



EFFECT OF GENDER BALANCE ON SOCIO-ECONOMIC DEVELOPMENT OF WOMEN OF TUMBA SECTOR IN RULINDO DISTRICT, RWANDA

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1. ABSTRACT

The research conducted in Tumba sector of Rulindo district analyzed the impact of gender balance on the socio-economic development of women. Through a descriptive research design incorporating both quantitative and qualitative data, the study investigated specific objectives including the effect of access to education, women empowerment, equal financial inclusion, equal work distribution, and equitable access to resources. A sample size of 158 women aged 21 and above was selected, and regression analysis was employed for data processing. The findings revealed significant positive effects of gender balance factors on socio-economic development. Access to education, women empowerment, equal financial inclusion, equal work distribution, and equitable resource access demonstrated respective effects ($\beta_1=0.207$, $p=0.003 < 0.05$; $\beta_2=0.294$, $p=0.000 < 0.05$; $\beta_3=0.377$, $p=0.000 < 0.05$; $\beta_4=0.819$, $p=0.000 < 0.05$; $\beta_5=0.229$, $p=0.000 < 0.05$). Each 1% change in these factors led to changes in socio-economic development. All specific objectives were achieved, and hypotheses (H01, H02, H03, H04, and H05) were rejected. Recommendations include encouraging women in Tumba sector to pursue initiatives for their socio-economic advancement, advocating for gender-responsive policies at the local government level, implementing skills training and capacity-building programs for women, conducting awareness campaigns to challenge gender stereotypes, and establishing a monitoring and evaluation framework at the national level to track progress in gender balance and socio-economic development.

Key words: *Gender Balance¹, Socio-Economic Development², Women³*

2. INTRODUCTION

The concept of gender balance is complex and constantly evolving, shaped by various societal, cultural, and political factors across different times and places. It involves striving for a relatively fair representation and treatment of individuals across genders in social, economic,

political, and cultural aspects (Sen & Ostlin, 2018). Historically, many societies adhered to patriarchal systems where men held dominant positions in power, rights, and opportunities, contrasting with the limited agency afforded to women. However, gender roles have been fluid, with instances of more equal societies or even

matriarchal systems evident in some cultures. Early human societies, often organized around hunting, gathering, or agricultural practices, assigned distinct gender roles. Men typically engaged in hunting and warfare, while women were responsible for gathering and domestic tasks. Nevertheless, some societies showed greater gender balance, with women playing important roles in decision-making and spiritual practices (Ageon & Otaviano, 2022).

In contrast, civilizations such as ancient Greece and Rome confined women to domestic roles, offering them limited rights and opportunities, including restricted access to education and politics. Throughout the European Middle Ages, gender roles were rigidly defined, primarily assigning women to homemaking and childcare duties. Yet, there were exceptions, with influential roles played by queens and noblewomen (Ageon & Otaviano, 2022). The Renaissance and Enlightenment eras initiated a gradual questioning of traditional gender norms and a push for greater individual freedoms, although these movements primarily benefited men, leaving women's rights highly constrained. The 19th and early 20th centuries saw women mobilizing for suffrage rights, leading to significant milestones such as New Zealand granting women the right to vote in 1893 (Butler, 2019).

The upheavals caused by World Wars I and II brought about societal changes, providing women with more opportunities in traditionally male-dominated workplaces. This shift challenged established gender norms and propelled progress towards gender balance. The latter half of the 20th century witnessed sustained feminist activism aimed at dismantling patriarchal structures and advocating for gender equality (Butler, 2019).

The emergence of second and third waves of feminism from the 1960s onwards highlighted women's campaigns on various issues, including reproductive rights, workplace discrimination, and domestic violence. In recent decades, numerous countries have made significant strides towards achieving gender balance across different spheres, with increased women's participation in the workforce and leadership roles, alongside legal and policy reforms promoting gender equality (Sandberg, 2022). However, socio-political and economic barriers persist, hindering women's empowerment in various cultures and societies (Kanter, 2017).

Rwanda stands out for its remarkable progress in gender mainstreaming and women's empowerment since the aftermath of the 1994 genocide against the Tutsi. Through initiatives like the National Gender Policy, Rwanda has prioritized gender equality and women's empowerment across all sectors, achieving notable advancements in policy implementation (MIGEPROF, 2021). Despite these achievements, gender disparities persist in areas like Rulindo District, where women encounter obstacles in accessing education, employment, and ICT opportunities (Tumba Sector, 2022). The journey towards gender balance has been marked by historical struggles, societal shifts, and ongoing activism. While significant progress has been made, entrenched gender inequalities underscore the need for continued advocacy, policy reforms, and institutional interventions to realize true gender equality and foster inclusive socio-economic development

3. Statement of the Problem

In Rwanda, there have been notable advancements towards achieving gender equality and empowering women, backed by political commitments, institutional mechanisms, and

legislative reforms (GMO, 2018; Robert, 2019). Particularly noteworthy is the significant representation of women in decision-making roles, notably in Parliament, where Rwanda stands as a global leader in this aspect (GMO, 2018). Moreover, high rates of school enrollment for both girls and boys signify progress towards gender balance in education (Robert, 2019).

