Gender and Students' Personal Attitude to Start a Farming Business: The Moderation Role of Family Business Status and Area Raised

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Keywords

Area raised

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Personal attitude

Abstract

The objective of this research was to determine the relationship between gender and agriculture students' personal attitudes to start a farming business. Also, the moderating effect of family business status and the area raised on the relationship was determined. An estimated 3,486 students were enrolled for various agriculture-related qualifications in various institutions of higher learning in South Africa when this cross-sectional, quantitative study was carried out. Data from 421 agricultural students were collected through a Prospective Farmers Profile Questionnaire at six institutions of higher learning in the country. The study revealed that gender has no significant influence on students' personal attitudes to start a farming business. The findings further revealed that family business status and the area where agricultural students were raised do not moderate the relationship between gender and students' personal attitudes to starting a farming business. The findings suggest that the construct cannot be regarded as useful for evaluating students' personal attitudes to starting a business. Based on the research findings, the present study can be extended in several directions, e.g. students from Economics or Humanities faculties for further research to determine the influence of gender on the personal attitude of students to start a business in these fields.

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1. Introduction

1.1 Background

Research evidence proves that business start-ups significantly contribute to the country's economy and provide employment opportunities (Ibarra et al., 2020; Susanto & Meiryani, 2019). Balasa and Alemu (2022) and Radipere and Dhliwayo (2014) consider entrepreneurship as an important driver of economic growth, productivity, innovation, and employment. In developing nations like South Africa, where a greater number of graduates complete their studies but fewer opportunities are available, unemployment has increased to become one of the most serious problems in the country. The unemployment rate in South Africa reached 27.9% in the third quarter of 2022 among workers aged 35 to 44 years while the figure dropped from 29.1% in the same quarter in the previous year (Statistics South Africa, 2022). The age group is linked to the largest portion of human capital in the country and among young South Africans (15 to 24 years); the unemployment rate was at its highest, at 59.6% (Statistics South Africa, 2022).

This challenge may be resolved by creating jobs through the establishment of businesses in the agricultural sector because the land is available for such activities. Agriculture-related businesses in livestock, field crops or horticulture are considered vital instruments for economic growth, job creation and the fight against poverty. According to Msuya et al. (2014), countries on the African continent consider agriculture as the backbone of their economy and they are investing in education systems with the aim of producing graduates that can play a crucial role in the achievement of the industry objectives. Agriculture in South Africa contributes significantly to food security (Meissner et al., 2013). National food security can be guaranteed by a stable agricultural sector (Agricultural Goods, 2013). Food security is a critical requirement of any country because it averts starvation traditionally alleged to be one of the main challenges faced by developing countries around the globe (Food and Agriculture Organization, 2016).

The findings of the study of Topimin et al. (2021) revealed that culture-related factors, which influence gender in entrepreneurial activities, stem from two perspectives of culture: micro and macro. Therefore, their interactions and experience within the family environment (micro), as well as the social environment (macro), will affect the entrepreneurial activities of women entrepreneurs (Topimin et al., 2021). From the micro perspective, their study revealed that family culture is significant in influencing women to start their own businesses. Culture is a vital element in the study of entrepreneurship and its influence on gender differences in entrepreneurial intention is important. Socially, the structure, social development and culture of a country are some of the important factors that affect entrepreneurial decisions to start new businesses (Castaño et al., 2015).

1.2 Problem statement

The gendered nature of entrepreneurship has become a major topic of research in recent years and researchers are encouraged to investigate the factors and processes underpinning the differential rates of entrepreneurship activities among men and women (Ahl, 2007; Marlow, 2002). The study done by Mustafa and Treanor (2022) reflect that women remain misrepresented within some occupation and positions in

