# Assessing Rural Entrepreneurial Intentions of Adults in Mabaalstad in the North West Province

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#### Abstract

Rural areas are characterised by poverty and unemployment. Many people who live in rural areas are ensnared in a cycle of poverty. The unemployment rate in Mabaalstad village, which is part of Ward 25 of the Moses Kotane Local Municipality in the North West province, is very high. The Integrated Development Plan (IDP) 2017/2022 of the municipality reveals an unemployment rate of 51%. The high unemployment rate and great poverty are compounded by the low education levels, which implies that skills development is necessary, and that job creation needs urgent attention. Among the interventions that can help are training and skills development for small-medium enterprises and fostering of a culture of entrepreneurship. Entrepreneurship capacity can be built in Mabaalstad through a skills development programme. An entrepreneurship-intentions assessment can help the municipality to identify the skills that already exist compared to what is required in terms of the opportunities that have been identified by the IDP. Thus, the main objective of this study was to assess the entrepreneurial intentions of the adults in Mabaalstad in the North West province of South Africa. The study uses the theory of planned behaviour (TPB) and Shapero and Sokol's model of entrepreneurial event (SEE) to explore the relationships of the challenging circumstances in Mabaalstad, do have an intention to start their business ventures.

Keywords: Rural areas, unemployment, poverty, entrepreneurial intention, TPB Model and SEE Model.

## Introduction

Unemployment is a serious problem in South Africa; in the first quarter of 2022 the rate was 34.5% with the expanded unemployment rate being 45.5% (Statistics South Africa [StatsSA], 2022a). Various reasons have been provided as to why this is the case. In 2013, the International Monetary Fund (IMF) (International Monetary Fund [IMF], 2018) identified the lack of skills as a factor contributing to unemployment in SA. Trying to enter the job market without the requisite skills is bound to fail. The IMF (2018) further stated that where jobs are created, employers are not able to find people with the right skills to fill the vacancies. In 2022, the IMF stated that the poor quality of the South African education system has accelerated the economic impact of skills deficiencies and mismatches which contributes to the high unemployment rate (IMF, 2022). Phiri and Chasaya (2023) and Ikebuaka and Dinbabo (2018) reported that in the past few decades, high unemployment has led to growth in entrepreneurship in most countries such as South Africa.

In 2018, StatsSA reported that poverty had decreased from 66% in 2005 to 55.5% in 2015. Even though progress had been made, the problem persists as more than half of South Africans are still living in poverty (Maduku, Gudo and Mlambo, 2022; Adanlawo, 2017). Rural households experience extremely high levels of poverty when compared to urban households, with levels of poverty in rural areas being higher than the national average (StatsSA, 2019). The limited access to resources like land and funding is the catalyst to rural poverty and there is a lack of integration of rural areas into regional economic activities (IDP, 2021).

The small and medium enterprise (SME) sector has great potential to create employment opportunities and improve the prospects of wealth creation (Herrington and Kew, 2015; Egnaifoghe and Ramsuraj, 2023). Zulu, Ngwenya and Zondi,2023) state that South Africa has a low rate of entrepreneurial intention (EI), although the government has been driving support for SMEs since 1995. Successful SME development requires identification of those entrepreneurs with realistic medium-high growth aspirations and developing

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policies aimed at supporting them to optimise their impact on economic growth and job creation (Herrington and Kew, 2015; Sanchez et al., 2021).

Entrepreneurship capacity can be built in Mabaalstad through a skills development programme, but for this to be effective an EI assessment should be conducted to help the local government to identify the skills that are already existing in the communities and compare that with what is required to see what skills are lacking to take advantage of the opportunities that have been identified by the IDP (IDP, 2017: 239). The assessment of EI through regression models such as the theory of planned behaviour (TPB) and Shapero and Sokol's model of entrepreneurial event (SEE) can assist policymakers to determine which factors influence EI. This exercise can assist in minimising the high failure rate of SMEs (Ferreira, Strydom and Nieuwenhuizen, 2010). Entrepreneurial support goes far beyond access to finance, requiring development of managerial skills of small business owners as well (Maloka and Dlamini, 2016, Owolabi et al., 2024).

Although South African government is designed to promote SME growth, the performance of SMEs has been poor with ill-designed programmes and support that does not match the needs of SMEs (NISED, 2022). This has led to increased emphasis on regulatory support and education and training (Rungani, 2022).