However, despite these gains, gender gaps persist in socio-economic realms, particularly concerning employment and income distribution (MIGEPROF, 2021). Women are largely concentrated in unskilled labor and agricultural sectors, facing limited access to formal employment opportunities (MIGEPROF, 2021). Discrepancies in income and involvement in decision-making processes highlight ongoing gender inequalities (Tumba Sector, 2023). In places like Tumba Sector, akin to many rural areas in Rwanda, gender dynamics have shifted due to policy interventions and community efforts aimed at enhancing women's engagement across various sectors (Tumba Sector, 2023). Nevertheless, notable gender disparities endure, especially concerning education, entrepreneurship, employment, and decision-making (Tumba Sector, 2023). To tackle these disparities and evaluate how gender balance influences socio-economic development, this study investigates the impact of gender balance on women's socio-economic status specifically within Tumba Sector, Rulindo District (Tumba Sector, 2023). By focusing on Tumba Sector, the study aims to provide insights into the effectiveness of current policies and initiatives in promoting gender equality and women's empowerment at the grassroots level.

4. Objectives of the study

The general objective of this research was to examine the effects of gender balance on socio-

economic development of women in Tumba sector in Rulindo district. Specific objectives were as follows

- (1) To assess the effect of access to education on socio-economic development of women
- (2) To examine the effect of women empowerment on socio-economic development of women
- (3) To determine the effects of equal financial inclusion on socio-economic development of women
- (4) To evaluate the effects of equal work distribution on socio-economic development of women
- (5) To examine the effects of equitable access and use of resources on socio-economic development of women

5. Research Hypotheses

The following were the hypotheses to be verified in this research:

- (1) **H01:** There is no significant effect of access to education on socio-economic development of women
- (2) **H02:** There is no significant effect of women empowerment on socio-economic development of women
- (3) **H03:** There is no significant effect of financial inclusion on socio-economic development of women
- (4) **H04:** There is no significant effect of equal work distribution effect on socio-economic development of women
- (5) **H05:** There is no significant effect of Equitable access and use of resources on socio-economic development of women

6. Theoretical Framework

This study incorporates various theories, with this section focusing on their relevance to the current research:

Modernization Development Theory

Modernization theory emerged prominently in the 1950s and 1960s, aiming to comprehend

economic and social development issues and formulate policies to facilitate transitions in poorer nations (Sharma, 2017). According to Rostow (2014), economic modernization theory posits the superiority and desirability of Western-style modernization and growth, suggesting that all countries progress from traditional to modern societies following a similar developmental trajectory experienced by advanced Western nations. However, contrary arguments suggest that third-world nations face numerous constraints and structural impediments such as traditionalism, low savings, high population, and low achievements. The failure of modernization to benefit women can be attributed to various factors shaped by cultural contexts. In female farming systems, particularly in Sub-Saharan Africa, women have historically been denied access to training, land rights, education, and technology by biased colonial and post-colonial administrators who favored male farmers. Additionally, societal prejudices and women's own preferences hindered their pursuit of employment in the modern sector within the market economies of the Third World, where employers displayed a preference for men, thus establishing a sex-stereotyped job hierarchy.

Participatory development theory

Participatory development stands as a vital approach to fostering people-centric progress, prioritizing enhanced participation within local communities as a pathway towards achieving sustainable development and social equity (Sharma, 2019). Waishbord (2019) critiques participatory theories, contending that they challenge the modernization paradigm by highlighting its tendency to impose a top-down, ethnocentric, and paternalistic view of development. Instead, these theories advocate for

a strategic model that aligns with diverse visions of progress.

At its core, participatory development theory advocates for active community involvement in decision-making processes concerning the implementation of initiatives that impact them (Slocum et al., 2019). It perceives participation as the exercise of collective power in decision-making, promoting collaboration without allowing individual wishes to overshadow collective interests. This approach underscores concepts like capacity building, empowerment, sustainability, and self-reliance. According to participatory development theory, the solution to effective third-world development lies within the community itself, rather than in centralized bureaucratic projects. This necessitates community empowerment and control over resources and destiny (Chen, 2019).