different sectors of the economy and these under-representation informs their under-representation as entrepreneurs as well. According to Bird and Brush (2002), the idea of male-gendered entrepreneurship serves as a challenge for women in business. Goktan and Gupta (2015) found that gender identity and an individual's self-perception both play a notable role in the orientation of both men and women towards entrepreneurship. However, gender identity is considered the most important factor in explaining the entrepreneurial rate difference between the two. Goktan and Gupta (2015) state that the complexity and various influences of gender identity on the affinity of men and women for entrepreneurship is an area of concern. It is therefore evident that gender plays a role in deciding whether to participate in entrepreneurship or not. The investigation of this finding on agricultural students is vital for understanding their perception of gender and personal attitude to business start-ups. Farming business opportunities exist in South Africa but more males are participating in the sector than females (Raidimi, 2014). The reason behind this notion is important to enable one to draw a conclusion about their personal attitude to partake in business start-up activities.

1.3 Research objective

The aim of this study is to determine the relationship between gender and agriculture students' personal attitudes to start a farming business. The focus is also on how agricultural students raised in rural or urban areas and from families owning a business or not moderate gender and personal attitude to start a business. This study sought to determine the relationship between gender and students' personal attitudes to starting a farming business and how family business status and the area where the students were raised moderate this relationship.

Following this research objective, the paper presents a review of the literature under the themes of personal attitude to start a business, gender and personal attitude to start a business, family business status, area raised, followed by methodology applied, results and discussion and finally, the conclusion.

2. Literature Review

Personal attitude to start a business, the relationship between gender and personal attitude to start a business, family business status and area raised are analysed and hypotheses are developed from these discussions.

2.1 Personal attitude to start a business

Debarliev et al. (2015) state that attitude to the act reflects the person's valuation of the individual desirability of establishing a new business. Liñán and Chen (2009) report that beliefs are antecedents of attitudes because beliefs explain attitude, while attitude explains intention. Canizares and Garcıa (2010) emphasise that psychological and non-psychological factors (demographic, training and experience) are pertinent in clarifying the existence of entrepreneurial attitudes. The findings of Malebana (2014) confirm that attitude to becoming an entrepreneur, perceived behavioural control and subjective norms predict the intention to establish new business start-ups among rural university students in the Limpopo province of South Africa. Based on the arguments of Debarliev et al. (2015) and Liñán and Chen (2009), the researcher

decided to equate personal attitude to start a business and intention to start a business. Because they are treated the same, the researcher further decided to use them interchangeably. According to Soria et al. (2016), entrepreneurial intention is considered crucial to understanding the process of creating a new business, for example, a role player who mobilises persons to initiate their own business or those who consider initiating their own business start-up.

The relationship between gender and personal attitude to start a business, family business status, and the area raised are discussed next.

2.2 Gender influence on personal attitude to start a business

Gender has an influence on entrepreneurial inclination (Borges et al., 2021). Wagner (2005) reported a gender gap in the propensity to become self-employed and in self-employment performance and Wilson et al. (2007) reached the same findings. Douglas and Shepherd (2000) revealed that attitude influences entrepreneurship via intentions, while Canizares and Garcıa (2010) affirmed that attributes associated with entrepreneurial intention to establish a new business start-up differ between genders. The results of the study done by Mansour (2019) show that gender affect students' entrepreneurial perceptions and attitudes to start a business. Baliyan et al. (2020), in their study of Botswana and Lesotho University Agriculture graduates' attitudes, also established that there is a gender difference in students' attitudes towards entrepreneurship. Uike (2018) found that male students at Nagpur University management colleges have higher attitudes toward entrepreneurship behaviour than their female counterparts. Contreras-Barraza et al. (2021) report no evidence for gender differences in attitudes of business and economics students from Chile.

Conroy and Weiler (2016) and Magidimisha and Gordon (2015) found that there are significant characteristic and behavioural differences between males and females that affect business ownership such as education level and family structure in particular. Men and women have different views regarding their actions towards attitudes to entrepreneurship (Chipeta et al., 2016). Women are inclined to create new business start-ups only if they believe that their immediate environment appears positive to entrepreneurial activity (Caro-Gonzalez et al., 2017). In general, women have been found to have weaker entrepreneurial aspirations than their male counterparts (Borges et al., 2021). The study by Nguyen (2021) also confirmed that women are less likely than men to start businesses of their own.

