



## ASSESSING THE IMPACT OF YOUTH INVOLVEMENT ON NATIONAL DEVELOPMENT PROJECTS: A STUDY ON THE AGRICULTURAL DEVELOPMENT PROJECTS LED BY YALLA YALLA GROUP (YYG) UNDER RAB-RWANDA

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**DOI:** <https://zenodo.org/records/10813499>

### **ABSTRACT**

The Study assessed the impact of Youth Involvement on National Development Projects: A Study on the Agricultural development projects Led by Yalla Yalla Group (YYG) under RAB-Rwanda a country which is experiencing rapid economic growth and characterized by a predominantly youthful population. Despite economic progress, Rwanda faces challenges such as insufficient job creation and inadequate economic infrastructure, leading to persistent issues of unemployment and underemployment, particularly among the youth. In response to these challenges, Yalla Yalla Group (YYG), comprising young professionals, directs its efforts toward agriculture development projects. The research objectives encompass evaluating the effectiveness of YYG's projects, examining socio-economic benefits, assessing the impact on community development, and exploring potential barriers to success. The study population comprises 198 individuals actively involved in YYG projects, with a sample of 132 determined using Slovin's formula through convenient sampling. Quantitative data is collected through a structured questionnaire and statistical analyses, including SPSS and multiple

linear regression, are employed to scrutinize hypotheses. The findings reveal a highly significant positive correlation ( $r = 0.977$ ,  $p < 0.01$ ) between "country development" and "young people involvement," indicating a strong linear relationship. The F-statistic of 219.903 emphasizes that the predictors significantly explain variance in country development beyond chance. Specifically, the study highlights that increased involvement in agriculture is associated with higher levels of country development (coefficient: 0.506,  $t = 5.500$ ,  $p < 0.001$ ), underscoring a positive relationship. Livestock involvement, while statistically significant (coefficient: 0.017,  $t = 0.097$ ,  $p = 0.003$ ), exhibits a limited impact on country development. In contrast, higher engagement in business and entrepreneurship significantly correlates with increased country development (coefficient: 0.919,  $t = 4.963$ ,  $p < 0.001$ ), emphasizing a strong positive relationship. Additionally, heightened participation in environmental conservation is linked to elevated country development (coefficient: 0.157,  $t = 3.049$ ,  $p = 0.003$ ).

**Keywords:** *Youth Involvement; National Development Projects; Agricultural Development; Youth-Led Initiatives; Sustainable Development*

## INTRODUCTION

The global youth population, projected to be 1.20 billion in 2020, is anticipated to increase to 1.29 billion by 2030 and nearly 1.34 billion by 2050. However, despite the numerical growth, the youth demographic is expected to represent a progressively decreasing share of the overall population, accounting for 15.5%, 15.1%, and 13.8% in 2020, 2030, and 2050, respectively [1]. Projections indicate a substantial increase in the youth population of sub-Saharan Africa, with expectations of reaching nearly 30% of the global youth demographic by 2050, a notable rise from 18% in 2020 and almost 22% in 2030. Northern Africa and Western Asia are also anticipated to witness growth in their youth populations over the next three decades.

Despite this demographic expansion, youth in these regions confront persistent challenges, including unemployment, underemployment, poverty, and the disproportionate impacts of the pandemic, climate crisis, and evolving economic landscapes. These factors significantly hinder their opportunities for securing decent employment and initiating entrepreneurial endeavors [2]. Empowering young people through education and skills development is crucial for their active contribution to community and national socio-economic development. As a dynamic demographic, youth bring innovative ideas and energy essential for addressing global challenges. Focusing on creating job opportunities and fostering entrepreneurial skills not only promotes economic empowerment but also helps deter radicalization, particularly among marginalized individuals. The agricultural sector, integral to many economies, holds significant promise as a platform for harnessing the positive impact of youth involvement [3].

In 2011, the Mouvement International de la Jeunesse Agricole et Rurale Catholique (MIJARC/IFAD/FAO) collaborated on a project focused on facilitating rural youth access to agricultural activities. The initiative aimed to address information gaps and examine the challenges faced by rural youth in agriculture, recognizing the sector's crucial role in mitigating high

levels of youth unemployment, underemployment, and poverty. The project involved global participation of rural youth informants, identifying key challenges to be overcome for the creation of decent work opportunities in rural areas and the reversal of rural exodus [4]. The Government of Rwanda, recognizing the demographic dividend held by its youthful population, has strategically involved young people in national development projects, with a focus on sectors such as agriculture [5]. This deliberate effort aims to address multiple challenges, including food security, unemployment, and rural development. In a bid to achieve Middle-Income Country (MIC) status by 2035 and High-Income Country (HIC) status by 2050, Rwanda has experienced robust economic growth, averaging 7.5 percent annually between 2007 and 2017. However, economic challenges persist, including limited job creation, insufficiently skilled human capital, poor economic infrastructure, limited access to capital, and heavy reliance on donor funding [6].

## PROBLEM STATEMENT

Rwanda characterized by rapid economic growth and a youthful population, faces multifaceted challenges hindering inclusive development. Despite significant progress, economic constraints persist, including insufficient job creation, inadequately skilled human capital, poor economic infrastructure, limited access to capital for entrepreneurs, and a dependence on donor funding. Apart of business establishment rates increasing, job creation rates still lag behind the growing working-age population, indicating a gap in translating economic growth into meaningful employment opportunities especially for youth people [7]. Youth, constituting 67 percent of the population below 30 years, face significant hurdles in the labor

<sup>1</sup> United Nations, (2019) *youth development and participation*. <https://www.un.org/development/desa/youth>

<sup>2</sup> UNDESA. (2011). *World population prospects: the 2010 revision, highlights and advance tables*. Working Paper No. ESA/WP. 220.

<sup>3</sup> UNDP (2023) *five ways young people are contributing to their communities*. <https://www.undp.org/restrieved> on 26th December 2023

<sup>4</sup> Findings from the survey launched for the purpose of this publication (MIJARC/IFAD/FAO, 2012) and key informant interviews and findings from East African Farmers Federation Regional Youth Consultative Workshop, 2009. (Proctor and Lucchesi, 2012).

<sup>5</sup> MINAGRI. (2018). *Rwanda's Strategic Plan for Agriculture Transformation phase 4 (PSTA 4)*. Kigali, Rwanda. (also available at: [https://www.minagri.gov.rw/fileadmin/user\\_upload/webstore/PSTA\\_4\\_-\\_Strategic\\_Plan\\_for\\_Agriculture\\_Transformation\\_\\_\\_Planning\\_for\\_Wealth\\_\\_\\_2018-2024\\_\\_\\_Approved\\_by\\_Cabinet.pdf](https://www.minagri.gov.rw/fileadmin/user_upload/webstore/PSTA_4_-_Strategic_Plan_for_Agriculture_Transformation___Planning_for_Wealth___2018-2024___Approved_by_Cabinet.pdf))

<sup>6</sup> FAO. 2019. *Rwanda at a glance*. [Cited 15 November 2019] (also available at: <http://www.fao.org/rwanda>)

<sup>7</sup> World Bank. 2019. *Reshaping urbanization in Rwanda. Economic and Spatial Trends and Proposals. Note 2: Internal Migration in Rwanda* (also available online at: <http://documents.worldbank.org/curated/en/>)

market, with an 18.7 percent unemployment rate and around 60 percent underemployed [8].