Relating participatory development theory to the current research, it becomes apparent that women require tailored approaches focusing on capacity building, empowerment, sustainability, and self-reliance to actively participate in socio-economic development. Specifically, by incorporating the principles of participatory development, such as involving local communities and stakeholders in decision-making processes, the research on the socio-economic development of women in Tumba Sector ensures that their voices, needs, and perspectives are acknowledged. This inclusive approach empowers women to contribute meaningfully to shaping development initiatives that directly impact their lives, thereby fostering more pertinent and sustainable outcomes

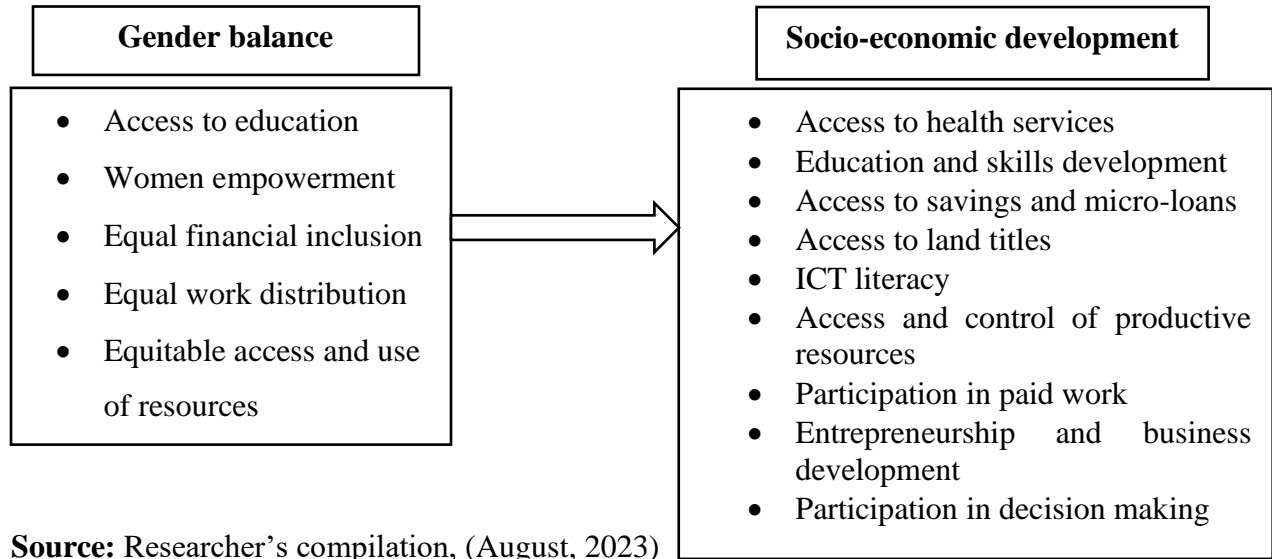
7. Conceptual Framework

A conceptual framework in research refers to the author added that the conceptual framework

guides the selection of appropriate research methods, data collection techniques, and analysis procedures. In this study, gender balance was taken as independent variable while “socio-economic development” was taken as dependent

variable. The conceptual framework of this study is shown on the following figure:

Figure 1: Conceptual framework



Source: Researcher’s compilation, (August, 2023)

8. Research Design and Methodology

The present research used a descriptive research designs to establish factors associated with certain occurrences, outcomes, conditions or types of behavior to relate gender balance and socio-economic development. The target population

was made of all the women of Tumba sector located in Rulindo District, aged of 18 years old and above. The distribution of the population per cell is shown in the following table

Table 1: Distribution of population

N ^o	Cell	Population
1	Barari	1445
2	Gahabwa	1860
3	Misezero	1032
4	Nyirabirori	1546
5	Taba	1057
	Total	6940

Source: Field survey, (2023)

The application of Yamane formula was given below: Sample size= $\frac{N}{1+Ne^2}$ where **n** is the sample size; **N** is the population size; **e** is the margin sampling error. The margin error of 0.05 was

chosen for this research and the sample of 158 was obtained as follows: Sample size= $\frac{259}{1+259*(0.05)^2} \approx 158$

