

ISSN: 2617-6548

URL: www.ijirss.com



Socio-economic factors and personality traits influencing the sustainability of female agrientrepreneurs in emerging economies

1.2.3 University of Venda, Faculty of Science, Engineering & Agriculture Department of Agricultural Economics and Agribusiness.

Corresponding author: Mpho Tshikororo (Email: mpho.tshikororo@univen.ac.za)

Abstract

Entrepreneurship is the future, particularly for developing economies that are still striving to meet societal needs with the bare minimum of resources. With the urgency of entrepreneurship in South Africa, the study sought to investigate the influence of socioeconomic characteristics and personality traits on the sustainability of women agripreneurs. The study was conducted in the Mopani district of Limpopo province, South Africa. Structured questionnaires were administered to 119 women agripreneurs during face-to-face interviews. Descriptive statistics were used to gain insight into the distribution of socioeconomic characteristics among women agripreneurs. At the same time, a multinomial logistic regression model was used to determine the influence of socioeconomic characteristics and personality traits on the sustainability of female entrepreneurship. The study discovered that the sustainability of women agripreneurs during their start-up phase was significantly influenced by their hard work and resilience traits. At the same time, their traits of innovativeness and independence positively influenced their short-term sustainability. The long-term sustainability of the women agripreneurs was primarily influenced by their willingness to learn, household size, problem-solving, and can-do attitude. The study recommends that potential women agripreneurs be assisted in developing personality traits that enhance their sustainability during different phases of their businesses. The study findings imply the importance of considering the socioeconomic status and personality traits of potential agripreneurs when developing mechanisms to enhance their agribusiness sustainability.

Keywords: Agripreneurs, Long-term, Sustainability, Traits, Viable, Women.

DOI: 10.53894/ijirss.v8i1.4407

Funding: This study received no specific financial support. The APC was funded by the Research and Publication Committee, University of Venda.

History: Received: 2 December 2024/Revised: 30 December 2024/Accepted: 8 January 2025/Published: 31 January 2025

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Competing Interests: The authors declare that they have no competing interests.

Authors' Contributions: All authors contributed equally to the conception and design of the study. All authors have read and agreed to the published version of the manuscript.

Transparency: The authors confirm that the manuscript is an honest, accurate, and transparent account of the study; that no vital features of the study have been omitted; and that any discrepancies from the study as planned have been explained. This study followed all ethical practices during writing.

Institutional Review Board Statement: The Ethical Committee of the University of Venda, South Africa has granted approval for this study (Ref. No. FSEA/23/AECA/06).

Publisher: Innovative Research Publishing

1. Introduction

Entrepreneurship is primarily viewed as a critical contributor to the economic engine of every country, as it enhances job creation, innovation, and competitiveness within the sector [1]. South Africa faces a record-breaking unemployment rate, prompting entrepreneurship to be a lifeline for many people. While entrepreneurship is not an easy career, female participation in it remains limited. It is believed that one effective way to strengthen a country's economy is through its ability to create employment within its jurisdiction via entrepreneurship [2]. It was noted in the study of Anggadwita, et al. [3] that women's empowerment in the rural space had been noted to reduce poverty and improve the livelihoods of society through entrepreneurship. In recent years, female entrepreneurship has increased, significantly boosting economic activities and lowering unemployment [4]. This is due to a common notion that entrepreneurship is primarily dominated by males compared to their counterparts, as depicted by various studies [2, 5]. Female entrepreneurship has recently been established as a priority for the governments of the world's leading economies due to the benefits that both developed and underdeveloped countries can gain from it Rubio-Bañón and Esteban-Lloret [6] and Hechavarria, et al. [7]. Moreover, despite entrepreneurship being dominated by males, most employees are females [8, 9]. Entrepreneurship within the agribusiness sector includes commodity production, livestock rearing, and rendering services such as hiring and renting farm equipment and equipment maintenance [10].

