Graduate entrepreneurial intentions in the rural provinces of South Africa

M.J. Malebana & E. Swanepoel

A B S T R A C T

This paper investigated the entrepreneurial intentions of 355 final-year commerce students from two universities in the predominantly rural provinces of South Africa, namely Limpopo and the Eastern Cape. The study was based on the theory of planned behaviour (TPB). The objectives of the study were to test whether the TPB can help explain the entrepreneurial intentions of rural university students in a South African context and to assess whether these students will have the intentions to start their own businesses in the future. The study was conducted by means of a survey using a structured questionnaire. Descriptive statistics and hierarchical multiple regression were used to analyse the data. The findings revealed that the TPB is a valuable tool in understanding entrepreneurial intentions, and that the majority of students intend to start a business in the future. The attitude towards becoming an entrepreneur explained the most variance in entrepreneurial intention of the respondents, followed by perceived behavioural control. Subjective norms did not have a significant effect on entrepreneurial intention. The results suggest that the TPB could be a valuable tool for measuring entrepreneurial intentions as part of a comprehensive entrepreneurship development programme in rural areas.

Key words: entrepreneurial intention, rural entrepreneurial activity, Limpopo province, Eastern Cape province, South Africa, theory of planned behaviour, youth entrepreneurship development

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Introduction

The importance of entrepreneurship in economic development and growth is widely acknowledged (Nabi & Liñán 2011; Sesen 2013). As a result, there has been a considerable increase in interest among entrepreneurship scholars regarding how new ventures emerge and what drives individuals to become entrepreneurs. More recently, researchers have adopted the view that new ventures emerge as a result of individuals' cognitive processes (Segal, Borgia & Schoenfeld 2005; Liñán & Chen 2009; Liñán, Nabi & Krueger 2013). This view is supported by the increasing popularity of process-oriented cognitive models such as Shapero and Sokol's model of the entrepreneurial event and the theory of planned behaviour (TPB) in entrepreneurship research (Segal et al. 2005; Miralles, Riverola & Giones 2012; Schlaegel & Koenig 2014). These models have proven to be compatible (Krueger, Reilly and Carsrud 2000; Miralles et al. 2012). These models are valuable in explaining individual entrepreneurs' inclination towards the entrepreneurial career option and how they ultimately engage in the entrepreneurial process (Wickham 2006).

Entrepreneurship is considered to be a process whereby entrepreneurs discover, evaluate and exploit opportunities to create future goods and services (Shane & Venkataraman 2000). Entrepreneurial activity follows the identification of opportunities by entrepreneurs (Krueger, Hansen, Michl & Welsh 2011), which Krueger et al. (2000) view as an intentional process. Entrepreneurs should have access to the necessary resources in order to exploit the identified opportunities and translate their intentions into the act of creating new ventures (Spinelli & Adams 2012). Souitaris, Zerbinati and Al-Laham (2007) postulate that specific behaviours such as entrepreneurship can be predicted with considerable accuracy from entrepreneurial intentions. Previous research reported the existence of a significant relationship between entrepreneurial intentions and behaviour (Wiklund 2002; Kolvereid & Isaksen 2006; Zhang & Yang 2006; Delanoë 2013). As a result, observing intentions towards the entrepreneurial behaviour can help in predicting this behaviour (Krueger et al. 2000). Entrepreneurial intention refers to self-acknowledged convictions by individuals that they intend to establish new business ventures in the future (Thompson 2009). Entrepreneurial intention is considered to be the key element in understanding the new venture creation process (Bird 1988; Liñán et al. 2013).

While globally there is tremendous growth in entrepreneurial intention studies (Liñán & Chen 2009; Iakovleva, Kolvereid & Stephan 2011, Krueger et al. 2011; Miralles et al. 2012; Schlaegel & Koenig 2014), these types of studies are scarce in South Africa and developing countries (Nabi & Liñán 2011; Malebana 2014). The

2013 Global Entrepreneurship Monitor report indicates that only 15.4% of South Africans have entrepreneurial intentions, and men are more likely to have higher entrepreneurial intentions and engage in early-stage entrepreneurial activity than women (Herrington & Kew 2014). The findings with regard to entrepreneurial intentions of women in South Africa support previous research that has been conducted in other countries (for example, Driga, Lafuente & Vaillant 2005; Wilson, Kickul & Marlino 2007; Laviolette & Radu 2008; Dawson & Henley 2013; Zhang, Duysters & Cloodt 2013). Low levels of entrepreneurial intention among women are attributed to a lack of entrepreneurial knowledge (Wang & Wong 2004).