# Literature Review

#### **Rural Environment**

## **Rural Poverty**

Rural areas are those areas outside of cities and towns with economic activity closely linked to the use of natural resources and industries such as mining, fishing, agriculture, forestry, nature conservation and eco-tourism (Department of Rural Development and Land Reform [RDLR], 2019). One third of South Africans live in rural areas or the so-called "former homelands" which are characterised by unemployment and poverty. Consequences of living in these areas include higher living costs due to high demand and low supply of products, lack of storage facilities, high transport costs, and limited competition, all of which further worsens their plight (National Planning Commission, 2013).

Rural poverty is considered to be caused by economic growth deficit and a disconnect between rural and urban areas among other things (Nkomo and Adanlawo, 2024; du Toit, 2017: 1). Suttie (2019: 2) identifies three drivers of rural poverty: (1) Economic – rural economies have low levels of productivity, they lack product diversification and access to productive markets; (2) Social – rural communities are excluded from economic participation; Environmental – rural people rely heavily on agriculture which can be affected severely by climate change.

High transport costs result from the low densities of the population of rural areas (Sloman and Hendy, 2008). Although a good transport infrastructure is not enough to solve the poverty problems of rural areas, it is essential for economic growth (Starkey and Hine, 2014: 13). The lack of adequate storage facilities affects food security as losses can be expected if there are no good storage facilities to protect products from spoilage (Selepe, Sabela and Masuku, 2014: 3).

#### Rural Unemployment

In second quarter of 2023, the official unemployment rate of North West province was 36.8% and the expanded unemployment rate was 53.5% which was the highest of any province in South Africa. The unemployment rate in Mabaalstad village, which is part of Ward 25 of the Moses Kotane Local Municipality (MKLM) in the North West province, is also very high. The MKLM Integrated Development Plan (IDP) 2017/2022 (Moses Kotane Local Municipality [MKLM], 2017) reveals an unemployment rate of 51%. According to the 2011 census (StatsSA, 2011), the unemployment rate for the youth in MKLM was 47.4%. The IDP 2017/22 states that the high unemployment is compounded by the low education level, which implies that skills development is necessary, and that job creation needs urgent attention (IDP, 2017: 90).

There are various costs to high unemployment. Those who are unemployed represent what could be earned if their labour was put into use. The unemployed are incapable of being productive for their futures which means less future growth for the country. This accelerates social ills and makes the affected people feel hopeless (Mzungulu and Ndzendze, 2021: 19).

The most vulnerable group is the youth who have a higher unemployment rate than adults (StatsSA, 2019: vii). The youth unemployment rate is 56.9% for those aged 15-24 followed by 35.45% for those aged 25-34 (Maskaeva and Msafiri, 2021: 4).

Proposed solutions to unemployment include structural reforms and targeted interventions leading to sustainable long-term growth (Department of Planning, Monitoring and Evaluation [DPME], 2019: 45). These reforms seek to address the weak job-creating capacity of the economy (South African Government, 2020: 4). The COVID-19 relief fund set aside R100 billion for job retention and job creation through public employment programmes aimed at creating a large number of jobs (South African Government, 2020: 21). One of the specific initiatives of the government was to support 5 000 young entrepreneurs and micro-enterprises (South African Government, 2020: 22), although the announcement was not clear on how this was going to be achieved. The National Development Plan (NDP) anticipates a large percentage of jobs to be created in the services sector, with 90% of those jobs being in the small and growing firms (National Planning Commission, 2011: 123). These initiatives all focus on entrepreneurship as the creator of jobs.

## **Rural Barriers**

The NDP has a spatial vision for rural areas which is to develop lively, dynamic rural communities that will pursue wealth creation for their benefit and the nation's (National Planning Commission, 2013: 283). The needs of rural areas are different from those of urban areas due to the locality of such areas (Pato, 2015: 3-4; Xaba and Adanlawo 2024). Rural areas are known for their developmental challenges which come from their remoteness and their low population densities. They do not enjoy the same economic base as urban areas which means that the servicing and capital investment costs are high (National Planning Commission, 2013).

Migration of skills to city centres leaves rural areas with a declining population, low levels of skilled labour, lack of access to finance, lack of competition, lack of infrastructure and transportation, and small size of local markets (Imedshvili, Ivchenko and Kekua, 2013: 19-22). The most common obstacles to rural entrepreneurship can be grouped into three main categories: the nature of internal and external linkages, the economic and social composition of rural communities and, the low population densities and the remoteness of rural areas (Strano, *et al.* 2012: 21). Motswiane (2009: 17) also mentions challenges such as poor infrastructure, severe shortage of skills and high levels of illiteracy. The government recognises that emerging entrepreneurs experience skills constraints when they enter new markets. Furthermore, the stagnant economy is a stumbling block for smaller companies as they struggle to find new demand in a saturated market and are up against incumbents in those markets who impose barriers (DPME, 2019: 49).