With agribusiness being tricky due to some phenomena beyond human control, many entrepreneurial traits significantly contribute to its long-term sustainability. Among other influencing factors, it has been noted that the personality of a potential or actual entrepreneur matters in the sustainability of such a person within the sector [11]. A study by Hasniati, et al. [12] indicated that entrepreneurial traits such as a high level of initiative and open-mindedness play an essential role in ensuring that women succeed in entrepreneurship. At the same time, a similar study indicated resilience traits being a decisive factor in entrepreneurship sustainability, particularly among female entrepreneurs [13]. Few studies have noted self-efficacy and intentions toward entrepreneurship as ideal drivers among females [14, 15]. Other factors deemed influential on the sustainability of female entrepreneurship were organizational knowledge, communication and problem-solving ability, creativity, leadership, self-efficiency, and the willingness to take risks [16] Furthermore, recent literature also indicates that the benefit of women's entrepreneurship is not limited to sustained economic growth; it also enhances living standards through innovation and enhanced competitivity [17]. It was also noted that it is essential to gain insights into gender dimensions relating to access to agricultural land and long-term sustainability as they aid in improving the needs of rural women in agriculture [18]. Furthermore, agriculture is a critical player in developing countries' national food security. However, its sustainability has been impaired by various factors, leading to low productivity [19]. Against this background, the study was contextualized around identifying socio-economic and personality traits that significantly impacted the sustainability of agribusiness ventures owned by females, as they significantly contribute towards food security and livelihood enhancement through such businesses.

2. Materials and Methods

2.1. Study Area

The study was conducted in the Mopani district of the Limpopo Province, South Africa. Mopani district consists of five local municipalities, namely Greater Giyani, Greater Letaba, Greater Tzaneen, and Maruleng, and contributes significantly to agriculture at a provincial level. The district has an estimated population of 1,092,507 and 296,320 households [20]. Mopani district is well-known for its agricultural activities, from emerging to commercial farming, with maize production taking the lead.

2.2. Sampling Technique and Data Collection

The study used a purposive sampling method to select 119 women agripreneurs in the Mopani district. Purposive sampling was selected for its strength of locating and selecting instances that will yield the most efficient use of the available scarce resources [21]. Data was collected using structured questionnaires administered during face-to-face interviews with the respondents.

2.3. Empirical Method

The study used descriptive statistics to draw insight into the distribution of the socioeconomic characteristics of women agripreneurs within the study sample. Furthermore, the study used the Multinomial Logistic Regression model to determine the influence of socioeconomic characteristics and personality traits of women agripreneurs on their sustainability within the agribusiness sector. The Multinomial Logistic Regression model was deemed suitable for the study based on its proven effectiveness in analyzing response variables that have more than two categories.[22]. Furthermore, the Multinomial Logistic Regression can compare more than one contrast and estimate the log odds of three or more covariates simultaneously [23]. The empirical Multinomial Logistic Regression model was specified as Yi = f(X1, X2..., Xn), where Yi is the polychotomous dependent variable, and it is, therefore, the sustainability of women agripreneurs through their years of operation. (Yi) is defined as 0 for the start-up phase, short-term period = 1, medium-term = 2, and long-term sustainability = 3. At the same time, the explanatory variables are denoted by Xs, as shown in the Table 1. In the analysis, the base category is between 11 and 15 years of operations (secured sustainability).

Table 1.Description of independent variables used in the regression model.

Variable	Name of description	Type of measure expected sign					
X1	Age group	0=between 20 and 30 years; 1=between 31 and 40 years, 2=between 41 and					
		50 years,3=between 51 and 60 years, -/+ 4 above 60 years					
X2	Marital status	0=single,1 married ,2= divorced ,3=widowed -/+					
X3	Land ownership	0=self-owned land, 1= PTO, 2=Rent ,3=lease -/+					
X4	Household size	0=between 1 and 5 members ,1= between and 10 members, -/+					
		2= above 10 members					
X5	Problem-solving	Dummy;0=No,1=Yes +					
X6	Time management	Poor=0, good=1, excellent=2 +					
X7	Innovativeness	Dummy;0=No,1=Yes +					
X8	Willingness to learn	Dummy;0=No,1=Yes +					
X9	Independence	Dummy;0=No,1=Yes +					
X10	Leadership	Dummy;0=No,1=Yes +					
X11	Communication	Poor=0, good=1, excellent=2 +					
X12	Creativeness	Dummy;0=No,1=Yes +					
X13	Can-do-attitude	Dummy;0=No,1=Yes +					
X14	Implementation	Dummy;0=No,1=Yes +					
X15	Resilience	Dummy;0=No,1=Yes +					
X16	Commitment	Dummy;0=No,1=Yes +					
X17	Planning	Poor=0, good=1, excellent=2 +					
X18	Hard working	Dummy;0=No,1=Yes +					