Apart from having a low percentage of people with entrepreneurial intentions, South Africa's total entrepreneurial activity rates from 2002 to 2012 had been very low compared to other countries (Turton & Herrington 2013). However, this situation has improved slightly, as South Africa ranked one position (35th) above the median of 68 countries that participated in the 2013 Global Entrepreneurship Monitor (GEM) study (Herrington & Kew 2014). The rate of unemployment among young people aged between 15 and 34 years (based on the expanded definition of unemployment) is also very high, that is 63.6% for those aged 15 to 24 years and 39.4% for those aged 25 to 34 years (Statistics SA 2015). Previous research has found that in as much as individuals can be pulled into entrepreneurship, necessity and unemployment can make entrepreneurship an attractive career option and stimulate the intention to start a business (Lucas, Cooper & MacFarlane 2008; Krishna 2013). Given this situation, South Africa needs more entrepreneurial intention studies to guide the development of interventions that could stimulate entrepreneurial activity in order to reduce unemployment.

Of the two popular entrepreneurial intention models mentioned earlier, only the TPB has been used to study entrepreneurial intentions of students in two of South Africa's highly urbanised provinces, namely Gauteng and the Western Cape (Muofhe & Du Toit 2011; Gird & Bagraim 2008). Neither TPB nor any other entrepreneurial intention model has been applied in a rural setting. The proponents of the entrepreneurial intent theory argue that entrepreneurial activity is an intentionally planned activity (Krueger et al. 2000; Souitaris et al. 2007; Liñán et al. 2013), but the extent to which this view holds in the rural areas in South Africa has not been established. Owing to the fact that entrepreneurial intentions are driven by the beliefs and attitudes of entrepreneurs, the TPB is relevant for studying entrepreneurial intentions in the rural areas of South Africa, as it has been validated in both developed and developing countries (Malebana 2014).

According to Statistics SA (2006), the Eastern Cape and Limpopo provinces are the least urbanised provinces in South Africa with 61% and 89% respectively

of their population living in non-urban areas. They are also considered to be the poorest provinces in South Africa (Bhorat, Poswell & Naidoo 2004). The majority of entrepreneurs in these provinces are found in rural areas (Turton & Herrington 2013). Orford, Herrington and Wood (2005) report that rural areas experience significantly lower entrepreneurial activity rates than urban areas and are dominated by necessity-based low income activity. Due to the legacy of underdevelopment, rural areas are characterised by poor infrastructure and fewer viable opportunities, smaller markets and low levels of skills, resulting in low entrepreneurial activity compared to urban areas (Orford et al. 2005; Herrington, Kew & Kew 2010). While awareness of and access to entrepreneurial support in rural areas has been reported to be very low (Orford et al. 2005), there are rural universities that can help the population to acquire the necessary entrepreneurial skills and develop positive entrepreneurial attitudes.

Since entrepreneurial intention is a precursor to entrepreneurial behaviour (Krueger et al. 2000; Kolvereid & Isaksen 2006; Douglas 2013), an understanding of the entrepreneurial intentions of rural people would shed light on the determinants of entrepreneurship in rural areas. Therefore, investigating the entrepreneurial intentions of students in rural provinces such as Limpopo and the Eastern Cape could assist in the efforts to promote entrepreneurship development in these provinces. Increasing the number of people who have the ability and motivation to start businesses in rural areas is vital to ensuring sustainable rural economies. This study examines, on the basis of the TPB, whether rural university students in Limpopo and the Eastern Cape have the intention to start their own businesses.

The purpose of this study was to test whether the TPB could help explain the entrepreneurial intention of university students in the rural provinces of South Africa and to assess whether these students will have the intention to start their own businesses in the future.

Literature review

Theory of planned behaviour

The theory of planned behaviour (TPB) originates from the theory of reasoned action developed by Ajzen and Fishbein in 1980 (Ajzen 2005, 2012). It is regarded as the most influential and popular framework for the prediction of human behaviour (Ajzen & Cote 2008). The TPB suggests that intentions are the most important immediate determinants of behaviour (Ajzen 2005, 2012). Since its introduction, the TPB has been empirically tested and validated in numerous studies, including

studies that focused on the intention to start a business, the decision to grow a venture, and evaluation of the impact of entrepreneurship education (for example, Krueger et al. 2000; Wiklund & Shepherd 2003; Gird & Bagraim 2008; Engle et al. 2010; Iakovleva et al. 2011; Muofhe & Du Toit 2011; Mueller 2011; Otuya, Kibas, Gichira & Martin 2013).

