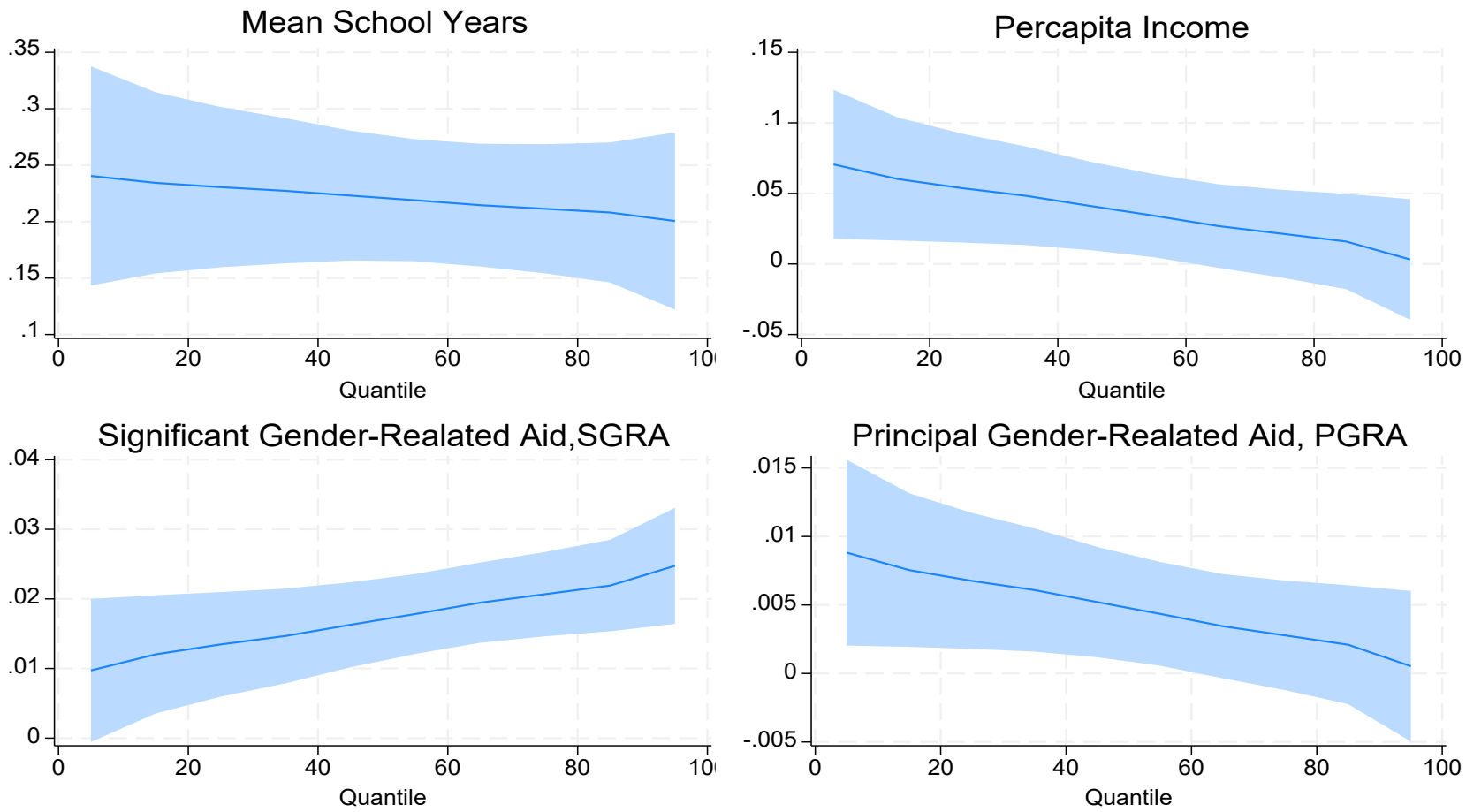

Table 6: Mixed Effects Model Estimation of the Determinants of WBL Index

	Dependent Variable: WBL Index (in Logs)				
VARIABLES	(a)	(b)	(c)	(d)	(e)
Mean years of school	0.193***	0.195***	0.192***	0.198***	0.196***
	(0.0191)	(0.0188)	(0.0187)	(0.0189)	(0.0188)
Percapita Income	0.0339**	0.0340**	0.0284*	0.0339**	0.0334**
	(0.0147)	(0.0144)	(0.0146)	(0.0147)	(0.0147)
Institutional Quality Index	0.00687*	0.00692*	0.00643	0.00551	0.00475
	(0.00413)	(0.00400)	(0.00404)	(0.00406)	(0.00406)
Cultural Globalization	0.0432**	0.0476**	0.0335	0.0418**	0.0430**
	(0.0212)	(0.0207)	(0.0218)	(0.0209)	(0.0209)
Economic Globalization	0.233***	0.225***	0.269***	0.181***	0.175***
	(0.0557)	(0.0543)	(0.0561)	(0.0543)	(0.0545)
TGRA (t-2)	0.0193***				
	(0.00503)				
SGRA (t-2)		0.0196***		0.0178***	0.0122**
		(0.00538)		(0.00530)	(0.00576)
PGRA (t-2)			0.00824***	0.00409*	-0.00694
			(0.00306)	(0.00239)	(0.00558)
SGRA#PGRA (t-2)					0.00295**
					(0.00132)
Constant	2.254***	2.262***	2.273***	2.463***	2.516***
	(0.234)	(0.230)	(0.235)	(0.233)	(0.234)
Observations	1,302	1,302	1,238	1,238	1,238
No. of Countries	116	116	115	115	115
Log-Likelihood	1683	1705	1643	1698	1700
Chi-Square	298.4***	303.9***	277.7***	278.7***	285.8***
Country Fixed Effects	YES	YES	YES	YES	YES
Year Fixed Effects	YES	YES	YES	YES	YES