## **Rural Opportunities**

Successful rural entrepreneurs need to be aware of the opportunities available in rural areas and commit to maximising those opportunities (Strano, *et al.* 2012: 32; Chaka and Adanlawo, 2024). The NDP identified opportunities in the rural areas and states that it plans to activate rural economies through stimulating small-scale agriculture, mining investments, tourism, creative industry and other related spin-offs (National Planning Commission, 2013: 124). Rural areas are dominated by agriculture, forestry and the use of land which engenders a way of life surrounded by extensive landscapes and a people who respect the environment (Shahraki and Heydari, 2019: 4). The NDP predicts that reformed land tenure, agricultural output and support to farmers will increase the participation of the rural areas in the economy from 29% to 40% (National Planning Commission, 2013: 123).

According to the NDP, South Africa contributes only 0.60% to the global market share when it comes to food sales. The NDP sees agriculture as one of the opportunities that can be used for employment of the rural poor due to agriculture being the most labour-intensive of the production sectors. Thus, the neglect of agriculture amounts to the neglect of rural communities. When the NDP compares South Africa with other regions, the rural population has a small share in agriculture, and they see the potential for job creation in the green economy and conservation (National Planning Commission, 2013: 148-149). The Medium-Term Strategic Framework (MTSF) 2019-2024 also identifies the agro-industrial cluster as a key sector with many job creation opportunities in rural economies which can drive growth (DPME, 2019: 47).

#### **Rural Entrepreneurship**

The South African government's economic policies are geared towards adopting and implementing strategies that support job creation and poverty alleviation (Elephant and Maphela, 2018: 1). Entrepreneurship enables economies to grow and thrive (Nieuwenhuizen, *et al.* 2016: 528). Entrepreneurship is a function that identifies opportunities and uses various means to take advantage of those opportunities and create value which produces a wide range of outcomes (Timmons, 1999: 14; Venter, Urban and Rwigema, 2008: 6; Nieuwenhuizen, 2019: 82). Entrepreneurship can leverage the strengths of a community and diversify local economies. Rural entrepreneurs contribute to the social and economic development of rural places (Pato, 2015: 3-4), when applied in rural areas (Paul and Sharma, 2013: 319-320).

#### **Entrepreneurship Intention**

Entrepreneurial intention (EI) refers to the intention to start a business in the future, usually within three years (Herrington and Kew, 2013: 9; Herrington, Kew and Mwanga, 2017: 18; Niewenhuizen, 2016: 314; Malebana, 2012: 6; Thompson, 2009: 670). Some studies define EI as the intention to be self-employed (Iakovleva and Kolvereid, 2009: 69; Mcwango et al., 2024). Intentions can be conditional or unconditional; conditional refers to a condition under which a person would consider starting a business (Obschonka, Silbereisen and Schmitt-Rodermund, 2010: 64).

Entrepreneurial intention is important because of the understanding that it gives researchers about entrepreneurship; it helps them to be aware of the factors that determine entrepreneurial activity (Nieuwenhuizen 2016: 314).

## **Entrepreneurial Intention Models**

#### a) TPB Model

The theory of planned behaviour (TPB) is the modified version of the theory of reasoned action (TRA), which links attitudes and intentions to actual behaviour. The central focus in both the TRA and TPB model is the person's intention to perform a given behaviour but the TRA was limited in that it was not able to explain behaviour of people who have some control over their behaviour (Ajzen, 1991). The TPB differs from TRA because it adds perceived behavioural control asserting that the behaviour of people is in line with their intentions and the perception of how they can control their behaviour (Ajzen, 1985; Ajzen, 1991; Anal and Singh, 2023).

Many studies have used the TPB to model entrepreneurial intention (Urban and Chanston, 2018: 115). The TPB has found support even beyond entrepreneurship studies and is considered to be the supreme way of modelling entrepreneurship intention because of detailed specifications and consistency (Urban and Chanston, 2018: 115).

The TPB states that entrepreneurial intentions can be predicted through three factors: personal attitudes (or attitude toward the behaviour), subjective norms, and perceived behavioural control (Azjen, 1991; Obschonka, Silbereisen and Schmitt-Rodermund, 2010: 64).