2.3 Family business status

Nguyen (2018) reports that students whose parents are self-employed score higher in entrepreneurial intention but the difference is not statistically significant. Role models (e.g. from family business owners) not only offer prospects for informal learning (i.e. learning from others) but are also a good source of social persuasion, making individuals feel more confident to pursue an entrepreneurial career (BarNir et al., 2011). Chaudhary (2017) revealed that self-employed family backgrounds have a positive relationship with entrepreneurial intent. Drennan et al. (2005) further reported that persons with exposure to self-employed family background consider starting a business as both appropriate and practical. This is because students were exposed to self-employed family backgrounds or have been introduced to the businesses of their

families. According to Deaprida (2021) and Papadaki et al. (2002), self-employed parents serve as a positive role model and provide managerial expertise to their children, who will later engage in entrepreneurial activities themselves.

Abun et al. (2022) in their study of business intention with self-employed families and entrepreneurial education background, found that students with both family business background and entrepreneurial education background have higher business intention compared to those who do not have both. Socio-economic background and exposure to self-employed entrepreneurs may affect the business intention of individuals, yet, not repudiating that entrepreneurial education is vital in changing the mindset of students to choose entrepreneurship as a career (Kazakoff & Mitchell, 2017). The results of the study by Seidel (2019) reflect that male stereotypes about entrepreneurs can be reduced and self-identification with androgynous characteristics altered through exposure to certain role models (e.g. from a family member owning a business). According to Seidel (2019), males and females react differently depending on aspects such as role model gender and their level of success in entrepreneurship. Byrne et al. (2019) in their study found that role model discourse has little impact on trigging change in a dominant gender gap in entrepreneurship. Exposure to parental role models has a more significant effect on attitude toward entrepreneurship in women than men and exposure to entrepreneurship education significantly influence perceived entrepreneurial behaviour control of females than of their male counterparts (Entrialgo & Iglesias, 2018). Seidel (2019) reflects that males show similar identification with all role models (either male or female) and perceive their success as equally attainable, in line with previous research. McIntyre et al. (2003) found that women who are confronted with women's mathematic stereotype threat do significantly much better when being reminded of other women's achievements. Lockwood (2006) established that women identify more with female role models, while men identify with both female and male role models. Karimi et al. (2013) found that the influence of role models for female students on attitudes toward entrepreneurship is stronger than those for male students. On the other hand, Nguyen (2018) reflects that there is insufficient statistical evidence to conclude that children of self-employed parents show a higher entrepreneurial intention than children whose parents are not self-employed.

2.4 Area raised

The environment in which agricultural students are raised, either urban or rural, can influence their decision to start an agriculture-based business in the future. When studying entrepreneurship, attention should also focus on the aspects of the area raised. The area where an individual is raised can also influence their ambition to start a business due to factors of socio-economic settings. The study by Nishantha (2008) reflects that difference in residential area is a key factor affecting the entrepreneurship of young people due to differences in socio-economic or political conditions. Students may have a better understanding of socio-economic and political conditions that might assist them to engage in entrepreneurial activities (Kolosta et al., 2018; Ozaralli & Rivenburgh, 2016).

Roji and Ghazali (2020) in their study of entrepreneurial characteristics among community college students living in urban and rural areas found no significant differences in entrepreneurial characteristics between

urban and rural students. Dao et al. (2021) also found no differences between the entrepreneurial mindset of engineering and business students in Vietnam from either rural or urban areas. The agricultural sector plays an important role in international trade and foreign exchange resources and marketable surplus, which includes factors influencing market surplus and infrastructure, food security and source of raw material, transport, rural development, employment opportunities and lastly, economic development. Young people, especially from rural areas, who are exposed to farming, should take advantage of the opportunity and establish businesses in the sector. The land is a source of wealth because it can be harvested and the agricultural products grown on it are sold for profit. However, some of these young people are opting to migrate to urban areas. Factors that partly influence the migration of people from other countries like Hungary are employment and education (Kummitha et al., 2020). South Africa as a country faces the same challenge.