The stratified sampling was applied while dispatching the 158 respondents in five cells of Tumba Sector. Thereafter, the random sampling was applied in selecting the respondents in each cell. This study used primary data. The used of interviews and questionnaires were methods of data collection for primary sources. A quantitative method was used to process numerical data. Correlation analysis was used to measure the strength of the linear relationship between two variables and compute their association. Zero indicates no linear relationship; +1 indicates a perfect positive linear relationship: as one variable increases in its values, the other variable also increases in its values through an exact linear rule; -1 indicates a perfect negative linear relationship: as one variable increases in its values, the other variable decreases in its values through an exact linear rule; Values between 0 and 0.3 (0 and -0.3) indicate a weak positive or negative) linear relationship through a shaky linear rule; Values between 0.3 and 0.7 (0.3 and -0.7) indicate a moderate positive or negative) linear relationship through a fuzzy-firm linear rule; Values between 0.7 and 1.0 (-0.7 and -1.0) indicate a strong positive or negative) linear

relationship through a firm linear rule. In this regard, this study used a regression model to estimate the effects of gender balance on socio-economic development of women. The linear regression was as follows: $Y = \beta_0 + \beta_1x_1 + \beta_2x_2 + \beta_3x_3 + \beta_4x_4 + \beta_5x_5 + \varepsilon$ Where, **Y** is the level of socio-economic development, β_0 is the constant term of the equation, $\beta_1, \beta_2, \beta_3, \beta_4$ and β_5 are the coefficients of independent variables and they measure the responsiveness of **Y** to unit change in variable **x**. **Y** = Socio-economic development (SED); x_1 = Access to education (AE); x_2 = Women empowerment (WE); x_3 = Equal financial inclusion (EFI); x_4 = Equal work distribution (EWD); x_5 = Equal access and use of resources (EAUR) and ε_i = The error term.

9. Findings and Discussions

The analysis was based on the data collected from the women of Tumba sector, aged of 21 years old and above, among whom a sample of 158 individuals was taken. The results are presented and analyzed using statistical methods including tables with frequencies and percentages, mean, maximum and standard deviations.

Table 2: Age of respondents

	Freque y	Perce t	Valid Percent	Cumulative Percent
Valid 21-30 Years	28	18.4	18.4	18.4
31-40 Years	64	40.5	40.5	58.9
41-50 Years	47	29.7	29.7	88.6
51 and above	18	11.4	11.4	100.0
Total	158	100.0	100.0	

Source: Primary data, 2023

The Table 2 shows that 18.4% of respondents were in the range 21-30 years old; 40.5% were in the range 31-40 years old; 29.7% were in the range 41-50 years old and 11.4% were in the range of above 50 years old. The above results show that the highest percentage of respondents was in the range 31-40 years old. This is the range

in which women are active and can have great influence on socio-economic development. Therefore, the above results ensured the attainment to socio-economic development of women in Tumba Sector.

Table 3: Educational level of respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Primary Ordinary	46	29.1	29.1	29.1
	Secondary Level	39	24.7	24.7	53.8
	Advanced Secondary Level	36	22.8	22.8	76.6
	Diploma/Advanced diploma	24	15.2	15.2	91.8
	Bachelor	9	5.7	5.7	97.5
	Masters	4	2.5	2.5	100.0
	Total	158	100.0	100.0	

Source: Primary data, 2023

The Table 3 shows that 29.1% of respondents had primary level; 24.7% of respondents had Ordinary Secondary level; 22.8% of respondents had advanced Secondary level; 15.2% of respondents had diploma/advanced diploma; 5.7% of respondents had bachelor degree and 2.5 had

Master's degree. The above results show that the women of Tumba Sector have enough educational levels which can conduct them to considerable socio-economic development.

Table 4: Marital status of respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Single	29	18.4	18.4	18.4
	Married	109	69.0	69.0	87.4
	Widower	12	7.6	7.6	95.0
	Divorced	8	5.0	5.0	100.0
	Total	158	100.0	100.0	

Source: Primary data, 2023

The Table 4 shows that 18.4% of respondents were single; 69% were married; 7.6% were widowed and 5.1% were divorced. The above results show that the majority of respondents were married and this ensured considerable socio-

economic development among the women of Tumba Sector for the reason that married women may have different access to resources, support networks, and responsibilities compared to women with other statuses

Table 5: Occupation of respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Farmers	56	35.4	35.4	35.4
	Traders	6	3.8	3.8	39.2
	Primary teachers	43	27.2	27.2	66.4
	Secondary teachers	15	9.5	9.5	75.9

University lecturers	3	1.9	1.9	77.8
Nurses	9	5.7	5.7	83.5
Security workers	4	2.5	2.5	86.0
Financial institution workers	8	5.1	5.1	91.1
Local government employees	14	8.9	8.9	100.0
Total	158	100.0	100.0	

Source: Primary data, 2023

According to the Table 5 it is seen that 35.4% of respondents were farmers; 3.8 were traders; 27.2% were primary teachers; 9.5 % were secondary teachers; 1.9% were university teachers; 5.7% were nurses; 2.5% were security agents; 5.1% were financial institutions staff and 8.9% were local government agents. The above results show that the respondents were in varied occupations which ensure women socio-economic development.