# i. Personal Attitude (PA)

Ajzen (1991: 188) and Adanlawo and Chaka (2023) defined personal attitude (PA) as the "degree to which a person has favourable or unfavourable evaluation or appraisal of the behaviour in question". In relation to entrepreneurship, PA has to do with how a person positively or negatively values being an entrepreneur (Nieuwenhuizen, 2016:317). It is about being attracted to starting a business because of the benefits that come with owning a business (Malebana, 2021: 2).

People with positive and strong beliefs about the probability of the results of the desired behaviour generally would have favourable PAs (Malebana, 2021: 4). Personal attitudes are triggered by behavioural beliefs (Ajzen, 1985: 14).

# ii. Subjective Norms

Azjen (1991: 189) defined subjective norm (SN) as the "perceived social pressure to perform or not to perform the behavior". Subjective norms in entrepreneurship are about whether people that have close relationships (e.g., family and friends) with the potential entrepreneur and agree with the idea of them starting a new business (Nieuwenhuizen, 2016: 317). It is about the perceptions of the individual of the social pressures that exist to behave in a certain way or not (Aprilia and Ardana, 2021: 169).

The underlying beliefs that affect SNs are normative (Ajzen, 1985: 14).

# iii. Perceived Behavioural Control

Ajzen (1991: 188) defined perceived behavioural control (PBC) as "the perceived ease or difficulty of performing the behavior and it is assumed to reflect past experience as well as anticipated impediments and obstacles". In regard to entrepreneurship, PBC has to do with the perception of how easy or difficult it is to become an entrepreneur (Nieuwenhuizen, 2016: 317). This is the individual assessing their ability to perform a given behaviour, based on whether certain factors are available or not to the individual in the performance of that given behaviour (Malebana, 2021: 2).

## Figure 1: Theory of Planned Behaviour



Figure 1 depicts that Ajzen's model is a suitable theoretical framework for understanding how factors like personality traits impact entrepreneurial intentions (Obschonka, Silbereisen and Schmitt-Rodermund, 2010: 64). Mothibi and Malebana (2019) reviewed the relevant literature and found that most of the studies tend to support the TPB as a model that predicts entrepreneurial intention with differing effects of PA, SN and PBC. According to Mvula (2018: 63), the TPB model is widely accepted as the authoritative model of behaviour and measuring intentions. Iakovleva and Kolvereid (2009: 69) state that the model assumes that personality traits and broad attitudes have a secondary impact on some behaviours by influencing factors that are closer to the action of starting a business.

# b) SEE Model

The SEE model is based on TPB and is specifically focused on behavioural intention in the area of entrepreneurship. Shapero and Sokol (1982) looked at a career in entrepreneurship as an event or a phenomenon which includes consolidation of resources, initiative taking, management, risk taking, and relative autonomy. The model proposes that people experience a displacement event that leads to a change in their behaviour. The displacement event could positive like provision of capital, or negative like losing a job (Krueger, Reilly and Carsud, 2000). The SEE looks at propensity to act, perceived desirability, and feasibility, as the variables determining entrepreneurial events, with intention being based on the interaction between personality traits, values, perceptions, beliefs, background and environment (Mvula, 2018: 61).

# i. Propensity to Act

The propensity to act (PTA) is the individual's frame of mind to act on their decisions (Shapero and Sokol, 1982; Iakovleva and Kolvereid, 2009: 67). It is about how willing the individual is to act on their decisions (Nguyen, 2019: 42).

## ii. Perceived Desirability

Perceived desirability (PD) is the attraction the individual feels towards becoming an entrepreneur (Shapero and Sokol, 1982; Mvula, 2018: 62). It is a question of how attractive it is to start a business (Iakovleva and Kolvereid, 2009: 67).

## iii. Perceived Feasibility

Perceived feasibility (PF) is about the degree of the individual's feelings concerning their capabilities to start a business (Shapero and Sokol, 1982; Iakovleva and Kolvereid, 2009: 67).

## Figure 2: Shapero's Model of Entrepreneurial Intentions



Figure 2 depicts according to Mvula (2018: 62), the SEE model emphasises the prior involvement of an individual in entrepreneurship and their personality traits as important variables in determining the behaviour of future entrepreneurs. The SEE model assumes that individuals will not consider entrepreneurial activity until a displacement event occurs in their lives which can be something negative like losing a job or something positive like receiving money (Mvula, 2018: 63).