Rwanda recognizes the critical role of the agriculture sector in absorbing the working-age population, especially the youth people. Many initiatives targeting youth aged 18–30 provide vocational and business training, access to loans, and entrepreneurship support, with a focus on economically oriented livelihoods [9]. Yalla Yalla Group (YYG) is organization established by Young professionals in various fields given chance by Government of Rwanda to attend various trainings from different countries like Israel, Korea, America, Rwanda, and other countries worldwide. The Young people in the Group are well organized and they bring together their expertise in a wide range of domains like horticulture, general crop production, agricultural mechanization, agribusiness, irrigation and drainage, animal production, veterinary medicine, aquaculture and fisheries, rural development and environmental management, project management, IT, economics, business administration, education, engineering, and related fields to support in the country development [10].

This study seeks to comprehensively evaluate the positive impacts of involving young people in Yalla Yalla Group's agriculture development projects in Rwanda. By examining the effectiveness of existing youth programs and assessing the inclusivity of these initiatives on how youth Group, with expertise in horticulture, agriculture, crop production, IT, and engineering, contributed in addressing economic constraints like insufficient job creation for youth and poor infrastructure in Rwanda's agricultural sector to the farmers; assesses the effectiveness of the Group's vocational and business training programs access the entrepreneurship support in promoting economically oriented livelihoods for youth. The research provides a comprehensive analysis of youth Group's impact, challenges, collaborations, effectiveness, and innovative strategies in promoting youth involvement

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8 National Institute of Statistics of Rwanda (NISR). 2018a. *Labour Force Survey Report 2018*. Kigali, Rwanda. (also available at: <http://www.statistics.gov.rw/publication/labour-force-survey-report-december-2018>)

9 International Labour Organization (ILO). 2018. *Decent Work Country Programme (DWCP) 2018-2022*. (also available at: [https://www.ilo.org/wcmsp5/groups/public/---edmas/---program/documents/generic/document/wcms\\_674581.pdf](https://www.ilo.org/wcmsp5/groups/public/---edmas/---program/documents/generic/document/wcms_674581.pdf))

<sup>10</sup> <https://yallyalla.rw/about-us/> retrieved on 26<sup>th</sup> December 2023

and economic development in Rwanda's agriculture sector.

## OBJECTIVES OF THE STUDY

The main purpose of the study was to assess the impact of Youth Involvement on National Development Projects. Specifically, the study has achieved the following objectives were to:

- [i.] Evaluate the effectiveness of involving young people to the enhancement of sustainable agricultural practices in Rwanda;
- [ii.] Examine the socio-economic benefits of engaging young individuals within the agriculture development projects in Rwanda;
- [iii.] Assess the impact of involving young people on community development and cohesion in Rwanda;
- [iv.] Explore and document the barriers encountered by young individuals engaged in agriculture development projects under the Yalla Yalla Group under RAB-Rwanda

## RESEARCH HYPOTHESIS

The study tested and verified three alternative hypotheses:

- [1.] **Ha1:** There are significant effectiveness of involvement of young people on the enhancement of sustainable agricultural practices in Rwanda such as job creation, increased agricultural productivity, resource efficiency, and environmental sustainability;
- [2.] **Ha2:** There are significant socio-economic benefits of engaging young individuals in agriculture development projects of Rwanda, such as the improvement of income generation, livelihoods, and the overall economic well-being of the youth participants;
- [3.] **Ha3:** There is significant and positive impact of involving young people in the Yalla Yalla Group on community development in Rwanda, such as participation fosters social integration, knowledge transfer, and community empowerment, ultimately contributing to broader national development goals;

## LITERATURE REVIEW

**Youth Involvement:** Refers to the active participation and engagement of young people in

various aspects of national development, including policy-making, implementation of projects, and decision-making processes. In the context of agriculture, youth involvement may include activities such as farming, agribusiness, rural entrepreneurship, and community development initiatives.

**National Development Projects:** These are initiatives or programs implemented at the national level with the aim of promoting economic growth, social progress, and sustainable development within a country. National development projects may encompass various sectors, including agriculture, education, healthcare, infrastructure, and environmental conservation.

**Agricultural Development:** Refers to efforts aimed at improving the productivity, sustainability, and resilience of agricultural systems to meet the food security, economic, and social needs of a population. Agricultural development projects may involve activities such as agricultural research, technology adoption, extension services, value chain development, and market access enhancement.

**Youth-Led Initiatives:** These are projects or programs initiated, managed, and implemented primarily by young people, either individually or collectively as youth groups or organizations. Youth-led initiatives often prioritize the interests, needs, and aspirations of young people and aim to address socio-economic challenges while promoting youth empowerment and leadership development.

**Sustainable Development:** Involves meeting the needs of the present generation without compromising the ability of future generations to meet their own needs. Sustainable development projects seek to achieve a balance between economic growth, social equity, and environmental conservation, ensuring that development efforts are environmentally sound, socially inclusive, and economically viable over the long term.

**Rural Development:** Focuses on improving the quality of life and economic opportunities for people living in rural areas. Rural development projects aim to address disparities between rural and urban areas by promoting agricultural productivity, infrastructure development, access to basic services, and socio-economic empowerment of rural communities.

**Participation and Empowerment:** Involves enabling young people to actively engage in decision-

making processes, exercise their rights, and contribute to the development of their communities and societies. Participation and empowerment strategies aim to build the capacity, confidence, and leadership skills of young people, fostering their sense of ownership and responsibility towards national development goals.

Youth involvement in national development projects, particularly in the agricultural sector, has gained significant attention in recent years due to its potential to drive socio-economic progress and foster sustainable development. The active participation of young people in these projects not only empowers them but also contributes to addressing pressing challenges such as food insecurity, poverty alleviation, and rural development (Alemu & Degefa, 2018). Numerous studies have highlighted the positive impacts of youth involvement in agricultural development projects. For instance, research by Ajayi, Omonona, and Arowolo (2018) found that engaging young people in farming activities led to increased agricultural productivity, enhanced food security, and improved livelihoods in rural communities. Similarly, a study conducted by Abreu, Filho, and Souza (2019) revealed that youth-led agricultural initiatives resulted in innovative farming practices, technology adoption, and knowledge transfer, thereby contributing to sustainable agricultural development.

Moreover, youth involvement in national development projects has been linked to broader socio-economic benefits at the community level. According to Osei-Kwarteng, Yamoah, and Amoah (2017), youth-led agricultural projects have the potential to create employment opportunities, stimulate economic growth, and promote social cohesion within rural communities. Furthermore, the active participation of young people in decision-making processes fosters inclusivity and empowerment, leading to more sustainable development outcomes (Bass & Hou, 2019). Despite these positive outcomes, challenges and limitations associated with youth involvement in national development projects exist. Limited access to land, capital, and resources often constrains young people's ability to fully participate in agricultural activities (Birner et al., 2018). Additionally, inadequate training, technical skills, and market information hinder their capacity to engage effectively in farming enterprises (Kumar et al., 2020). Addressing these barriers is



crucial to maximizing the potential contributions of youth to agricultural development initiatives.