Inferential statistics Analysis Results

The researcher determined using linear regression, how much the independent variables (gender balance) on dependent variable (socio-economic development).

Test of hypothesis one (Ho1):

Hypothesis one: There is no significant effect of access to education on socio-economic development of women in Tumba sector in Rulindo district of Rwanda.

Table 6: Model Summary on the effect of access to education on socio-economic development of women

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.724 ^a	.524	.517	.2315

a. Predictors: (Constant), Access to education (AE)

From the table 6; the model had a correlation of 0.724 positive strong correlation between dependent and independent variables. The model had adjusted R² of 0.517, implying that Even access to education (AE) explains 51.7% of the changes in socio-economic development of

women of Tumba sector in Rulindo district of Rwanda, while the remaining 48.3% changes in socio-economic development of women of Tumba sector in Rulindo district of Rwanda are results of other factors that are not captured by the model.

Table 7: ANOVA on the effect of access to education on socio-economic development of women

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1505.299	1	1505.299	67.069	.015 ^a
	Residual	3501.316	156	22.444		
	Total	5006.615	157			

a. Dependent Variable: Socio-economic development (SED)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1505.299	1	1505.299	67.069	.015 ^a
	Residual	3501.316	156	22.444		
	Total	5006.615	157			

b. Predictors: (Constant), Access to education (AE)

From findings obtained in table 7, the F-test value was 67.069 with significant value of 0.015 at 0.05 level of significance. In fact, since the p value obtained was <0.05, the F-test was significant, hence we conclude that model was good. Therefore, we cannot accept the Ho1 which stated

that there is no significant effect of even access to education on the socio-economic development of women of Tumba sector in Rulindo district of Rwanda.

Table 8: Coefficients on the effect of access to education on socio-economic development of women

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	.562	.863		.651	.774
	Even access to education	.816	.255	.311	3.200	.046

a. *Dependent Variable: Socio-economic development (SED)*

Table 8, provides the summary of results of regression analysis for the effect of even access to education on Socio-economic development of women of Tumba sector in Rulindo district of Rwanda. The results indicated that there is a positive and significant effect of Even access to education on Socio-economic development of women of Tumba sector in Rulindo district of

Rwanda ($\beta_1=0.311$, $t= 3.2$, $p= 0.046 < 0.05$). This implies that 1% increase in even access to education will lead to 0.311 increase in Socio-economic development of women of Tumba sector in Rulindo district of Rwanda. $SED= .562 + 0.311AE + 0.863$ Where: SED: Socio-economic development; AE = Access to education.

Hypothesis two: There is no significant effect of women empowerment on socio-economic

Test of Hypothesis Two (HO2)
development of women of Tumba sector in Rulindo district of Rwanda.

Table 9: Model Summary on the effect of women empowerment on socio-economic development of women

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.831 ^a	.690	.678	.3421

a. Predictors: (Constant), Women empowerment (WE)

From the table 9; the model had a correlation of 0.831 positive strong correlation between dependent and independent variables. The model had adjusted R² of 0.678, implying that Women empowerment (WE) explains 67.8% of the

changes in socio-economic development of women of Tumba sector in Rulindo district of Rwanda, while the remaining 32.2% changes in socio-economic development of women of Tumba sector in Rulindo district of Rwanda are

results of other factors that are not captured by the model.

Table 10: ANOVA on the effect of women empowerment on socio-economic development of women

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	2238.175	1	2238.175	209.273	.000 ^a
	Residual	1668.441	156	10.695		
	Total	3906.616	157			

a. Dependent Variable: Socio-economic development (SED)

b. Predictors: (Constant), Women empowerment (WE)

From findings obtained in table 10, the F-test value was 209.273 with significant value of 0.000 at 0.05 level of significance. In fact, since the p value obtained was <0.05, the F-test was significant, hence we conclude that model was

good. Therefore, we cannot accept the Ho2 which stated that there is no significant effect of women empowerment on socio-economic development of women of Tumba sector in Rulindo district of Rwanda.