The findings of the study of Orabi et al. (2022) reveal that at Sohag University faculty of agriculture the majority of undergraduate agriculture students from rural origins at plan to establish their own businesses following graduation. However, they consider a lack of entrepreneurial knowledge as a major barrier to business start-ups (Orabi et al., 2022). Akhtar et al. (2011) found that in Turkey, students residing in rural areas are more likely to take risks and engage in entrepreneurship activities than students from urban areas. Nesse et al. (2015) explored entrepreneurship among youth in rural areas, regional differences and changes over time. They found that regional differences were insignificant both in 2001 and 10 years later. Malebana and Swanepoel (2015) in their study on graduate entrepreneurial intention in rural provinces in South Africa found that they have the intention to start a business and recommended that they should be given the necessary support to establish start-ups.

The results of the study of Makhwedzha (2019) show that the majority of National Rural Youth Service Corp students at Thaba Nchu College in the Free State have strong intentions to become entrepreneurs in the near future. Therefore, these students would prefer to be entrepreneurs rather than to be employed. Makhwedzha (2019) also reported that some of them are already in the process of starting their own businesses. Omotosho et al. (2020) investigated the effect of entrepreneurship education on entrepreneurial intentions of rural-based university students in South Africa and found that the majority of the students from rural areas had the intention to start businesses in the future. The study by Nguyen (2018) on demographic factors, family background and prior self-employment on entrepreneurial intention of Vietnamese business students found that students whose parents emigrated from rural areas to urban cities scored higher entrepreneurial intention, but the difference was not statistically significant. Dao et al. (2021) found that no differences exist between the entrepreneurial intention of students coming from rural and urban areas.

3. Research Methodology

This study utilised secondary research (review of existing literature) and empirical research was carried out by means of a descriptive research design. A survey was used as the data collection method. Cooper and Schindler (2008) describe a survey as a measurement process used to collect information during a highly

structured interview. Surveys may be used in studies that are usually quantitative in nature and are aimed at providing a broad overview of a representative sample of a large population (Mouton, 2001). In view of the primary objective of this research, the researcher deemed the quantitative method applicable.

A non-probability sampling design was deemed appropriate for this study. The research population comprised third-year students enrolled solely for agriculture programmes, at all 27 South African universities but permission to gather data was granted by only six institutions. The number of agricultural students in these six participating institutions was 1,123. The researcher personally distributed questionnaires to the participants. Only 421 students returned completed questionnaires and this is the number used in the analysis. The use of a questionnaire was appropriate where the researcher required an analytical approach exploring relationships between variables. Jansen (2010) reports that the endorsement of questionnaires by researchers as an instrument for data collection is based on their advantages, which include distribution to a large number of respondents at a relatively low cost, returning a high response rate as compared to other instruments. Therefore, a questionnaire was deemed appropriate for this study.

Data were collected using a self-developed questionnaire and was named Prospective Farmers Profile Questionnaire (PFPQ). The questionnaire contained questions on the agricultural students' demographic details, such as gender, field of study, area in which raised, and family business status (4 questions). The personal attitude of agricultural students was measured using a 7-point Likert scale and is further analysed under data analysis.

Factor loading after rotation is reported in Table 1. Factor loadings for personal attitude ranged from 0.44 – 0.86, which indicates that factors are closely related and were all important towards the factor personal attitude. The personal attitude subscale consisted of 5 items (α = .78), which indicates good internal consistency.