## **METHODS**

This was a prospective descriptive cross-sectional study. The researcher determined the constructive impacts of involving young people in the country development projects assigned to Yalla Yalla Group in Agriculture Development Projects of Rwanda. This study was carried out in period of six months from June up to December, 2023 at Yalla Yalla Group by visiting its Agronomists, scheme managers, farmer's cooperatives, IWUOs' representatives, internship students in the Irrigation schemes assigned to YYG, and local authorities where Yalla Yalla Group operating their projects and programs. The study population for this research primarily consist of 64 young individuals actively involved in the Yalla Yalla Group participating in agriculture development projects in Rwanda; 74 members of farmers cooperatives from 37 cooperatives; 56 members from 28 IWUOs; and 4 people from G.S DIHIRO TSS in GrowALE program. This means, the total population of the study was 198 people involved in development projects assigned to Yalla Yalla Group in Agriculture Development Projects. Slovin's formula was used to determine an appropriate sample size for a research study, especially when the population size is large and the researcher wants to ensure a representative sample. The formula is commonly expressed as:

$$n = \frac{N}{1+N*(\epsilon)^2}$$
 where: n is the desired sample size. N is the total population size. e is the desired level of precision or margin of error or 0.05 is margin error while 95% is for the confidence level.

$$n = \frac{198}{1+198*(0.05)^2} = 132$$

The sample of 132 participants was obtained through convenient sampling method which is a type of non-

The SPSS IBM 21.0 version was used to analyze the statistical data. Descriptive statistics method was used to analyze the constructive Impacts of Involving Young People in the Country development projects: case of Yalla Yalla Group in Agriculture Development Projects of Rwanda. The p-value was set at 5% with 95% confidence interval and adjusted odds ratio. Multiple linear Regression analysis was used to test and verify the research hypothesis.

probability sampling method. The inclusion criteria of being involved in the survey should be involved in YYG projects/programs. Sample selection criteria are that convenient Sampling where Participants were selected based on their availability and accessibility. This method was chosen for practical reasons, making it easier to reach and involve individuals who are actively participating in YYG projects/programs. The individuals should be actively involved in the Yalla Yalla Group (YYG) projects or programs; Age range: 18 to 35 years; and respondent should have been involved in YYG projects/programs for a minimum period (e.g., at least 4 months) to ensure a sufficient understanding of their contributions and experiences.

The researcher went to Yalla Yalla Group (YYG) projects/programs operational to administer the questionnaires to the respondents readily available subjects and to those who met the inclusion criteria. The structured questionnaire was designed to collect quantitative data. Administering a structured questionnaire to respondents involved in Yalla Yalla Group (YYG) projects/programs involves several key procedures; ensure that all relevant stakeholders are informed about the research and its purpose; coordinated with YYG leaders to identify suitable times for administering the questionnaire; considered the schedules of the respondents to maximized participation; begin each session by explaining the purpose of the study, distribute the structured questionnaire to each participant; and ensured that participants understand the instructions for each section of the questionnaire; collect the completed questionnaires from participants; check for completeness and clarify any missing or unclear responses; entered the data into a digital format for analysis; and ensured accuracy during the data entry process.

## **RESULTS AND DISCUSSIONS**

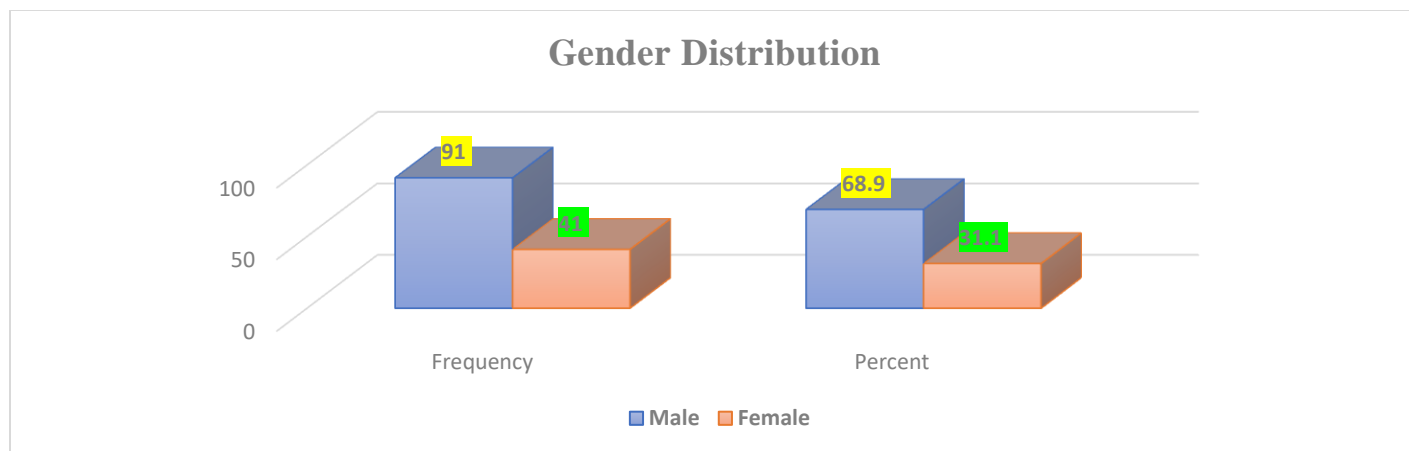
The findings were based on the data collected from 132 respondents participated in this survey on the constructive impacts of involving Young People in the Country development especially Yalla Yalla Group in Agriculture Development Projects of Rwanda.

### ***Profile of Respondents***

This is creating a comprehensive profile of respondents which is crucial for understanding the targeted

respondents given research questionnaires. Table 1 of socio-characteristics of respondents outlines gender;

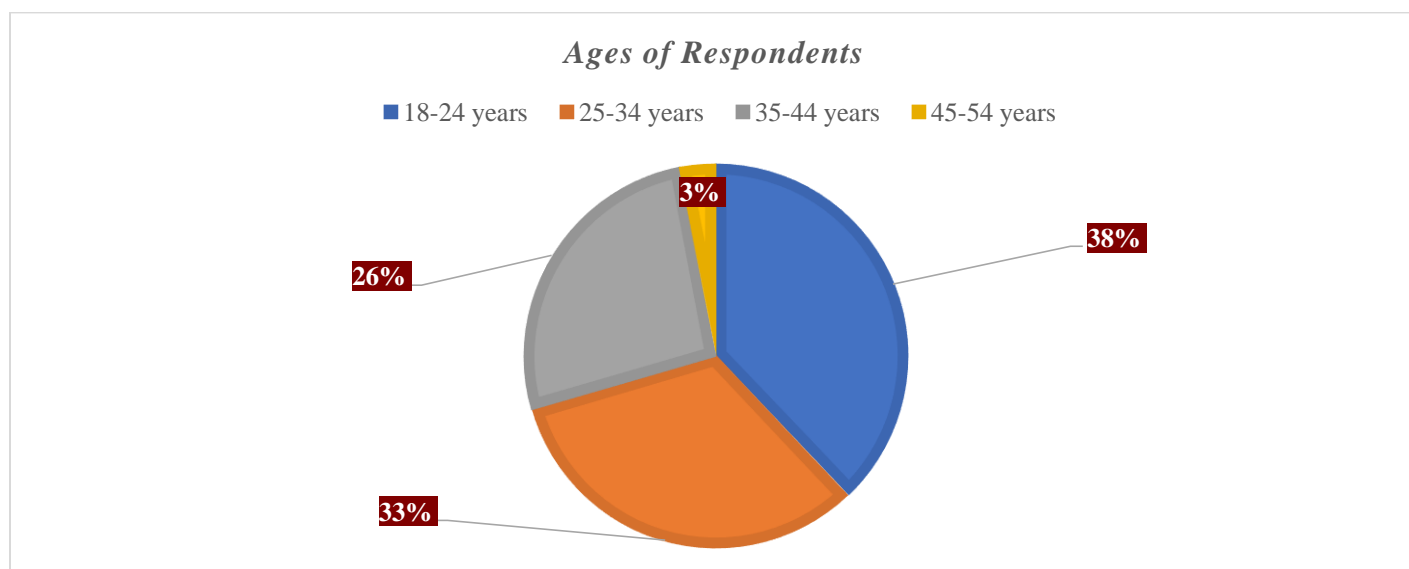
ages, marital status, and educational attainment of respondents from Yalla Yalla Group.