Table 11: Coefficients on the effect of women empowerment on socio-economic development of women

Model	Unstandardized Coefficients		Standardized Coefficients		T	Sig.
	B	Std. Error	Beta			
1 (Constant)	.361	.532			.678	.017
Women empowerment	.432	.568	.421		0.760	.000

a. Dependent Variable: Socio-economic development (SED)

Table 11 provides the summary of results of regression analysis for the effect of women empowerment on socio-economic development of women of Tumba sector in Rulindo district of Rwanda. The results indicated that there is a positive and significant influence of women empowerment on socio-economic development of women of Tumba sector in Rulindo district of Rwanda. ($\beta_2=0.421$, $t= 0.760$, $p= 0.000 < 0.05$). This implies that 1% increase in women empowerment will lead to 0.421 increase in socio-economic development of women of

Tumba sector in Rulindo district of Rwanda. $SED= 0.361 + 0.421WE + 0.532$; Where: SED: Socio-economic development; WE = Women empowerment.

Test of Hypothesis Three (HO3)

Hypothesis three: There is no significant influence of equal financial inclusion on socio-economic development of women in Tumba sector in Rulindo district of Rwanda.

Table 12: Model Summary on the influence of equal financial inclusion on socio-economic development of women

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.891 ^a	.793	.784	.3431

a. Predictors: (Constant), Equal financial inclusion (EFI)

From the table 12; the model had a correlation of 0.891 positive strong correlation between dependent and independent variables. The model had adjusted R² of 0.784, implying that Equal financial inclusion (EFI) explains 78.4% of the changes socio-economic development of women

in Tumba sector in Rulindo district of Rwanda, while the remaining 21.6% changes in socio-economic development of women in Tumba sector in Rulindo district of Rwanda are results of other factors that are not captured by the model.

Table 13: ANOVA on the influence of equal financial inclusion on socio-economic development of women

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3555.168	1	3555.168	257.789	.000 ^a
	Residual	2151.448	156	13.791		
	Total	5706.616	157			

a. Dependent Variable: Socio-economic development

b. Predictors: (Constant), Equal financial inclusion (EFI)

From findings obtained in table 13, the F-test value was 257.789 with significant value of 0.000 at 0.05 level of significance. In fact, since the p value obtained was <0.05, the F-test was significant, hence we conclude that model was

good. Therefore, we cannot accept the Ho3 which stated that there is no significant influence of equal financial inclusion on socio-economic development of women in Tumba sector in Rulindo district of Rwanda.

Table 14: Coefficients on the influence of equal financial inclusion on socio-economic development of women

Model	Unstandardized Coefficients		Standardized Coefficients		Sig.
	B	Std. Error	Beta	t	
1 (Constant)	.741	.452		1.639	.004
Equal financial inclusion	.653	.346	.563	1.887	.000

a. Dependent Variable: Socio-economic development (SED)

The results indicated that there is a positive and significant influence of equal financial inclusion on socio-economic development of women in Tumba sector in Rulindo district of Rwanda, ($\beta_3=0.563$, $t= 1.887$, $p= 0.000 < 0.05$). This implies that 1% increase in equal financial

inclusion will lead to 0.563 increase in socio-economic development of women in Tumba sector in Rulindo district of Rwanda. $SED = 0.741 + 0.563EFI + 0.452$; Where: SED: Socio-economic development; EFI = Equal financial inclusion.

Hypothesis four: there is no significant effect of equal work distribution on socio-economic

Test of Hypothesis Four (HO4)

development of women in Tumba sector in Rulindo district of Rwanda.

Table 15: Model Summary on the effect of equal work distribution on socio-economic development of women

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.853 ^a	.727	.623	.16282

b. Predictors: (Constant), Equal work distribution (EWD)

From the table 15; the model had a correlation of 0.853 positive strong correlation between dependent and independent variables. The model had adjusted R² of 0.623, implying that equal work distribution (EWD) explains 62.3% of the changes in socio-economic development of

women in Tumba sector in Rulindo district of Rwanda, while the remaining 37.7% changes in socio-economic development of women in Tumba sector in Rulindo district of Rwanda are results of other factors that are not captured by the model.

Table 16: ANOVA on the effect of equal work distribution on socio-economic development of women

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3669.661	1	3669.661	166.561	.015 ^a
	Residual	3436.955	156	22.032		
	Total	7106.616	157			

a. Dependent Variable: Socio-economic development (SED)

b. Predictors: (Constant), Equal work distribution (EWD)

From findings obtained in table 16, the F-test value was 166.561 with significant value of 0.015 at 0.05 level of significance. In fact, since the p value obtained was <0.05, the F-test was significant, hence we conclude that model was good. Therefore, we cannot accept the Ho4 which

stated that there is no significant effect of equal work distribution on socio-economic development of women in Tumba sector in Rulindo district of Rwanda.