# Methodology

## Study Area

The study area is Mabaalstad, one of the villages in the vicinity of Rustenburg in the North West province. Mabaalstad village is part of Ward 25 of the MKLM. In 2011, the population of MKLM was estimated to be 242 553 (StatsSA, 2011) and the population of Mabaalstad was 3 540 (IDP, 2017).

A quantitative research study was conducted using a self-administered questionnaire that was distributed by hand to 131 adults in Mabaalstad village. The number of adults who voluntarily completed the questionnaire satisfactorily was 108 which is an 82% response rate. The questionnaire was used to capture the respondents' biographical details and information from their perspective about entrepreneurial intentions. Ethical clearance to conduct the study was received from the University of Johannesburg, School of Economics REC (21SECO042).

# **Data Preparation**

The target population were those who were present at the three voting stations in Mabaalstad for the local elections on 1 November 2021.

A 7-point Likert scale was used to record respondents' answers about entrepreneurial intentions. The scale used ranges from "Strongly disagree" to "Strongly agree" to show their level of agreement or disagreement with a statement. The scale was converted to numbers 1 to 7 for ease of analysis. This questionnaire used a combination of scales from other studies that were extensively tested by various researchers (Malebana, 2014; Malebana and Swanepoel, 2015; Mbuya and Schachtebeck, 2016; van Tonder, 2017; Mvula, 2018; Esfandiar *et al.*, 2019; Pheaha, 2020; Hadebe and Adanlawo, 2024). Statements testing various aspects of entrepreneurial intentions were used and grouped into different scales such as entrepreneurial intention (EI), personal attitude (PA), subjective norms (SA), perceived behavioural control (PCA), the propensity to act (PTA), perceived desirability (PD), and perceived feasibility (PF).

## Data Analysis

The study was cross-sectional and quantitative in nature. One of the researchers was familiar with Mabaalastad, hence convenience sampling method was used. Its allowed the researcher to select the most relevant and convenient participants, and is inexpensive (Wagner, Kawulich and Garner, 2012: 92). Descriptive statistics were used to understand the data (Vinindwa, 2019: 45). Descriptive statistics provide the summary of the data by looking at measurements such as frequency tables, means, modes, medians, standard deviations, skewness and kurtosis (Meyer, 2018: 186).

The study used the Pearson correlation for correlation analysis; the Pearson correlation is a measure of linear association between the independent variable and the dependent variable (Kloke and McKean, 2015; Fatokun et al., 2022). The range of values this measure can take is between -1 and 1, with negative values meaning that there is a negative association and positive values a positive association. This correlation explores the strength or weakness of the relationship between two continuous variables (Pallant, 2016). The purpose of conducting correlation analysis was to determine how the changes in the independent variables could be related to the changes in the dependent variable, to see the strength of the relationships and the direction of the correlation. The existence of the relationship between the dependent variable (EI) and the

independent variables (PA, SN, PBC, PTA, PD, PF) were tested through the null hypothesis ( $H_0$ ) and the alternative hypothesis ( $H_1$ ). The two opposing hypotheses were:

- Null hypothesis (H<sub>0</sub>): There is no relationship between the dependent variable and the independent variable.
- Alternative hypothesis (H<sub>1</sub>): There is a relationship between the dependent variable and the independent variable.

To accept or reject the null hypothesis, statistical tests were conducted using a significance level (p-value) of 5%. If the p-value is less than 0.05 the null hypothesis is rejected and the alternative hypothesis is accepted.

The study also used regression analysis as used by other studies to assess or examine entrepreneurial intentions (Sixholo, 2011; Ni, *et al*, 2012; Debarliev, *et al*, 2015; Nieuwenhuizen, 2016; Lee-Ross, 2017; Davids, 2017; Fatoki, 2018; Mvula, 2018; Hamiruzzaman, Ahmad and Ayob, 2020; Pheaha, 2020).

# Findings and Discussion

## The Characteristics of the Sample

A total of 131 paper-based questionnaires were distributed with 108 being completed correctly, which is a response rate of 82.4%. The sample of 108 consisted of 48% (52) males and 47% (51) females, while 5% (5) did not indicate their gender. The 2011 census found that in Mabaalstad females were 51.7% of the population and males were 48.3% (StatsSA, 2011). The 2019 GEM reports state that half of the South African population is made up of women (Bowmaker-Falconer and Herrington, 2020: viii), which is largely consistent with the research findings.