**Figure 1: Gender Distribution of respondents from Yalla Yalla Group**  
 Source: primary data (2023)

The figure 1 provides a breakdown of gender distribution among the participants in the survey, with 91 males (68.9%) and 41 females (31.1%). The gender distribution findings are crucial for contextualizing the involvement of young people, particularly the Yalla

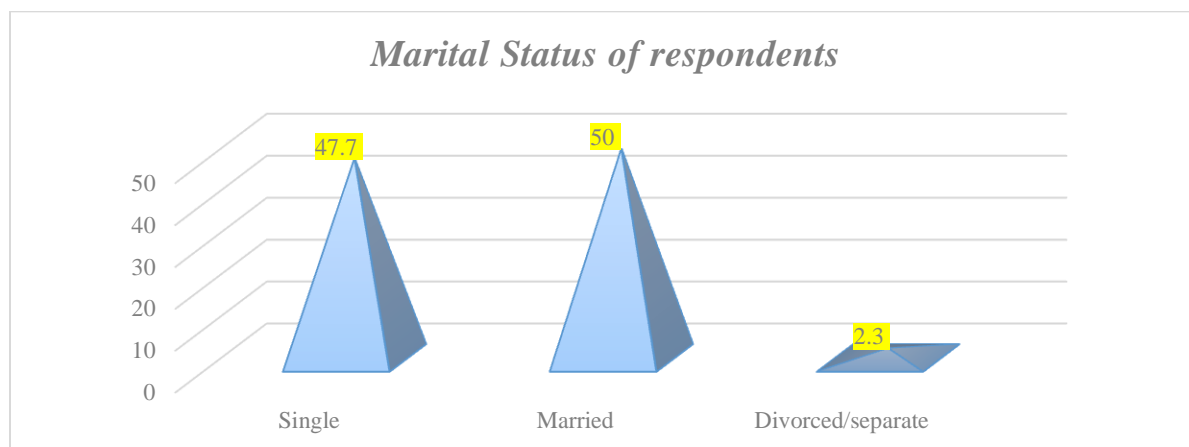
Yalla Group, in agriculture development projects in Rwanda. Understanding and addressing gender disparities contribute to more inclusive and effective initiatives, ultimately maximizing the positive impacts on the country's development.



**Figure 2: Age Distribution of respondents from Yalla Yalla Group**  
 Source: primary data (2023)

Findings indicated the majority of respondents who fall within the younger age brackets, with 37.9% between 18-24 years and 32.6% between 25-34 years. This suggests that the study primarily involves a younger demographic. The study explored age as among the specific factors influence participation in agriculture development. For example, younger individuals are more open to technology-based solutions in agricultural production in enhancing productivity,

while older individuals have mainly valuable traditional knowledge. The lower percentages in the 35-44 years (26.5%) and 45-54 years (3%) categories indicate a comparatively lower representation of respondents from these older age groups. Yalla Yalla Group primarily consists of young individuals, the findings are more directly applicable to understanding the role and impact of youth in agriculture initiatives.



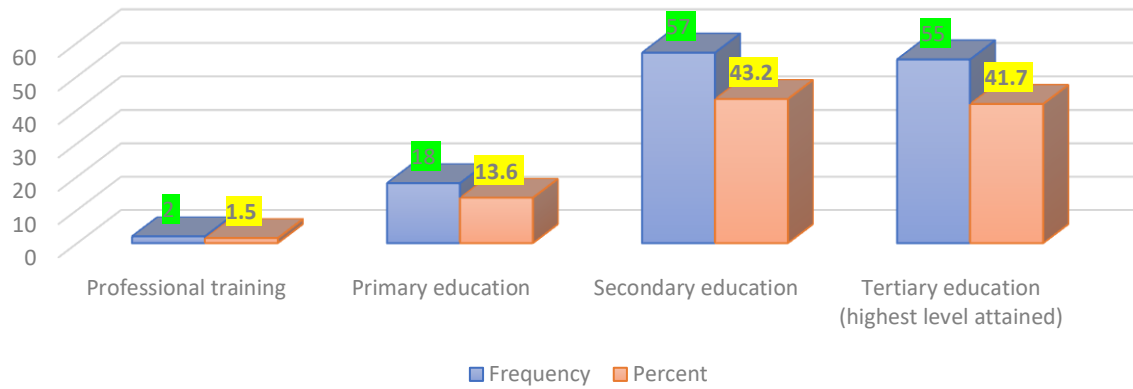
**Figure 3: Marital status of respondents from Yalla Yalla Group**

**Source:** primary data (2023)

The figure 3 presents the distribution of respondents based on their marital status, with percentages for each category. The data show a diverse range of marital statuses among the respondents. The majority are either single (47.7%) or married (50%), indicating a mix of individuals at different life stages and responsibilities. The high percentage of single individuals (47.7%) suggests a significant presence of young people who have more flexibility and potentially fewer familial responsibilities. This

demographic is more inclined to actively participate in agriculture development projects, contributing to the constructive impacts envisioned by the Yalla Yalla Group. The 50% of married individuals have additional considerations such as family responsibilities. This information is relevant for the Yalla Yalla Group's efforts in agriculture development, helping to tailor interventions and policies that consider the diverse needs and circumstances of individuals with different marital statuses.

## *Educational Attainment*



**Figure 4: Educational Attainment of respondents**

Source: Primary data (2023)

The study's findings on education levels emphasize the importance of inclusive approaches in agriculture development. Both formally educated and non-formally educated individuals have roles to play, and the Yalla Yalla Group's strategies accommodate this diversity. Findings revealed that the low percentage (1.5%) of respondents with professional training suggests that a small number of participants have specialized training beyond the basic education levels. Exploring the specific skills and expertise of these individuals provide insights into areas where targeted support or expertise are needed in the Yalla Yalla Group's projects. The combined percentage of

respondents with primary (13.6%) and secondary education (43.2%) indicates a significant portion of the sample with foundational education. This mix brings a diverse set of skills, local knowledge, and practical experiences to agriculture development projects. However, the 41.7% of respondents with tertiary education suggests a substantial presence of individuals with higher academic qualifications. This group brings specialized knowledge, technical skills, and potentially innovative ideas to the Yalla Yalla Group's initiatives, contributing to the constructive impacts in the agriculture sector.

### ***Descriptive Statistics of Findings***

The findings confirmed the effectiveness of involving young people in the enhancement of sustainable agricultural practices in Rwanda; the socio-economic benefits of engaging young individuals within the agriculture development projects in Rwanda; the ***Effectiveness of involving Young People in Sustainable Agricultural Practices;***

Findings presented the perceptions of respondents (n=132) from Yalla Yalla Group's study on the effectiveness of involving young people in sustainable

impact of involving young people in the Yalla Yalla Group on community development and cohesion in Rwanda; and the barriers encountered by young individuals engaged in agriculture development projects under the Yalla Yalla Group.

agricultural practices is presented in Table 1. The table includes various aspects related to sustainable agriculture, each with corresponding values for the number of respondents (n), mean scores, standard deviations, skewness, and kurtosis.