Table 17: Coefficients on the effect of equal work distribution on socio-economic development of women

Model	Unstandardized Coefficients		Standardized Coefficients		Sig.
	B	Std. Error	Beta	t	
1(Constant)	.562	.863		.292	.774
Equal work distribution	.816	.255	.212	3.200	.046

a. Dependent Variable: Socio-economic development (SED)

The results indicated that there is a positive and significant influence of Equal work distribution (EWD) on socio-economic development of women in Tumba sector in Rulindo district of Rwanda, ($\beta_4=0.212$, $t= 3.200$, $p= 0.046 < 0.05$). This implies that 1% increase in equal work

distribution will lead to 0.212 increase in socio-economic development of women in Tumba sector in Rulindo district of Rwanda. $SED = 0.562 + 0.212EWD + 0.863$ Where: SED = Socio-economic development EWD = Equal work distribution.

Test of Hypothesis Four (HO5)

Hypothesis five: there is no significant effect of equitable access and use of resources on socio-

economic development of women in Tumba sector in Rulindo district of Rwanda.

Table 17: Model Summary on the effect of equitable access and use of resources on socio-economic development of women

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.831 ^a	.690	.641	.3421

a. Predictors: (Constant), Equitable access and use of resources (EAUR)

The model had adjusted R² of 0.641, implying that equitable access and use of resources (EAUR) explains 64.1% of the changes in on socio-economic development of women in Tumba sector in Rulindo district of Rwanda, while the

remaining 35.9% changes in on socio-economic development of women in Tumba sector in Rulindo district of Rwanda are results of other factors that are not captured by the model.

Table 18: ANOVA on the effect of equitable access and use of resources on socio-economic development of women

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	6675.548	1	6675.548	140.908	.000 ^a
	Residual	7390.490	156	47.375		
	Total	14006.038	157			

a. Dependent Variable: Socio-economic development

b. Predictors: (Constant), Equitable access and use of resources (EAUR)

From findings obtained in table 17, the F-test value was 140.908 with significant value of 0.000 at 0.05 level of significance. In fact, since the p value obtained was <0.05, the F-test was significant, hence we conclude that model was good. Therefore, we cannot accept the Ho5 which

stated that there is no significant effect of equitable access and use of resources on socio-economic development of women in Tumba sector in Rulindo district of Rwanda.

Table 19: Coefficients on the effect of equitable access and use of resources on socio-economic development of women

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	.561	.732		.421	.417
	Equitable access and use of resources	.356	.644	.521	.552	.000

a. Dependent Variable: Socio-economic development (SED)

The results indicated that there is a positive and significant effect of equitable access and use of resources on socio-economic development of

women in Tumba sector in Rulindo district of Rwanda, ($\beta_5=0.521$, $t= 0.552$, $p= 0.000 < 0.05$). This implies that 1% increase in equitable access

and use of resources will lead to 0.521 increase in socio-economic development of women in Tumba sector in Rulindo district of Rwanda.

$SEC = 0.561 + 0.521EAUR + 0.732$ Where: SED: Socio-economic development; EAUR = Equitable access and use of resources.

Test of hypothesis four (Ho6)

Hypothesis four: There is no significant effect of gender balance on socio-economic development

of women in Tumba sector in Rulindo district of Rwanda

Table 20: Model summary on the effect of gender balance on socio-economic development of women

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.743 ^a	.553	.548	.58199

a. Predictors: (Constant), AE, WE, EFI, EWD, EAUR
Source: Primary data (2023)

The model summary is shown in the table 19. Based on the findings, R was 0.743, R² was 0.548, and adjusted R² was 0.548. An adjusted R² of 0.548 implies that gender balance interventions (Even access to education, Women empowerment, Equal financial inclusion, Equal work distribution, and equitable access and use of resources) jointly account for 54.8% of changes in socio-economic development of women in Tumba sector in Rulindo district of Rwanda. Nevertheless, the model does not take into consideration other factors that account for 45.2% of the variation in socio-economic development

of women in Tumba sector in Rulindo district of Rwanda. An R of 0.553 on the other hand signifies the effect of gender balance interventions on socio-economic development of women in Tumba sector in Rulindo district of Rwanda. Furthermore, the findings from the interview with the sector local government officials revealed that 85%, said that gender balance interventions contributed to the socio-economic development of women in Tumba sector in Rulindo district of Rwanda.

Table 21: ANOVA on the effect of gender balance on socio-economic development of women

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2188.027	1	2188.027	192.744	.000 ^b
	Residual	1770.845	156	11.352		
	Total	3958.872	157			

a. Dependent Variable: Socio-economic development (SED)
b. Predictors: (Constant), AE, WE, EFI, EWD, EAUR

Source: Primary data (2023)

The F-test value from the findings in table 21, was 192.744, with a significant value of 0.000 at a 0.05 level of significance. Because the F-test was significant and the p value was 0.000 < 0.05, the researcher came to the conclusion that this model

was significant and, thus, a reliable indication of the results of this analysis. Therefore, we cannot accept the Ho6 which stated that there is no significant effect of gender balance on socio-economic development of women in Tumba sector in Rulindo district of Rwanda.