Table 1. Factor loading after rotation

Constructs	Factor loadings	Item-rest correlation	Crα in the absence of the item	Cronbach' Alpha
Personal Attitude				
I do not think I will be a market leader in innovation in the future.	0.44	0.33	0.816	**0.775**
A career as an entrepreneur is attractive to me.	0.83	0.70	0.679	
Being an entrepreneur would give me great satisfaction.	0.86	0.76	0.667	
If I had the opportunity and resources, I would love to start my own business.	0.7	0.58	0.727	
Being an entrepreneur brings with it more advantages than disadvantages, in my opinion.	0.51	0.48	0.762	

3.1 Hypotheses

The following hypotheses were formulated for the study:

- H_1: There is a statistically significant relationship between gender and the personal attitude of agricultural students to start a business.

- H_2: It was predicted that there should be a family business status influence on the relationship between gender and the personal attitude of agricultural students to start a business
- H_3: It was predicted that there should be an area-raised influence on the relationship between gender and the personal attitude of agricultural students to start a business.

4. Results

H_1: There is a statistically significant relationship between gender and the personal attitude of agricultural students to start a business. This hypothesis is rejected. Table 2 reflects that there was no significant relationship between gender and personal attitude of agricultural students, b= 0.565, 95% CI [0.111; 2.111], p =0.078. The findings of this paper revealed that gender has no statistically significant effect on the personal attitude of agricultural students to start a farming business. These findings suggest that the personal attitude of agricultural students to establish a business in the near future is not gender-based. These findings are consistent with those of previous research studies which discovered that gender has no bearing on students, for example, business and commerce students' personal attitudes to start a business (Contreras-Barraza et al., 2021; Mansour, 2019). However, the findings of this paper contradicted those of previous research studies, which found that gender is statistically significant to entrepreneurial intention (Baliyan et al., 2020; Borges et al., 2021; Caro-Gonzalez et al., 2017; Chipeta et al., 2016; Conroy & Weiler, 2015; Magidimisha & Gordon, 2015; Nguyen, 2021; Uike, 2018).

Table 2. Gender and personal attitude to start a business

Personal Attitude	Coefficient	Std. err.	t	P>|t|	[95% conf]	Interval
2. Sex	1	0.5654065	1.77	0.078	0.1114022	2.11142
Cons	3	0.4115573	75.32	0.000	30.19101	31.8099

Level of significance: $\alpha = 0.05$

Figure 1 reveals that 118 respondents' families (28.10%) out of the total respondents (N=421), have a business, while 303 respondents' families (71.90%) do not. According to the study's results, the majority of prospective farmers who took part come from families without businesses.