According to the TPB, entrepreneurial intentions are determined by the attitude towards the behaviour, subjective norms and perceived behavioural control (Ajzen 2005; Ajzen & Cote 2008). The intention to start a business derives from a favourable or unfavourable evaluation of doing so, perceived personal capability and perceived social pressure felt by an individual to perform or not to perform the behaviour. However, the relative importance of these antecedents of entrepreneurial intention can vary depending on the intention being investigated, or from one person to another and from population to population (Ajzen 2005). Previous studies that tested this theory (Liñán, Urbano & Guerrero 2011; Liñán & Chen 2009) found that subjective norms do not predict entrepreneurial intention but have an indirect influence by means of personal attraction and perceived behavioural control. These findings corroborate those in Krueger et al. (2000); Li (2006) and Nishimura and Tristán (2011). Conversely, other studies reported full support for the TPB with regard to the three antecedents of entrepreneurial intention (Gird & Bagraim 2008; Mueller 2011; Angriawan, Conners, Furdek & Ruth 2012; Otuya et al. 2013).

The determinants of intentions are influenced by behavioural beliefs, normative beliefs and control beliefs (Ajzen 2005, 2012; Ajzen & Cote 2008). The decision to act entrepreneurially derives from individuals' beliefs concerning the likely outcomes of the behaviour and how they evaluate these outcomes. It is driven by beliefs regarding the expectations of significant others and the motivation to comply with these expectations, and by the availability of factors that might facilitate or impede the performance of the behaviour. Ajzen and Cote (2008) suggest that the effect of intention on behaviour will be strong when actual control is high rather than low.

A discussion of the determinants of entrepreneurial intentions in the TPB follows.

Attitude towards the behaviour

Ajzen (2005) argues that people develop attitudes from the beliefs they hold about the consequences of performing a behaviour. The attitude people hold towards the behaviour is the result of their evaluations of the outcomes associated with the behaviour and the strength of the associations with these evaluations (Ajzen & Cote 2008). Recent studies indicate that salient beliefs with regard to autonomy, authority, economic opportunity and self-realisation (Kolvereid & Isaksen 2006),

independence, self-actualisation and financial success (Fretschner & Weber 2013) influence the attitude towards entrepreneurship. It is also reported that attitudes towards independence, income and ownership (Douglas & Fitzsimmons 2013) entrepreneurship, change and money, and perceptions regarding university support for entrepreneurship (Schwarz, Wdowiak, Almer-Jarz & Breitenecker 2009) are related to entrepreneurial intentions. Based on these findings, it is argued that individuals are more likely to view entrepreneurship as a viable career when they believe that it will result in achieving outcomes that they value. Furthermore, individuals tend to hold positive attitudes towards entrepreneurship when it is approved and positively valued by those close to them and when they strongly believe that they possess the necessary skills to carry out the behaviour (Liñán et al. 2013). Therefore, in the search for ways to create jobs in South Africa and encourage entrepreneurship in the form of new venture start-ups, it is vital to adopt positive values regarding entrepreneurial activity and show appreciation for entrepreneurs in society. Doing so would contribute towards the development of positive entrepreneurial attitudes. Therefore, it is hypothesised that:

H_{01}: No relationship exists between the attitude towards becoming an entrepreneur and the intention of starting a business.

H_{11}: A relationship exists between the attitude towards becoming an entrepreneur and the intention of starting a business.

Perceived behavioural control

Perceived behavioural control refers to individuals' assessments of the degree to which they are capable of performing a given behaviour (Ajzen 2005; Ajzen & Cote 2008). Perceived behavioural control owes its roots to the concept of self-efficacy (Ajzen 2012). Bandura (1986: 391) defines self-efficacy as "people's judgements of their capabilities to organize and execute courses of action required to attain designated types of performances". Perceived behavioural control is determined by control beliefs concerning the availability of factors that can enable or hinder the performance of the behaviour. These factors could be internal or external and include the availability of resources and opportunities, past experience with the behaviour, second-hand information about the behaviour, observing the experiences of acquaintances and friends, required skills and abilities, the availability of social support, emotions and compulsions (Ajzen 2005, 2012; Ajzen & Cote 2008). These factors may impact on perceived behavioural control by increasing or decreasing the perceived difficulty of performing the behaviour in question.