**Table 1: Effectiveness of involving Young People in Sustainable Agricultural Practices;**

Aspects	N	Mean	Std. Deviation	Skewness	Kurtosis
Crop yield enhancement	132	4.4242	0.82998	-1.26	0.601
Community-led Irrigation	132	4.3712	1.00689	-1.668	2.099
Knowledge sharing initiatives	132	4.4773	0.93667	-1.999	3.675
Professional internships	132	4.4318	0.87539	-1.452	1.137
Organic farming cooperatives	132	4.4621	0.95234	-1.963	3.43
Sustainable farming practices	132	4.5303	0.91167	-2.178	4.513
Infrastructure enhancement	132	4.5	0.94506	-2.039	3.685
Skills training program	132	4.5	1.01515	-2.201	4.148
Agri-machines distribution	132	4.4167	1.01922	-1.747	2.196
Hands-on training	132	4.5682	0.87539	-2.222	4.604
Agricultural processing facilities	132	4.447	0.96752	-1.876	2.992
Coaching Hubs in agriculture	132	4.4848	0.96887	-2.079	3.916
<b>Overall Average</b>	<b>132</b>	<b>4.4678</b>	<b>0.9420125</b>	<b>-1.89033</b>	<b>3.083</b>

Source: Primary data (2023)

Findings confirmed a mean score of 4.4242, indicating a high effectiveness in enhancing crop yields, with a relatively low standard deviation (0.82998) categorized as heterogeneity of responses. With a mean score of 4.3712 and a higher standard deviation (1.00689), community-led irrigation efforts also show positive results but with more variability in responses. This aspect received a high mean score of 4.4773, suggesting that involving young people in knowledge-sharing initiatives related to sustainable agriculture is perceived as effective. The mean score of 4.4318 indicates that professional internships contribute positively to sustainable agriculture, with a moderate standard deviation (0.87539). Respondents rated this aspect with a mean score of 4.4621, reflecting a positive impact on sustainable agriculture practices. This aspect received one of the highest mean scores (4.5303), suggesting that involving young people in sustainable farming practices is highly effective. The mean score of 4.5 indicates that efforts in infrastructure enhancement for sustainable agriculture are well-received among the respondents. With a mean score of 4.5 and a relatively high standard deviation (1.01515), the effectiveness of skills training programs shows positive but varied perceptions. The mean score of 4.4167 suggests that distributing agricultural machines is perceived as effective in promoting sustainable practices. This aspect received one of the highest mean scores (4.5682), indicating that hands-on training is highly effective in sustainable agricultural practices.

The mean score of 4.447 suggests that involving young people in agricultural processing facilities is perceived as effective. With a mean score of 4.4848, coaching hubs in agriculture are perceived as effective in promoting sustainable practices. The mean scores suggest that, on average, respondents perceive positive impacts in various areas, such as crop yield enhancement, community-led irrigation, knowledge-sharing initiatives, and infrastructure enhancement. Skewness and Kurtosis Values, the negative skewness of -1.89033 and kurtosis of 3.083 values suggest a distribution slightly skewed to the left and with relatively light tails. This indicates that the majority of respondents perceive the initiatives positively, with fewer outliers on the lower end of the effectiveness scale. The overall average mean score across all aspects is 4.4678, indicating a consistently positive perception of the effectiveness of involving young people in various sustainable agricultural practices. The findings suggest that Yalla Yalla Group's initiatives have been well-received, with generally high mean scores across different aspects of sustainable agriculture. The data also highlights areas where perceptions are more varied, such as community-led irrigation and skills training programs. Overall, the study indicates a positive impact on sustainable agricultural practices through the involvement of young people of Yalla Yalla Group in agricultural development projects of Rwanda.

**Socio-Economic benefits of engaging young persons in Agriculture development projects;**

Findings in Table 2 indicated the perceptions of respondents from Yalla Yalla Group on the socio-

economic benefits of engaging young individuals in agriculture development projects.

**Table 2: Socio-Economic benefits of engaging young individuals in Agriculture development projects;**

Aspects	N	Mean	Std. Deviation	Skewness	Kurtosis
Employment opportunities creation;	132	4.4167	0.94135	-1.818	3.079
Income generation for farmers;	132	4.1439	1.24258	-1.369	0.721
Rural development contribution	132	4.4924	0.80548	-1.666	2.679
Skill development and capacity building	132	4.4242	0.966	-1.923	3.476
Enhanced food security	132	4.1364	1.27077	-1.371	0.657
Poverty Alleviation	132	4.5076	0.79595	-1.731	2.996
Inclusive economic growth	132	4.4091	0.96468	-1.888	3.387
Adoption of modern agricultural practices	132	4.4545	0.95999	-2.024	3.862
Empowerment of local communities	132	4.5833	0.75201	-2.312	6.736
Practical skills proficiency	132	4.2727	1.20489	-1.685	1.712
Improved facilities in education	132	4.5758	0.70029	-1.629	2.11
<b>Overall Average</b>	<b>132</b>	<b>4.401509</b>	<b>0.963999</b>	<b>-1.76509</b>	<b>2.855909</b>

Source: Primary data (2023)

The results revealed that key socio-economic benefits are the employment opportunities which have Mean of 4.4167 confirmed to be high as participants consider the projects effective in creating employment opportunities for young individuals. Findings indicated the Rural development contribution confirmed on Mean of 4.4924 as indicated that the projects are perceived as contributing positively to rural development, indicating a broader impact beyond individual benefits. Poverty Alleviation was stated by Mean of 4.5076 which is very high mean indicating that the projects are seen as effective in alleviating poverty, emphasizing their socio-economic significance. While the income generation confirmed by Mean of 4.1439 stated that while still above 4 on average, the comparatively lower score suggests that there is room for improvement in terms of income generation. Even also on enhanced food security confirmed by Mean of 4.1364 indicating similar to income generation, there is opportunities to enhance perceived effectiveness in ensuring food security. The results revealed that there is an empowerment and inclusive growth shown high

mean scores for "empowerment of local communities" and "inclusive economic growth" (4.5833 and 4.4091, respectively) highlight the projects' positive impact on community empowerment and inclusivity in economic growth. Practical skills proficiency and education facilities, the mean scores for "practical skills proficiency" (4.2727) and "improved facilities in education" (4.5758) indicate that participants believe the projects contribute to both practical skills development and improvements in educational facilities. The overall average mean score of 4.4015 indicates that participants perceive engaging young individuals in agriculture development projects as highly beneficial in various socio-economic aspects.; with the standard deviation of 0.963999 which is relatively low, suggesting a consistent and positive response across the surveyed aspects. Skewness and Kurtosis values, the negative skewness and kurtosis values indicate a distribution slightly skewed to the left and with relatively light tails. This implies that the majority of respondents have a positive perception of the socio-economic benefits, with fewer outliers on the

lower end of the effectiveness scale. Yalla Yalla Group's agriculture development projects are perceived as highly beneficial in various socio-economic aspects. While most areas receive high scores, there are opportunities for further enhancement in income generation and food security. The positive impact on rural development, poverty alleviation, and community empowerment underscores the projects' broader societal contributions. Areas of strength, notable areas of strength include the empowerment of local communities, improved facilities in education,

and employment opportunities, all of which scored above 4.5 on average. Areas for potential improvement, while all aspects received high mean scores, income generation and enhanced food security have slightly lower mean scores compared to other aspects. Further investigation into these areas could provide insights into specific factors influencing participant perceptions. Respondents generally acknowledge positive impacts, such as employment opportunities, income generation, rural development, skill development, and poverty alleviation.