3. Results and Discussion

3.1. Discussion of the socio-economic characteristics results

From the study sample, the study findings (Table 2) show that most women agripreneurs were between 51 and 60, accounting for 30.3%, followed by those aged between 31 and 40 years, accounting for 24.4%. The last group accounted for those between 20 and 30, who accounted for 11.8%. The study findings align with those of Haneef and Ahmad [10] who indicated that older women are more involved in agribusiness than young females. Regarding educational status, most women agripreneurs within the study sample had obtained a secondary education, accounting for 35.5%, followed by those possessing the primary qualification, accounting for 23.5%. The study findings also revealed that regarding marital status, most women agripreneurs within the study sample were single, accounting for 47.9%, followed by those who were married, accounting for 31.1%. Regarding land ownership, most women agripreneurs owned land 47.9%, followed by those who owned the land under the permission to occupy arrangement (PTO), accounting for 26.9%.

Regarding agribusiness ownership, the study findings uncovered that most women agripreneurs had owned an agribusiness between six and ten years, accounting for 31.1%, followed by those who owned agribusiness ventures for about 11 to 15 years. For household size, most women agripreneurs had a household size of between one and five members, amounting to 54.6%, followed by those with household members between six and ten members. From the study sample, most women agripreneurs had agribusiness ventures as their only source of income generation, amounting to 91.6%, while those who had an income from non-agribusiness accounted for 8.4%, as shown in Table 2.

Table 2. Distribution of the socio-economic characteristics among the women agripreneurs

Variables	Frequency	Percentage	
Age			
Between 20 and 30 years	14	11.8	
Between 31 and 40 years	29	24.4	
Between 41 and 50 years	19	16.0	
Between 51 and 60 years	36	30.3	
Above 60 years	21	17.6	
Educational level			
No formal education	24	20.2	
Primary education	28	23.5	
Secondary education	41	34.5	
Tertiary education	26	21.8	
Marital status			
Single	57	47.9	
Married	37	31.1	
Divorced	20	16.8	
Widowed	5	4.2	

Variables	Frequency	Percentage	
Self-owned	57	47.9	
PTO	32	26.9	
Rent	20	16.8	
Lease	10	8.4	
Years in agribusiness			
Less than a year	8	6.7	
Between 1 and 5 years	21	17.6	
Between 6 and 10 years	37	31.1	
Between 11 and 15 years	29	24.4	
Above 15 years	24	20.2	
Household size			
Between 1 and 5	65	54.6	
Between 6 and 10	54	45.4	
Agribusiness occupation		·	
No	10	8.4	
Yes	109	91.6	
Total	119	100	

As shown in Figure 1, the study sample results show that most women agripreneurs participated in the primary agribusiness sector. Of those participating in primary agribusiness, most were into cash crop production and livestock rearing, accounting for 59.7%. Most women agripreneurs ventured into primary agribusiness due to low start-up capital requirements and quick investment returns. The study findings also revealed that those involved in tertiary agribusiness were essentially in advisory services and business branding and packaging services, accounting for 11.8%.

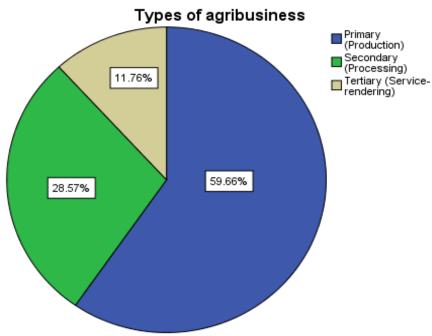


Figure 1. Types of agribusinesses that women agripreneurs are involved in within the study sample.

Table 3 presents the multinomial logit regression model that determines the influence of socioeconomic characteristics and personality traits of women agripreneurs on their sustainability within the agribusiness.

Table 3.Parameter estimates of the multinomial logit for women agripreneurs sustainability model

Explanatory variables	Less than a year		Between 1 and 5 years		Between 6 and 10 years		Above 15 years	
	Coeff.	P-value	Coeff.	P-value	Coeff.	P-value	Coeff.	P-value
X1	-4.824	0.206	6.230	0.001***	-5.709	0.001***	-0.404	0.996
X2	-2.324	0.264	0.923	0.360	1.738	0.066*	0.279	0.778
X3	0.372	0.792	0.705	0.500	-0.796	0.390	-3.256	0.741
X4	-8.548	0.111	-2.886	0.170	-2.644	0.183	-7.221	0.029**