See notes on Table 3

Table 7: Panel Fixed Effects Instrumental Variable Estimation of the Determinants of the WBL Index

VARIABLES	(1) lwbl	(2) lwbl	(3) lwbl	(4) lwbl	(5) lwbl
Mean years of school	0.2668*	0.2605*	0.2786**	0.2783*	0.295**
	(0.166)	(0.168)	(0.1229)	(0.119)	(0.1213)
Percapita Income	0.0955*	0.0557**	0.0541**	0.0748**	0.0482**
	(0.0513)	(0.0209)	(0.0228)	(0.0369)	(0.0209)
Institutional Quality Index	05661***	0.05830***	0.05611**	0.06124***	0.06994***
	(0.02372)	(0.02214)	(0.02101)	(0.02132)	(0.02132)
Cultural Globalization	0.528***	0.513***	0.2068***	0.0138**	0.01369**
	(0.0538)	(0.0544)	(0.0524)	(0.0501)	(0.0418)
Economic Globalization	0.264***	0.283***	0.2503***	0.301***	0.715***
	(0.0328)	(0.0349)	(0.0353)	(0.0338)	(0.0354)
TGRA (t-2)	0.0281**				
	(0.0140)				
SGRA (t-2)		0.0282*		0.0311*	0.0136***
		(0.0146)		(0.0136)	(0.00236)
PGRA (t-2)			0.0157***	0.0655***	0.00153
			(0.0032)	(0.0324)	(0.00223)
SGRA#PGRA (t-2)					0.0264***
					(0.00819)
Constant	3.443***	3.812***	15.90	3.674***	3.754***
	(0.823)	(1.009)	(165.4)	(0.909)	(0.588)
Observations	1,302	1,302	1,238	1,238	1,238
No. of Countries	116	116	115	115	115
sigma_u	0.571	0.583	11.47	0.500	0.348
sigma_e	0.153	0.158	3.801	0.167	0.0981
rho	0.933	0.931	0.901	0.900	0.927
Chi-Square	1.176e+06	1.097e+06	1814	943299	2.726e+06
Standard errors in parentheses		*** p<0.01, ** p<0.05, * p<0.1			
Endogenous:	TGRA	SGRA	PGRA	SGRA, PGRA	SGRA, PGRA
Exogenous: Maternal Mortality Rate					

Appendix Table-1: Descriptive Statistics of WBL Index and Its components by Regional Location of the Countries in the Study

Variables	East Asia & Pacific	Europe & Central Asia	Latin America & Caribbean	Middle East & North Africa	South Asia	Sub-Saharan Africa	All Regions (Total)
WBL INDEX	71.24	79.86	79.12	45.10	57.63	68.86	69.63
	(10.44)	(7.069)	(9.153)	(13.96)	(14.03)	(13.65)	(15.68)
MOBILITY	88.38	100	93.95	51.04	87.62	80.01	84.48
	(16.14)	(0)	(13.13)	(38.76)	(22.26)	(23.93)	(25.28)
WORKPLACE	75.96	81.43	80.88	44.79	73.51	72.25	73.09
	(27.57)	(22.42)	(28.27)	(32.77)	(26.65)	(33.05)	(31.27)
PAY	58.76	45.60	68.95	35.76	39.36	59.43	55.22
	(21.72)	(31.91)	(22.80)	(22.64)	(34.16)	(29.09)	(29.45)
MARRIAGE	80.76	94.76	84.63	23.47	68.51	68.02	72.42
	(21.94)	(8.814)	(17.15)	(21.46)	(26.88)	(29.74)	(30.15)
PARENTHOOD	40.25	74.86	52	34.44	20.40	41.81	46.50
	(28.19)	(14.38)	(23.92)	(23.23)	(14.69)	(24.63)	(27.02)
ENTREPRENEURSHIP	84.87	90.24	81.84	77.78	72.77	75.11	80.09
	(12.26)	(12.23)	(13.49)	(7.884)	(9.420)	(16.51)	(14.71)
ASSETS	84.71	100	96.91	40	54.06	72.37	78.41
	(20.27)	(0)	(10.69)	(0)	(17.79)	(26.28)	(26.28)
PENSION	56.21	52.02	73.77	53.47	44.80	81.90	66.86
	(25.58)	(15.04)	(22.56)	(29.36)	(21.01)	(21.00)	(26.05)
Observations	157	210	285	144	101	464	1361