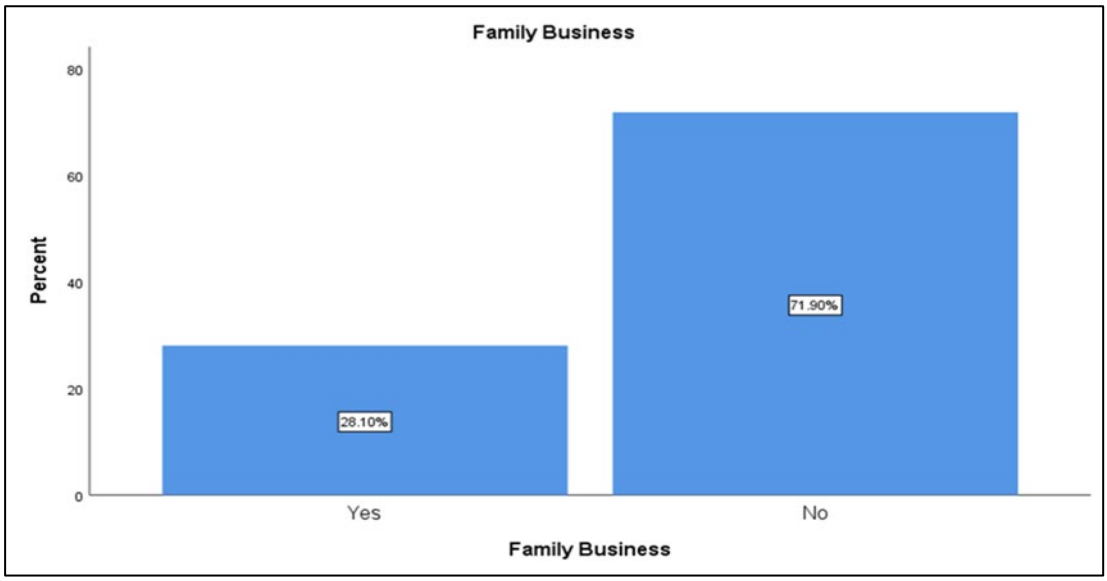

Figure 1. Students' family business

H_2: It was predicted that there should be business ownership status influence on the relationship between gender and the personal attitude of agricultural students to start a business. This hypothesis is rejected (as per Tables 2 and 3) because there was no significant relationship found between gender and personal attitude of agricultural students, b= 0.565, 95% CI [0.111; 2.111], p =0.078.

H_3: It was predicted that there should be an area-raised influence on the relationship between gender and the personal attitude of agricultural students to start a business. This hypothesis is rejected (as per Tables 2 and 3) because there was no significant main positive relationship found between gender and personal attitude of agricultural students, b= 0.565, 95% CI [0.111; 2.111], p =0.078.

Figure 2 shows the gender of respondents in percentages. Of the total respondents (N=421), 223 (52.98%) were female and 198 (47.02%) were male. The results show that slightly more females (53%) than males (47%) took part in this study. Gender is an essential characteristic of every person. The role of gender is defined as social and cultural traits assigned to males and females in different societies (Golmakani et al., 2015). The gender order of most cultures is structured to the disadvantage of women (Bandama, 2016).

Table 3. Factors affecting personal attitude to start the farming business

Personal Attitude	Coefficient	Std. err.	t	P>|t|	[95% conf]	Interval
2. Sex	2	1.30414	1.53	0.126	0.5636160	4.563616
Area raised rural	1	0.9944819	1.01	0.315	0.9549054	2.954905
Area raised semi-rural	0	1.069418	0.00	1.000	2.102211	2.102211
Area raised sex rural #2	-2	1.366748	-1.46	0.144	4.686689	0.6866888
Area raised sex semi-rural #2	-1	1.491491	-0.67	0.503	3.931902	1.931902
Family business No	0	0.8053718	0.00	1.000	1.583162	1.583162
Sex #family business 2 no	-1	1.105303	-0.90	0.366	-3.172753	1.172753
Cons	31	0. .9579515	32.36	0.000	29.1169	32.8831

Level of significance; α = 0.05

In South Africa, gender differences are especially evident in entrepreneurship and farming in particular. Bandama (2016) argues that it is important to reduce gender differences in the agricultural sector to allow women to contribute more efficiently to farming. Gender is used to determine the gap between male and female agricultural students' intention to start a farming business.