**Table 3: Impact of involving Yalla Yalla Group Young people on community development**

Aspect	N	Mean	Std. Deviation	Skewness	Kurtosis
Youth empowerment	132	4.3561	1.01239	-1.84	3.059
Skill enhancement	132	4.4545	0.85036	-1.558	1.631
Entrepreneurship development	132	4.5379	0.77563	-1.872	3.723
Social cohesion strengthening	132	4.5303	0.83291	-2.311	6.189
Infrastructure improvement	132	4.5379	0.78541	-1.951	4.029
Education and awareness programs	132	4.4848	0.91205	-2.223	5.164
Health and well-being	132	4.5303	0.83291	-2.311	6.189
Cultural preservation	132	4.5379	0.74552	-1.703	2.554
Environmental conservation	132	4.5379	0.75569	-1.908	4.201
Community pride and identity	132	4.4697	0.85996	-2.099	5.037
<b>Overall Average</b>	<b>132</b>	<b>4.49773</b>	<b>0.836283</b>	<b>-1.9776</b>	<b>4.1776</b>

Source: Primary data (2023)

The table 3 presents data on the impact of involving young people from the Yalla Yalla Group on community development. The results revealed that the mean scores for each aspect range from 4.3561 to 4.5379, indicating a consistently high perception of positive impact across various dimensions of community development. The overall average mean of 4.4977 reinforces the notion that, on average, participants view the involvement of Yalla Yalla Group's young people as highly impactful in community development. Standard deviations are relatively low for each aspect, ranging from 0.74552 to 1.01239. This suggests a narrow dispersion of responses and a high degree of agreement among participants regarding the perceived impact. The low standard deviation for the overall average (0.836283) indicates

a consistent and shared perception of impact across the community development dimensions. Skewness and Kurtosis, Negative skewness values (-1.558 to -2.311) suggest that the distributions are slightly skewed to the left, implying that the majority of participants have a positive perception of the impact. Positive kurtosis values (1.631 to 6.189) indicate that the distributions have relatively heavier tails, suggesting some degree of outliers or extreme positive perceptions. Overall, the results reinforce the positive and consistent impact of the projects on the community such as entrepreneurship development; social cohesion strengthening; infrastructure improvement; health and well-being; education and awareness programs; environmental conservation; cultural preservation; and community pride and identity.

## **Barriers encountered by young individuals in**

## **agriculture development**

Table 4 presents data on the barriers encountered by young individuals in agriculture development according to the Yalla Yalla Group.

**Table 4: Barriers encountered by young individual, in agriculture development**

<b>Barrier</b>	<b>N</b>	<b>Mean</b>	<b>Std. Deviation</b>	<b>Skewness</b>	<b>Kurtosis</b>
Limited access to finance	132	3.6894	1.20516	-0.282	-1.386
Lack of land ownership	132	3.4697	1.29261	0.014	-1.649
Market access issues	132	3.5985	1.40261	-0.365	-1.415
Climate change vulnerability	132	3.5606	1.4102	-0.391	-1.31
Limited supportive policies	132	3.5152	1.38963	-0.17	-1.61
<b>Overall Average</b>	<b>132</b>	<b>3.56668</b>	<b>1.340042</b>	<b>-0.2388</b>	<b>-1.474</b>

Source: Primary data (2023)

The findings confirmed that the mean scores for all barriers range from 3.4697 to 3.6894. The overall average mean for all barriers is 3.56668, indicating a moderate level of perceived difficulty or hindrance faced by young individuals in agriculture development. The results indicated that the standard deviations are relatively high, ranging from 1.20516 to 1.40261. The higher standard deviations suggest a considerable degree of variability in responses, indicating diverse opinions or experiences among participants regarding the severity of these barriers. Skewness and Kurtosis; the skewness values range from -0.391 to 0.014, and the kurtosis values range from -1.61 to -1.31. The skewness values indicate a slightly leftward skew, suggesting that, on average, respondents perceive these barriers as somewhat challenging. The negative kurtosis values indicate a distribution with relatively lighter tails, suggesting that responses are not heavily concentrated around the mean. Generally, for the Limited Access to Finance, this barrier has the highest mean score, indicating that limited access to finance is perceived as the most challenging barrier. The relatively high standard deviation suggests variability in opinions on the severity of this issue. As for the lack

Inferential statistics is a branch of statistics that involves drawing conclusions or inferences about a population based on a sample of data taken from that population. This process is crucial in scientific research, as it allows researchers to make generalizations and

of Land Ownership and Market Access Issues, both barriers have moderate mean scores, and the standard deviations suggest a degree of variability in perceptions. Climate Change Vulnerability and Limited Supportive Policies, these barriers also have moderate mean scores, and the standard deviations indicate variability in opinions about their severity. The overall average mean of 3.56668 suggests a moderate level of perceived barriers faced by young individuals in agriculture development. The relatively high standard deviations indicate diverse perceptions among participants, with some finding these barriers more challenging than others. In summary, the findings suggest that young individuals in agriculture development face moderate barriers, with limited access to finance being perceived as the most challenging. The high standard deviations highlight the diversity in perceptions, indicating that participants may have different experiences and perspectives regarding the severity of these barriers. Understanding and addressing these barriers is crucial for developing effective strategies to support young individuals in agriculture.

### **Inferential Statistics Results**

predictions about broader groups using a smaller subset of data. When conducting inferential statistics, researcher typically used hypothesis testing and confidence intervals to make judgments about the population parameters. Hypothesis testing involves

making a statement about a population parameter and assessing the evidence against it using sample data. Confidence intervals provide a range within which the true population parameter is likely to fall. The results of inferential statistics are often presented in terms of p-values, confidence intervals, and statistical significance. The p-value indicates the probability of obtaining the observed results (or more extreme) if the

null hypothesis is true. A smaller p-value suggests stronger evidence against the null hypothesis. Confidence intervals provide a range of values within which the true population parameter is likely to lie. Statistical significance is a key concept in inferential statistics. If a result is deemed statistically significant, it means that the observed effect in the sample is unlikely to have occurred by chance alone.

**Correlations**

**Coefficient**

**Table 5: Correlations Coefficient Test Results**

		<b>Country Development</b>	<b>Young People Involvement</b>
<b>Country Development</b>	Pearson Correlation	1	.977**
	Sig. (2-tailed)		.000
	N	132	132
<b>Young People Involvement</b>	Pearson Correlation	.977**	1
	Sig. (2-tailed)	.000	
	N	132	132

\*\* . Correlation is significant at the 0.01 level (2-tailed).

The correlation coefficient test results indicate a highly significant positive correlation ( $r = 0.977$ ,  $p < 0.01$ , two-tailed) between "Country Development" and "Young People Involvement." This implies a strong and positive linear relationship between the level of country development and the degree of involvement of young people. With a correlation coefficient of 0.977, which is very close to 1, it suggests a near-perfect positive association between the two variables. As the level of

country development increases, there is a corresponding substantial increase in the involvement of young people. The statistical significance ( $p < 0.01$ ) further strengthens the confidence in this relationship. In conclusion, the results suggest a robust positive correlation between country development and young people involvement, emphasizing the interconnectedness of societal development and the engagement of the younger population.