Table 22: Coefficients of gender balance and socio-economic development of women in Tumba sector in Rulindo district of Rwanda

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	
	B	Std. Error	Beta			
	(Constant)	9.789	3.295			
1	Even access to education	.607	.148	.207	4.101	.000
	Women empowerment	.746	.141	.294	5.290	.000
	Equal financial inclusion	1.061	.133	.377	7.977	.000
	Equal work distribution	.811	.043	.819	18.860	.000
	Equitable access and use of resources	.209	.036	.229	5.805	.000

a. Dependent Variable: Socio-economic development (SED)

Source: Primary data (2023)

Table 22 provides the summary of findings of the regression analysis for the effects gender balance on socio-economic development of women in Tumba sector in Rulindo district of Rwanda. As indicated in the table above, there is a significant positive effects of even access to education, women empowerment, equal financial inclusion, equal work distribution, and equitable access and use of resources on socio-economic development of women in Tumba sector in Rulindo district of Rwanda., (($\beta_1=0.207$, $p= 0.003 < 0.05$, $\beta_2=0.294$, $p= 0.000 < 0.05$, $\beta_3=0.377$, $p= 0.000 < 0.05$, $\beta_4=0.819$, $p= 0.000 < 0.05$, $\beta_5=0.229$, $p= 0.000 < 0.05$). This implies that 1% change in even access to education, women empowerment, equal

financial inclusion, equal work distribution, and equitable access and use of resources will lead to 0.207, 0.294, 0.377, 0.819, and 0.229 change in socio-economic development of women in Tumba sector in Rulindo district of Rwanda respectively. Therefore, the following regression equation was obtained: $SED= \beta_0 + \beta_1AE + \beta_2WE + \beta_3EFI + \beta_4EWD + \beta_5EAUR + \epsilon$; $SED= 9.789 + 0.207AE + 0.294WE + 0.377EFI + 0.819EWD + 0.229EAUR + 3.295$; where: SED: Socio-economic development; AE: Access to education; WE: Women empowerment; EFI: Equal financial inclusion; EWD: Equal work distribution; while EAUR: Equitable access and use of resources.

10. Conclusion and Recommendation

Conclusion

As indicated in the findings, there is a significant positive effects of even access to education, women empowerment, equal financial inclusion, equal work distribution, and equitable access and use of resources on socio-economic development of women in Tumba sector in Rulindo district of Rwanda., (($\beta_1=0.207$, $p= 0.003 < 0.05$, $\beta_2=0.294$, $p= 0.000 < 0.05$, $\beta_3=0.377$, $p= 0.000 < 0.05$, $\beta_4=0.819$, $p= 0.000 < 0.05$, $\beta_5=0.229$, $p= 0.000 < 0.05$). This implies that 1% change in even

access to education, women empowerment, equal financial inclusion, equal work distribution, and equitable access and use of resources will lead to 0.207, 0.294, 0.377, 0.819, and 0.229 change in socio-economic development of women in Tumba sector in Rulindo district of Rwanda respectively. Hence there a positive linear relationship between independent variables and dependent variables, we conclude that there is an effect of Gender balance on socio-economic development of women of Tumba Sector.

Recommendations

Women of Tumba Sector should take their own initiatives aimed to continue improving their socio-economic development. This should also concern different institutions which should be involved in creating microfinance programs tailored to their needs, promoting savings and credit cooperatives, and ensuring that women have equal access to loans and grants for business development. There should be the advocacy for the implementation of gender-responsive policies and initiatives at the local government level in

Tumba Sector. These policies should address the specific needs and challenges faced by women in socio-economic development, such as access to education, healthcare, and economic opportunities. Tumba Sector and affiliated local government entities

should develop and support programs that provide women in Tumba Sector with skills training and capacity-building opportunities. These programs should focus on enhancing their entrepreneurial skills, financial literacy, and vocational training to empower them economically. Rulindo District should conduct regular awareness campaigns and educational programs aimed at changing societal attitudes and stereotypes related to gender roles. The District should encourage both men and women in Tumba Sector to recognize the importance of gender balance and the benefits it brings to socio-economic development. The government of Rwanda should establish a systematic monitoring and evaluation framework to track progress in achieving gender balance and socio-economic development all over the country.

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