Explanatory	Less than a year		Between 1 and 5 years		Between 6 and 10 years		Above 15 years	
variables								
	Coeff.	P-value	Coeff.	P-value	Coeff.	P-value	Coeff.	P-value
X5	-4.034	0.193	-1.113	0.565	3.286	0.051*	1.389	0.008***
X6	2.033	0.490	-2.460	0.229	-0.909	0.642	-0.388	0.490
X7	-10.702	0.305	7.416	0.017**	6.505	0.053*	-9.338	0.852
X8	1.426	0.544	1.711	0.295	-0.686	0.626	0.049	0.006***
X9	3.103	0.026**	6.847	0.009***	-6.497	0.108	-3.529	0.974
X10	3.434	0.040**	-14.413	0.996	-14.035	0.996	-2.413	0.159
X11	-5.745	0.164	-5.573	0.115	-4.248	0.198	6.812	0.059*
X12	-11.736	0.219	10.076	0.024**	-8.815	0.140	-5.994	0.017**
X13	6.591	0.002***	5.105	0.041**	-2.738	0.223	5.718	0.020**
X14	0.617	0.050**	0.039	0.981	1.778	0.234	0.008	0.995
X15	4.420	0.029**	-1.393	0.427	0.235	0.873	-1.618	0.445
X16	-1.199	0.617	-0.728	0.679	0.025	0.988	22.816	0.993
X17	7.510	0.331	7.760	0.003***	4.081	0.053*	-1.108	0.658
X18	5.472	0.003***	-1.011	0.564	0.563	0.736	919	0.549

Diagnostics

Base category between 11 and 15 years of operations (secured sustainability)

Number of observations 119

LR chi-square 239.047

-2 Log likelihood 122.186

Pseudo-R2 .910

Note: Field data, 2023. ***, **, *Significant at 1%, 5%, and 10% probability level, respectively. Coeff. – coefficients.

3.2. Discussion of the Logistic Regression Results.

3.2.1. Start-Up Phase (Less Than a Year in Operations)

The study results show that the personality traits of women agripreneurs that sustain their businesses during the start-up phase are their implementation, leadership, independence, resilience, and hard and can-do attitude. The implementation, leadership, independence, and resilience skills were statistically significant at 5%, while hard work and can-do attitude were statistically significant at 1%. The study results show that women agripreneurs who succeed are implementors of their plans and decisions. During the business start-up phase, decision-making and implementation are crucial components of the managerial functions; hence, they play a significant role in women agripreneurs' sustainability during the first few months of their business venture's operations. Decision-making skills make and break the business, as tough decisions are made occasionally to ensure that the business activities are executed as planned. In agribusiness, tough decisions are part and parcel of the business as some phenomena are beyond man's control, prompting tough decision-making and implementation skills to come in handy. In a similar study, decision-making abilities were noted to influence the business's success [24]. The study findings also reveal that leadership skills significantly influence women agripreneurs' sustainability within their first year of operation. A study that investigated women's decision to become entrepreneurs revealed that leadership qualities were among the decisive factors in ensuring venturing and the sustainability of such entrepreneurship. This was significantly influenced by the contribution towards the sustainability of the household economy by female entrepreneurs [12]. Leadership skills come in handy, particularly during the start-up phase, in which the agripreneurs will have to lead the team toward the implementation and execution of activities as planned. The study findings also reveal that being independent significantly influences women agripreneurs to sustain their business operations during their first few months. As alluded to before, during the start-up phase, the business faces numerous challenges, and entrepreneurs are left with no choice but to find solutions on their own and take responsibility to remain viable and competitive within the sector.

Furthermore, the study results show that a can-do attitude is vital in sustaining a new business venture. During the start-up phase, new business ventures face challenges that lead to many shutting down. During the start-up phase, women agripreneurs must possess a can-do attitude that their male counterparts still dominate agribusiness. It was also noted that resilience significantly ensures women agripreneurs' sustainability during their ventures' start-ups. This could be due to the challenges alluded to before. Hence, the agripreneurs have no option but to resist regardless of the setbacks. These findings are also supported by the study of Padilla-Meléndez, et al. [25] who discovered that the entrepreneurial resilience traits of an individual significantly boost the sustainability of entrepreneurial activities as it ensures one's survival and personal improvement. This was also noted by Makandwa, et al. [26] who indicated that resilience is a dominant entrepreneurship skill among women entrepreneurs that contributes to their success. The hard-working trait was also found to significantly influence the sustainability of business ventures during their start-up period; this is important in that during the start-up period, much effort is required to put things together and ensure that the business operates as desired or planned. The hard-working trait was also classified as an influential entrepreneurial characteristic contributing to an entrepreneur's success and expansion [27].