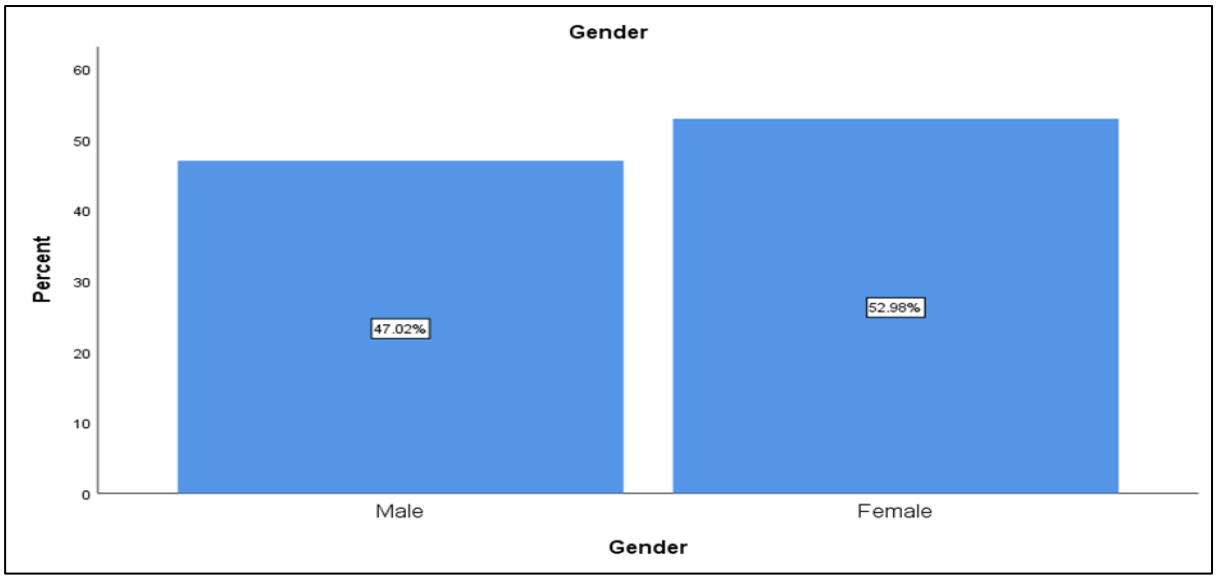

Figure 2. Gender of respondents

5. Managerial Implications

The personal attitudes of agriculture students towards starting a farming business were shown to be unaffected by gender. As a starting point, this paper's primary objective was to determine the relationship between gender and agricultural students' personal attitudes toward starting a farming business. The findings of this study have significant implications for policymakers, both conceptually and practically. Although interventions are made by the government to address gender-based issues in the agricultural sector, there is a need of much progress in the area. As a result, policymakers should actively promote equality in entrepreneurship and equal chances for both males and females. This may be achieved through identification of an instrument to encourage shift of power relationship and cut the deep roots of gender inequality. Institutions of higher learning should be equipped with sophisticated analysis to address the intricacies of gender inequalities and bring the entire university community of all genders to identify gender bias issues and devise solutions. To promote gender equality in entrepreneurship, policymakers must continue to work to eliminate gender-based barriers that both males and females face when pursuing entrepreneurship activities and many other career opportunities in any sector of the economy (Vracheva & Stoyneva, 2020). However, they must also acknowledge that giving men and women equal opportunities is important but unsatisfactory precondition. To assist entrepreneurs in starting new businesses that would undoubtedly stimulate the economy, governments should also consider providing financial assistance to potential individuals' irrespective of gender in the form of subsidies and grants. To make this process easier, policymakers should offer a wide range of alternatives (Terjesen & Amoros, 2010).

6. Conclusions, Limitations and Future Research

Improved comprehension of gender and its implications on agricultural students' individual attitudes towards starting a farming business in South Africa is achieved by this article, which was informed by the literature. This study sought to determine the relationship between gender and students' personal attitude to start a farming business. Contrary to some literature findings, which have shown gender differences in entrepreneurial intentions for different countries and continents, this study presents non-significant differences in the relationship. Studies have shown that EI in Botswana and Lesotho University Agriculture graduates' attitudes established that there is a gender difference in students' attitudes towards entrepreneurship (Biyan et al., 2020). Accordingly, this paper has some limitations that serve as the basis for recommendations in relation to the foundation for future research initiatives. As a result, they failed to consider how gender may affect various demographic parameters and the entrepreneurial aspirations of agricultural students. Future researchers could examine how gender and demographic characteristics (such as area raised and family business status) affect agricultural students' personal attitudes to establishing a business in a South African context.

The research study was based on a convenient sample of students from only 6 of 27 institutions of higher learning in South Africa. To strengthen the generalizability of the conclusions, more institutions of higher learning should be included in future research studies. The study only focused on third-year students

studying agricultural programmes at selected universities and colleges. Therefore, the findings of the study cannot be considered representative of all third-year students in different programmes in South Africa. Furthermore, the perspectives of students enrolled in other fields of study were not considered. Therefore, the study may be expanded to other fields of study, e.g. Economics, Humanities, Engineering or Commerce and Business faculty for further research to determine the influence of gender on the personal attitude of students to start a business in these fields.

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