Of the 108 respondents, 75 of them were unemployed which is equal to a 69% unemployment rate, while 19% of the respondents were self-employed, 9% were employed by others and 3% were not looking for employment. The national unemployment rate in Quarter 1 of 2022 was 34.5% and the expanded unemployment rate was 46.2%. For the North West province, the official unemployment rate for the same quarter was 30.1% and the expansion was 49.2% (StatsSA, 2022a). The MKLM unemployment rate is 51% (IDP, 2021:122). Thus, the the unemployment rate (69%) in Mabaalstad is higher than the municipality at large.

## **Descriptive Statistics**

Table 1 provides the mean, standard deviation and average mean of the entrepreneurial intention and its determinants.

Determinants	Ν	Mean	Standard Deviation
Entrepreneurial Intention	108	6.07	1.42
Personal Attitude	108	6.13	1.37
Subjective Norms	108	5.88	1.64
Perceived Behavioural Control	108	5.88	1.51
Propensity to Act	108	6.44	0.99
Perceived Desirability	108	6.09	1.40
Perceived Feasibility	108	5.73	1.61

Table	1. Deceni	atima Ct.	tistics
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In Tabel 1, it is found that the average mean for entrepreneurial intention is 6.07 which suggesting that respondents "agree" with all the statements, indicating that they had the intention to become entrepreneurs.

## **Reliability Analysis**

Cronbach's alpha measures the internal consistency and whether the Likert items measure a particular concept they are meant to measure, and is used to determine whether the questionnaire is reliable or not (Tavakol and Dennick, 2011; Chaka and Adanlawo, 2023).

		Cronbach	Internal
Variables	Items	alpha	Consistency
Entrepreneurial Intention	4	0.83780434	Good
Personal Attitude	5	0.72183138	Acceptable
Subjective Norms	4	0.63732523	Minimum
Perceived Behavioural Control	4	0.76896872	Acceptable
Propensity to Act	2	0.73804781	Acceptable
Perceived Desirability	2	0.61593858	Minimum
Perceived Feasibility	4	0.64975469	Minimum

#### Table 2: Cronbach's Alpha Values

A Cronbach's alpha value greater than 0.6 is generally regarded as reliable (Davids, 2017; Mvula, 2018; Nurjaya *et al.*, 2021; Dilcen, Dolu and Turhan, 2022; Nugroho *et al.*, 2022). Table 2 shows that all the scales have a reliability score greater than 0.60.

Table 5: Fearson's Correlation analysis results				
Relationship	Correlation	<b>P-value</b>	Interpretation	Significance
PA and EI	0.5442	0.00000	Moderate Relationship	Statistically significant
SN and EI	0.4079	0.00001	Moderate Relationship	Statistically significant
PBC and EI	0.5646	0.00000	Moderate Relationship	Statistically significant
PTA and EI	0.6100	0.00000	Strong Relationship	Statistically significant
PD and EI	0.3291	0.00050	Weak Relationship	Statistically significant
PF and EI	0.3958	0.00002	Weak Relationship	Statistically significant

#### **Correlation Analysis**

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The interpretation is based on the table by Wagner, Kawulich and Garner (2012). When the significance test was conducted using the Pearson correlation for the TPB model independent variables, PA (r = 0.544, p < 0.000), SN (r = 0.408, p < 0.000) and PBC (r = 0.565, p < 0.000) were found to be statistically significantly related and positively correlated to the entrepreneurial intentions of the respondents, meaning an increase in the independent variables is likely to lead to an increase in the dependent variable. All the independent variables are statistically significant, which means there is a significant linear relationship between the variables and the entrepreneurial intention. A regression line can also be used to model the relationship between the independent and dependent variables. The strength of the relationship was moderate for personal attitude and perceived behavioural control but weak for subjective norms.

When the significance test was conducted using the Pearson correlation for the SEE model independent variables, the PTA (r = 0.610, p < 0.000), PD (r = 0.329, p < 0.000) and PF (r = 0.396, p < 0.000) were found to be statistically significantly related and positively correlated to the entrepreneurial intentions of the respondents, meaning an increase in the independent variables is likely to lead to an increase in the dependent variables. All the independent variables are statistically significant, which means there is a significant linear relationship between the variables and the entrepreneurial intention. A regression line can also be used to model the relationship between the independent and dependent variables. The strength of

the relationship was strong for the propensity to act but weak for perceived desirability and perceived feasibility.