**Multiple Linear Regression**

**Table 6: Model Summary<sup>b</sup>**

<b>Model</b>	<b>R</b>	<b>R Square</b>	<b>Adjusted R Square</b>	<b>Std. Error of the Estimate</b>	<b>Durbin-Watson</b>
1	.935 <sup>a</sup>	.874	.870	3.02548	1.281

a. Predictors: (Constant), Involvement in environment conservation, Involvement in business and entrepreneurship, Involvement in Agriculture, Involvement in Livestock

b. Dependent Variable: Country Development

The multiple linear regression analysis in Table 6 assesses the relationship between the predictors (Involvement in environment conservation, Involvement in business and entrepreneurship, Involvement in Agriculture, Involvement in Livestock)

and the dependent variable (Country Development). The R Square value of 0.874 indicates that approximately 87.4% of the variance in the dependent variable (Country Development) which is explained by the predictors in the model. This suggests a strong fit,



and the model is effective in capturing a significant portion of the variability in country development. The Adjusted R Square value of 0.870 considers the number of predictors in the model, providing a more conservative estimate of the model fit. It reaffirms the robustness of the model, accounting for potential overfitting that occurred when adding predictors. The Standard Error of the Estimate (3.02548) represents the average deviation of the observed values from the predicted values. A lower value indicates a better fit.

In this case, the relatively low standard error suggests that the model's predictions are close to the actual values. The Durbin-Watson statistic of 1.281 helps assess the presence of autocorrelation in the residuals. The statistic ranges from 0 to 4, with 2 indicating no autocorrelation. In this case, the value of 1.281 suggests a slight positive autocorrelation, but it is close to the ideal value. The presence of the constant suggests that even when all predictors are zero, there is still a baseline level of country development.

**Table 7: ANOVA<sup>a</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	8051.535	4	2012.884	219.903	.000 <sup>b</sup>
	Residual	1162.495	127	9.154		
	Total	9214.030	131			

*a. Dependent Variable: country development*

*b. Predictors: (Constant), Involvement in environment conservation, Involvement in business and entrepreneurship, Involvement in Agriculture, Involvement in Livestock*

Table 7 presents the analysis of variance (ANOVA) results for the multiple linear regression model predicting the dependent variable "country development" based on the predictors: (Constant), Involvement in environment conservation, Involvement in business and entrepreneurship, Involvement in Agriculture, Involvement in Livestock. The regression sum of squares (SSR) is 8051.535. It represents the explained variability in the dependent variable by the predictors in the model. A higher SSR indicates that the predictors contribute significantly to explaining the variance in country development. The residual sum of squares (SSE) is 1162.495. It represents the unexplained variability in the dependent variable that is not accounted for by the predictors. A lower SSE indicates that the model is effective in capturing the observed outcomes. The total sum of squares (SST) is 9214.030. It is the sum of the regression and residual sums of squares, representing the total variability in the dependent variable. The degrees of freedom (df) for regression is 4, and for the residual is 127. The total degrees of freedom are the sum of these (4 + 127 = 131).

The mean square is calculated by dividing the sum of squares by the respective degrees of freedom. For regression, the mean square is 2012.884, and for the residual, it is 9.154. The F-statistic is the ratio of the mean square for regression to the mean square for the residual. In this case, the F-statistic is 219.903, indicating the variance explained by the predictors is significantly greater than what would be expected by chance. The significance level (Sig.) associated with the F-statistic is very close to zero (0.000b), which is less than the conventional significance threshold of 0.05. This suggests that at least one of the predictors in the model has a significant effect on predicting country development. In summary, the ANOVA results strongly support the conclusion that the overall regression model, including the predictors, is statistically significant in explaining the variance in the dependent variable "country development." The predictors collectively contribute significantly to the prediction of country development, as indicated by the highly significant F-statistic.

**Table 8: Regression Coefficients<sup>a</sup>**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	
	B	Std. Error	Beta			
	(Constant)	4.514	1.296			
1	Involvement in Agriculture	.506	.092	.302	5.500	.000
	Involvement in Livestock	.017	.180	.012	.097	.003
	Involvement in business and entrepreneurship	.919	.185	.633	4.963	.000
	Involvement in environment conservation	.157	.052	.107	3.049	.003

a. Dependent Variable: Country Development

The regression coefficients in Table 8 provide information about the change in the dependent variable (Country Development) for a one-unit change in each independent variable. The constant term (4.514) represents the expected value of the dependent variable when all independent variables are zero. In this context, it indicates the expected Country Development when there is no involvement in Agriculture, Livestock, Business and Entrepreneurship, or Environment Conservation. The results stated that, for every one-unit increase in Involvement in Agriculture, the Country Development is expected to increase by 0.506 units. The coefficient is significant ( $t = 5.500, p < 0.001$ ), suggesting a positive relationship. This implies that greater participation in agriculture is associated with higher levels of country development. For every one-unit increase in Involvement in Livestock, the Country Development is expected to increase by 0.017 units. The coefficient is significant ( $t = 0.097, p = 0.003$ ), indicating a positive but very small

relationship. This suggests that the impact of Livestock involvement on Country Development is limited. For every one-unit increase in Involvement in Business and Entrepreneurship, the Country Development is expected to increase by 0.919 units. The coefficient is highly significant ( $t = 4.963, p < 0.001$ ), suggesting a strong positive relationship. This implies that greater engagement in business and entrepreneurship is associated with significantly higher levels of country development. For every one-unit increase in Involvement in Environment Conservation, the Country Development is expected to increase by 0.157 units. The coefficient is significant ( $t = 3.049, p = 0.003$ ), indicating a positive relationship. This suggests that increased participation in environmental conservation is associated with higher levels of country development. The overall model ( $R^2 = 0.874$ ) indicates that approximately 87.4% of the variability in Country Development can be explained by the combination of these involvement factors.