3.2.2. Short-Term Sustainability (between 1 And 5 Years)

The study findings reveal that the short-term sustainability of the women agripreneurs was positively and significantly influenced by the age group, independence, and planning of the women agripreneurs at a 1% significance level. In contrast, such sustainability was influenced by their innovativeness, creativity, and can-do attitude at a 5% significance level. The study findings indicate that as the age group of women agripreneurs increases, their short-term sustainability also gets firm. This could be because most women agripreneurs within the study sample were above the age of 30 years, which could also be translated to them being resource-balanced or settled, which could enhance their sustainability. Innovation skills were also found to influence short-term sustainability significantly, with innovation skills deemed helpful for pursuing new ideas within an individual's space. This is in line with the study conducted by Nagaveena and Bhojanna [24] who indicated innovation as one factor that positively influences the business's success.

Moreover, the independence of women agripreneurs was also found to influence short-term sustainability significantly. The independent nature of the agripreneurs, particularly women, was deemed essential for success despite the challenges faced; the independent nature positively enhances getting things done without depending on someone else for work to be done. This study's findings align with that of Mas-Tur, et al. [28] who indicated that personal traits such as independence significantly influence women into entrepreneurship just as they influence males.

The study findings also showed that creativity contributed to the short-term sustainability among women agripreneurs. Creativeness skills being significant towards short-term sustainability supports the common practice of women agripreneurs wherein, during their early operations, they open to trying new things to gain market share. The findings of this study are supported by Hasniati, et al. [12] who also indicated creativity as a positive contributor toward the sustainability of women's entrepreneurship. Regarding the can-do-attitude, the study findings revealed that such an attitude plays a significant role. A can-do attitude is essential, particularly during the early operations of the business venture. The can-do attitude is critical in ensuring that entrepreneurs get things done regardless of the challenges, improving their sustainability. Planning was also found to improve short-term sustainability in that entrepreneurs must plan their activities accordingly, which could also assist them in identifying the corrective measures necessary should their execution not align with their business plan.

3.2.3. Medium-Term Sustainability (Between 6 And 10 Years)

The study findings reveal that age group, marital status, problem-solving, innovativeness, and planning influenced the medium-term sustainability of women agripreneurs. The age group was found to be statistically significant at a 1% level of significance. At the same time, marital status, problem-solving, innovativeness, and planning were statistically significant at a 10% significance level. For medium-term sustainability, the study findings reveal that the age group played a significant role. The results implicate that as women agripreneurs age, their medium-term sustainability is more secure. This could be influenced by the fact that as people get older, the possibility of being financially settled increases, which renders improved chances of being a sustainable entrepreneur as they can finance their business ventures better. Similar observations were noted wherein female entrepreneurs in the age group above 31 were found to be more involved in entrepreneurship than female entrepreneurs in their 20s. Female entrepreneurs with ten or more years of work experience are more financially sustainable than younger female entrepreneurs [29]. The study findings also revealed that marital status significantly influenced their medium-term sustainability. With most of the women agripreneurs within the study sample not married, this implies that being independent plays a significant role in their sustainability within the sector, a factor that was found significant for their short-term sustainability. With most of the women agripreneurs within the study sample, not being married could mean they are not reliant on anyone to get things done, hence their resilience. This study's findings complement the findings by Xheneti, et al. [30] who noted that most female entrepreneurs are often encouraged to pursue entrepreneurship to meet their household's needs. The study also uncovered that the medium-term sustainability of women agripreneurs is significantly influenced by possessing problem-solving skills. The need for problem-solving skills must be considered as the business environment is ever-changing and may need business owners to be well-vested in solving different obstacles.

The medium-term sustainability of the women agripreneurs was also significantly influenced by their innovativeness. The study results imply that the more agripreneurs improve their innovativeness, the more their chances of being sustainable increase. The results of the study also implicate that being innovative increases one's chances of remaining relevant to the business sector. Agribusinesses that still strive to mark their presence in the sector to ensure their long-term viability remain in pursuit of new ideas to attract more customers. The study's findings are also supported by Makandwa, et al. [26] who noted that entrepreneurs' innovativeness and creativity skills are strengthened by their ability to use their traditional methods to develop new products, which aids them in remaining competitive in the market. The study findings also indicated that planning significantly influences agripreneurs' chances of being sustainable. Planning is critical in identifying activities that are likely to be undertaken in the future, which also contributes to agripreneurs efficiently allocating resources for specific business activities. Proper planning also plays a significant role in evaluating business performance, wherein executed activities are measured against the planned ones to improve areas where things are not excellently executed.