## **Regression Analysis**

## I. TPB Model

TBC OLS Regression Results					
Dependant Variable	EI_mean	R-squared	0.425		
Model	OLS	Adj. R-squared	0.408		
No. Observations	108	F-statistic	25.58		
Df Residuals	104	Prob (F-statistic)	0.00000		
Df Model	3	Durbin-Watson	2.006		
	Coef	std err	t	<b>P&gt;</b>  t	
Intercept	0.9303	0.615	1.512	0.134	
PA_mean	0.4165	0.107	3.902	0.000	
SN_mean	0.0666	0.090	0.739	0.462	
PBC mean	0 3733	0.090	4 16	0.000	

#### Table 4: TBC Model Output

According to Table 4 the TPB can be represented as follows:

## *EI\_mean* = 0.9303 + 0.4165 × *PA\_mean* + 0.0666 × *SN\_mean* + 0.3733 × *PBC\_mean* + ε

The constant term is the intercept of the regression line. The intercept is 0.9303 in our model. Table 4 indicates that the correlation coefficient for PA ( $\beta_1 = 0.4165$ ) is slightly stronger than for PBC ( $\beta_3 = 0.3733$ ). SN ( $\beta_2 = 0.0666$ ) did not have any significant influence on EI and it was not statistically significant. The Pearson correlation for SN was also the weakest according to Table 3 with  $\mathbf{r} = 0.408$  of the three variables contained in the TPB model. The findings on SN reveal that rural adults did not see the support of family, friends and role models as important to them starting a business. Davids (2017) suggested that it is possible for people to be highly individualistic in their endeavour for entrepreneurship because the influence of the opinions of their family and friends is minimal or non-existent. The correlation coefficients of PA and PBC is moderate and weak respectively, this means that any unit change in PA or PBC will lead to a change in EI of 0.4165 or 0.3733.

The higher the value of the R-square, the better the explainability of the model, with the highest value being 1 (Kumari and Yadav, 2018). In percentage terms, 0.425 in our summary would mean the model explains 42.5% of the change in the EI variable. The adjusted R-square which corrects the overestimation of the R-square (Pallant, 2016) in the TPB model was 0.408, which means that the model explains 40.8% of the change in the EI variable for the adults in Mabaalstad. Malebana (2014) found that the three independent variables of the TPB model accounted for the 49.2% of variance which is different from 42.5% in this research.

The F-statistic in Table 4 is 25.58 and the p-value is 0.000 which shows that the data provides enough evidence to conclude that the model fits the data. We can see that personal attitude (PA\_mean) and perceived behavioural control (PBC\_mean) are statistically significant, as their p-value is less than 0.05. The findings are in line with previous research conducted in a South African context that the independent variables of the TPB model can be used to predict EI (Gird and Bagraim, 2008; Malebana, 2014), even though this research did not find subjective norms to be statistically significant and previous research found the SN's impact was low on the model (Gird and Bagraim, 2008; Mueller, 2011; Malebana, 2014; Adanlawo et al., 2021. The results of the F-statistic suggest that TPB can be used for a better understanding of the factors that influence the entrepreneurial intentions of rural adults (Malebana, 2014).

## SEE Model

SEE OLS Regression Results					
Dependant Variable	EI_mean	R-squared	0.399		
Model	OLS	Adj. R-squared	0.382		
No. Observations	108	F-statistic	23.00		
Df Residuals	104	Prob (F-statistic)	0.00000		
Df Model	3	Durbin-Watson	2.162		
	coef	std err	t	<b>P&gt;</b>  t	
Intercept	0.6368	0.673	0.947	0.346	
PTA_mean	0.7415	0.115	6.465	0.000	
PD_mean	-0.1381	0.123	-1.122	0.265	
PF_mean	0.2612	0.127	2.062	0.042	

#### Table 5: SEE Model Output

According to Table 5, the SEE can be represented as follows:

## *EI\_mean* = 0.6368 + 0.7415 × *PTA\_mean* -0.1381 × *PD\_mean* + 0.2612 × *PF\_mean* + ε

The intercept is 0.6368 in our model. Table 5 indicates that the correlation coefficient for PTA ( $\beta_1 = 0.7415$ ) is stronger than for the PF ( $\beta_2 = 0.2612$ ) but both are statistically significant as their p-values are less than 0.05. PD ( $\beta_2 = -0.1381$ ) did not influence entrepreneurial intentions as it was found not to be statistical significant and with a negative correlation coefficient. The Pearson correlation for PD was also the weakest with  $\mathbf{r} = 0.329$  of the three variables. The correlation coefficients of PTA and PF are strong and weak respectively, this means that for any unit change in PTA or PF will lead to a change in the entrepreneurial intentions of 0.7415 or 0.2612. According to the correlation coefficients, the PTA contributes more to the EI of the respondents followed by PF and lastly PD which has a negative correlation coefficient and no statistical significance. The p-value of PD suggests that the PD does not have any effect on EI and the negative correlation coefficient means that the more the respondent is increasing the PD then the lower the EI would be.