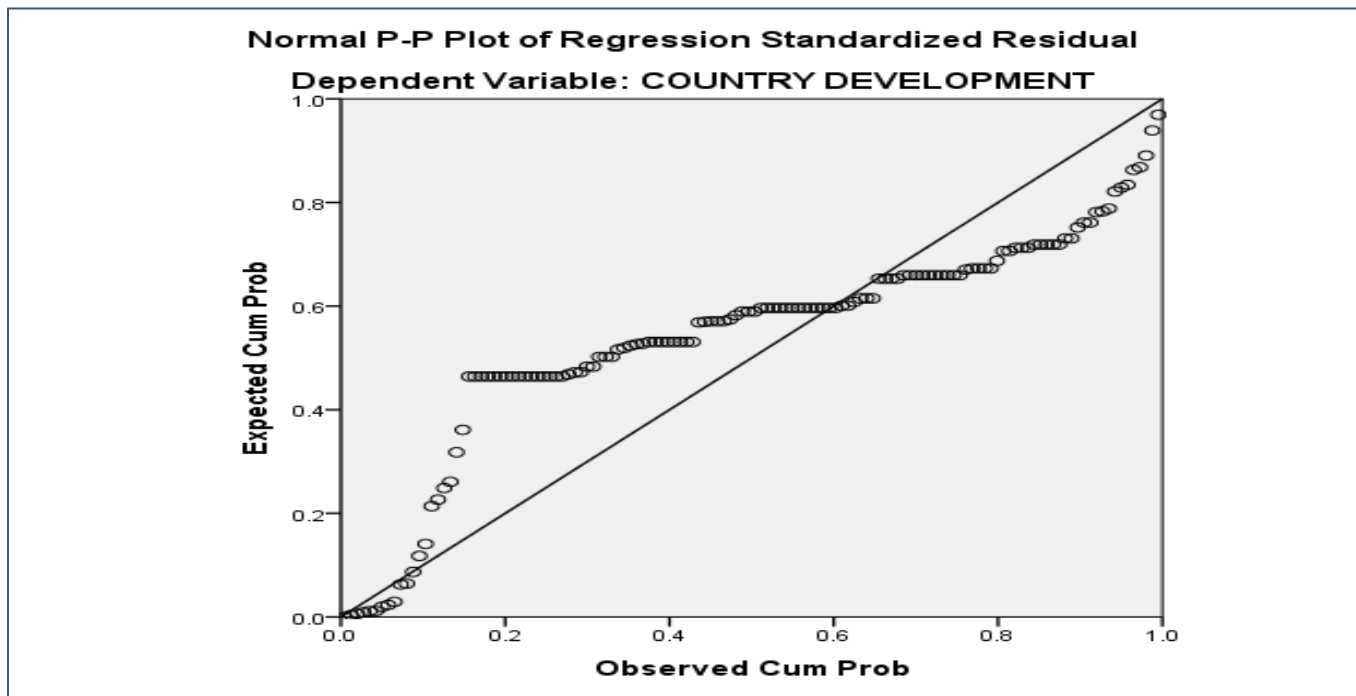
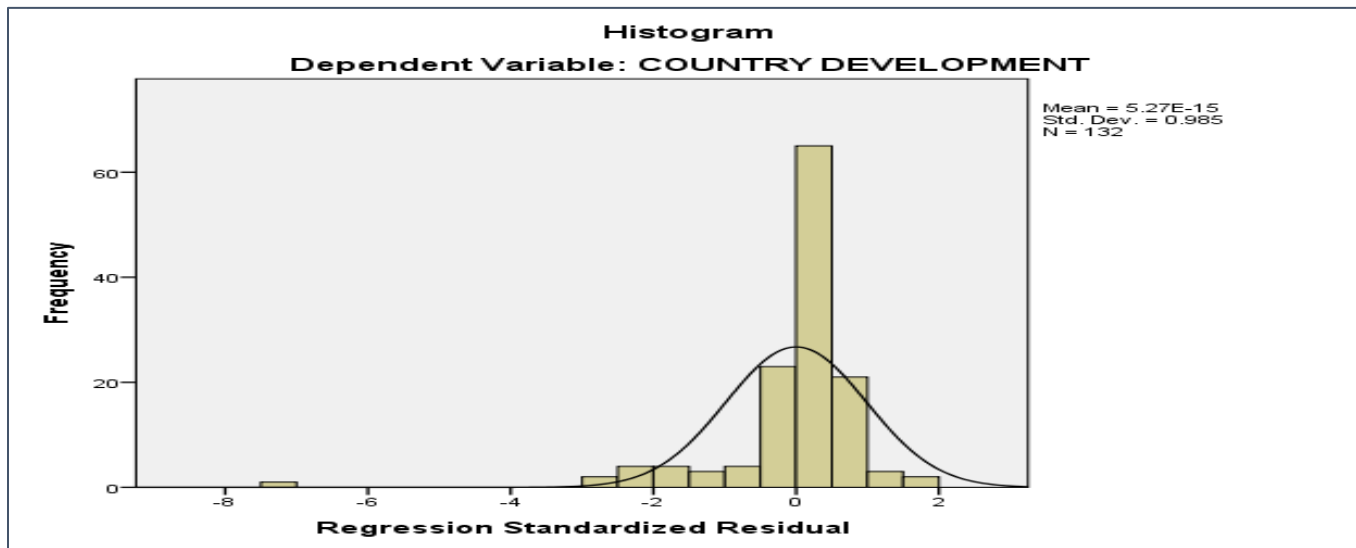
**Hypotheses Verification:**

Ha1: There are significant effectiveness and involvement of young people of Yalla Yalla Group in enhancing sustainable agricultural practices in Rwanda, such as job creation, increased agricultural productivity, resource efficiency, and environmental sustainability. Link to Coefficients: The coefficient for "Involvement in Agriculture" is significant ( $t = 5.500, p < 0.001$ ), indicating a positive relationship between involvement in agriculture and country development. This supports Ha1, suggesting that engagement in agriculture positively contributes to country development. Ha2: There are significant socio-economic benefits of engaging young individuals of Yalla Yalla Group in agriculture development projects of Rwanda, such as the improvement of income

generation, livelihoods, and the overall economic well-being of the youth participants. Link to Coefficients: The coefficient for "Involvement in Business and Entrepreneurship" is highly significant ( $t = 4.963, p < 0.001$ ), suggesting a positive relationship between involvement in business and entrepreneurship and country development. This supports Ha2, indicating that engagement in business and entrepreneurship contributes to socio-economic benefits. Ha3: There is a significant and positive impact of involving young people in the Yalla Yalla Group on community development in Rwanda, such as participation fostering social integration, knowledge transfer, and community empowerment, ultimately contributing to broader national development goals. Link to Coefficients: The coefficients in the table do not directly

address community development. Additional analyses or specific indicators related to community

development would be necessary to verify Ha3.



## CONCLUSION AND RECOMMENDATION

### Conclusion:

The study affirms the positive impact of involving young individuals from Yalla Yalla Group in sustainable agricultural practices in Rwanda. The findings underscore the effectiveness of this engagement, leading to socio-economic benefits, community development, and enhanced agricultural practices. Despite facing moderate barriers, the interconnectedness between country development and the involvement of young people is evident, emphasizing their crucial role in societal progress. The multiple linear regression model, with a robust fit, highlights the significance of involvement in agriculture, livestock, business, entrepreneurship, and environmental conservation in predicting country development. These factors collectively contribute to approximately 87.4% of the variability in the country's development, showcasing their importance in shaping national progress.

### Recommendations:

The study recommends government and other partners in agricultural to address financial barriers: Given the perceived challenges, there is a need for targeted interventions to address financial barriers faced by young individuals in agriculture development projects. Initiatives providing easier access to finance can enhance their overall engagement and contribution. Promote diversified involvement: encouraging a balanced approach to involvement in agriculture, livestock, business, entrepreneurship, and environmental conservation can further optimize the positive impact on country development. Policymakers and organizations should design programs that foster a comprehensive engagement strategy. Community development indicators: to fully verify the impact on community development, additional analyses or specific indicators related to community integration, knowledge transfer, and empowerment are recommended. This will provide a comprehensive understanding of the broader societal contributions of young individuals from Yalla Yalla Group. Continuous monitoring and evaluation: Implementing a system for continuous monitoring and evaluation of the involvement programs will allow for timely adjustments and improvements. This

ensures that the initiatives remain effective and responsive to evolving challenges. Strengthen collaboration: Enhancing collaboration between government bodies, non-governmental organizations, and private sectors can amplify the positive effects of youth involvement. A coordinated effort will maximize resources and create a more sustainable and impactful development ecosystem.

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