3.2.4. Long-Term Sustainability (More Than 15 Years)

The study findings reveal that personality traits such as problem-solving, willingness to learn, communication, creativeness, and can-do attitude significantly affect the long-term sustainability of women agripreneurs. Socio-economic status involving household size also significantly influenced the long-term sustainability of the women agripreneurs. Problem-solving and willingness to learn traits were statistically significant at a 1% significance level. At the same time, household size, creativity, and can-do-attitude were statistically significant at a 5% significance level. Communication skills were statistically significant at a 10% significance level. The study findings reveal that the long-term sustainability of women

agripreneurs is negatively impacted by larger household sizes. The results implicate that the larger the household size the women agripreneurs have, the more unsustainable their agribusiness enterprise gets; this could be influenced by the higher basic needs the women agripreneurs may have to meet for their household members. Agribusiness enterprises are financially sensitive, leading to most collapsing should there be an uneven distribution of funds and resources to support their ongoing operations. The study also uncovered that possessing problem-solving skills positively and significantly influences the long-term sustainability of women agripreneurs. The study findings reveal that the more a woman agripreneurs prunes her problem-solving skills, the more sustainable the business gets. Regardless of the years of existence, business ventures always encounter challenges; hence, agripreneurs must be problem solvers.

Relating to the women agripreneurs' willingness to learn, the study findings show that possessing such a skill positively contributes to their long-term sustainability. With the continuous development and changes in the business environment, an entrepreneur must be open and willing to learn various business dynamics to remain viable and competitive. Workplace learning culture was also pointed out as one of the entrepreneurial values that significantly sustained women's entrepreneurship, ensuring their development [31]. Communication skill was also a significant contributor to women agripreneurs' long-term sustainability. This is due to the imperative role that communication skill plays when executing business activities with both external and internal stakeholders. Female entrepreneurs can build trust and loyalty through superior communicative skills and appropriate flexibility and inclusiveness; hence, communication skills are significant in their sustainability Li [32]. Perks and Struwig [33] also highlighted the importance of communication skills as equally important to a venture's performance. The long-term sustainability of the women agripreneurs within the study sample was also negatively and significantly impacted by their creativeness. The results implicate that as the creativity of woman agripreneurs gets poor, their enterprises' sustainability slows. The results could be influenced by the fact that most women agripreneurs within the study sample who have been in a business for more than 15 years are older women, and a common belief among older people is that they are comfortable with their traditional way of doing things which also limit their creativity. Lastly, the long-term sustainability of women agripreneurs within the study sample was positively and significantly influenced by their can-do-attitude. Within the agribusiness sector dominated by male counterparts, women agripreneurs who possess can-do-attitude are among those who significantly thrive against all odds.

4. Conclusion and Recommendations

The study findings show that different socio-economic characteristics and personality traits significantly influence the sustainability of women agripreneurs. Furthermore, the study findings revealed that the sustainability of women agripreneurs during their start-up phase was significantly influenced by their hard work and resilience traits. Furthermore, the study also uncovered that the sustainability of women agripreneurs during the start-up phase was influenced by independence and leadership traits. The study also revealed that short-term sustainability was significantly influenced by innovativeness and independence, among other traits. While the age group, marital status, and planning significantly influenced the mediumterm sustainability. The long-term sustainability of the women agripreneurs was significantly influenced by their willingness to learn, household size, problem-solving, communication, and can-do attitude. The study recommends that potential women agripreneurs be assisted in developing personality traits that enhance their sustainability during different phases of their businesses. The study also recommends that potential women agripreneurs should be assisted in developing resilience and independence traits during their start-up period, as it will significantly assist them in surviving and being sustainable within the sector. For short-term sustainability, the study recommends that women agripreneurs develop and improve their innovativeness traits to remain viable and competitive. For medium-term sustainability, it is recommended that women agripreneurs improve their planning skills to align their long-term objectives with the changing business environment. For long-term sustainability, the study recommends that women agripreneurs develop alternative ways of solving problems and pruning their communication skills to ensure a conducive working environment for internal and external stakeholders.

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