R-squared is 0.399 in our summary which means the model explains 39.9% of the change in the EI variable. The adjusted R-square in the SEE model was 0.382, which means that the model only explains 38.2% of the change in the EI variable for the respondents. The findings are that the three independent variables of the SEE model accounted for the 39.9%.

The F-statistic in Table 5 is 23.61 and the p-value is 0.000 which shows that the data provides enough evidence to conclude that the model fits the data. The P>|t| column in Table 5 indicates that propensity to act (PTA\_mean) and perceived feasibility (PF\_mean) are statistically significant, as their p-value is less than 0.05. The perceived desirability, on the other hand, has a p-value of 0.265 which is greater than 0.05 meaning it does not have a unique contribution to the model.

## Conclusion

In assessing the rural entrepreneurial intentions of the adult respondents in Mabaalstad, the research found that the overall mean is 6.07 as reported in Table 1 which shows that they agree with the statements, and have intentions of starting a business. Furthermore, the research used descriptive statistics, correlation analysis and regression analysis based on the TPB and SEE models to assess the factors/independent

variables (PA, SN, PBC, PTA, PD, PF) that influence entrepreneurial intentions and to discover how these factors specifically impact on the rural entrepreneurial intentions of the respondents.

In the correlation analysis, the research found that all the independent variables were positively correlated with EI. Positive correlation means that an increase in the independent variable will likely lead to an increase in the dependent variable. The strength of the relationship was weak for the PD and PF, moderate for the PA, SN and PBC, and strong for the PTA. The significance test of the Pearson correlation also revealed that all the independent variables are statistically significant meaning that there is a relationship between the independent variables and the dependent variable. The implication from the findings of the correlation analysis for policy is that an increase in any one of the independent variables will likely lead to an increase in EI. PA and PD could be increased through highlighting the benefits of entrepreneurship like self-employment, independency, value-creation etc. SN could be increased by exposing aspiring entrepreneurs to successful entrepreneurs. PBC, PA and PF could be increased through entrepreneurial skills.

In the regression analysis, two models were used to assess how the independent variables affect the entrepreneurial intentions. The TPB model revealed that only two variables affected EI, namely PA (regression coefficient = 0.4165, p < 0.000) and PBC (regression coefficient = 0.3733, p < 0.000). The SN (regression coefficient = 0.0666, p < 0.462) did not influence EI. The statistic that was used to determine the goodness of the model was R-squared (0.425) which showed that the model explains 42.5% of the change in the entrepreneurial intention variable; since the sample was small, the adjusted-R squared was a better estimate and it yielded 40.8%. The F-statistic was also used to determine whether the linear regression provided a better fit to the data than a model that contains no independent variables. The F-statistic was 25.58 and the p-value was less than 0.05 which means that the regression model fits that data better than the model with no independent variables. The SEE model revealed that only two variables affected EI, namely, PA (regression coefficient = 0.7415, p < 0.000) and PF (regression coefficient = 0.2612, p < 0.042). The PD (regression coefficient = -0.1381, p < 0.265) did not influence EI. The statistic that was used to determine the goodness of the model was the R-squared (0.399) which showed that the model explains 39.9% of the change in the EI variable; the sample was small so the adjusted-R squared was a better estimate and it yielded 38.2%. The implication from the results of the models is that if these variables are given attention, rural adults' intentions to start a business venture could intensify. Even though subjective norms and perceived desirability did not have any effect on entrepreneurial intentions according to the models, they should still be considered when measuring EI.

The study has limitations which can be addressed in future studies. This was a cross-sectional study which means that entrepreneurial intentions over an extended time could not be measured and the realisation of these intentions by the rural people in Mabaalstad could not be measured. The entrepreneurial intentions of the respondents may change over time and a longitudinal study would be a more accurate assessment to track the changes of the respondents. The study also used convenience sampling which is a nonprobability sampling method meaning that the effectiveness of such studies is limited or only relevant to the study area i.e., Mabaalstad. Simple random sampling could be used, and the sample size could also be increased to improve the generalisability of the findings. The study did not use moderating or mediating variables, and this could also be explored in future studies.

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