Individuals' perceptions that significant others would approve of them in performing the entrepreneurial behaviour and that entrepreneurial activity is positively valued in society increase perceptions of control over the behaviour (Liñán et al. 2013). It has been found that the experience that an individual has acquired in a particular sector (Uygun & Kasimoglu 2013) and having entrepreneurial role models (Uygun & Kasimoglu 2013; Dohse & Walter 2012) enhance entrepreneurial self-efficacy or perceived behavioural control (Sun & Lo 2012), which in turn positively influences entrepreneurial intentions. Similarly, Douglas and Fitzsimmons (2013) and Gird and Bagraim (2008) report a positive relationship between prior self-employment experience and entrepreneurial intentions. According to Ramos-Rodríguez, Medina-Garrido, Lorenzo-Gómez and Ruiz-Navarro (2010), being able to recognise good business opportunities is related to individuals' beliefs that they possess the necessary knowledge and skills to start their own businesses and knowing other people who are entrepreneurs. It is therefore required that institutions that provide entrepreneurial support (whether funding, information, training, mentoring or technical assistance) are accessible. Such institutions should also facilitate opportunities for networking with entrepreneurs, for example, for information sharing related to the existence of opportunities. These actions can contribute to perceived capability to start a business. The following hypotheses are thus proposed:

H_{02}: No relationship exists between perceived behavioural control and the intention of starting a business.

H_{12}: A relationship exists between perceived behavioural control and the intention of starting a business.

Subjective norms

Subjective norms refer to "perceived social pressure to perform or not perform the behaviour" (Ajzen & Cote 2008). Subjective norms derive from readily accessible normative beliefs regarding the expectations of significant others (Ajzen 2012). Individuals feel more pressured to perform a particular behaviour when they believe that important social referent individuals or groups approve or disapprove of performing a given behaviour and are motivated to comply with the expectations of such referents (Ajzen 2012). Important referents may include a person's parents, spouse, close friends, co-workers and even experts in the behaviour of interest. According to Ajzen (2005), whether social referents themselves engage or do not engage in a particular behaviour influences perceptions regarding whether that behaviour is approved or disapproved. Previous research indicates that individuals are more likely to intend to start a business when they have relationships with others

who are entrepreneurs themselves (Lapista, Breugst, Heblich & Patzelt 2012; Dohse & Walter 2012) or know other people who are entrepreneurs (Muofhe & Du Toit 2011; Uygun & Kasimoglu 2013). Sun and Lo (2012) reported a significant association between having entrepreneurial role models and higher levels of subjective norms. The influence of subjective norms on the intention to start a business is found in Souitaris et al. (2007); Gird and Bagraim (2008); Engle et al. (2010); Mueller (2011); Iakovleva et al. (2011); Angriawan et al. (2012); Fretschner & Weber (2013) and Otuya et al. (2013). Based on these findings it is hypothesised that:

H_{03}: No relationship exists between subjective norms and the intention of starting a business.

H_{13}: A relationship exists between subjective norms and the intention of starting a business.

Research methodology

Data collection and measures

The study followed a quantitative approach, allowing for the collection of primary data from large numbers of individuals so that the results can be generalised to a wider population (Tustin, Ligthelm, Martins & Van Wyk 2005). In comparison with qualitative approaches that use small samples, quantitative approaches have high reliability (Pellissier 2007), which is vital for replication studies in various contexts (Tustin et al. 2005). The quantitative approach was suitable for this study as it was undertaken to validate relationships among variables of the existing theory in a rural context in South Africa (Leedy & Ormrod 2010). This study was conducted by means of survey research using a structured and validated entrepreneurial intention questionnaire that was designed and tested by Liñán and Chen (2009). The entrepreneurial intention questionnaire was designed solely for studying the theory of planned behaviour as it is applied to entrepreneurship (Liñán & Chen 2009; Liñán et al. 2011). Although this questionnaire was initially tested on Spanish and Taiwanese samples, it has also been validated in both developed and developing countries (for example, Guerrero, Lavín & Álvarez 2009; Iakovleva et al. 2011; Gerba 2012; Angriawan et al. 2012; Otuya et al. 2013; Sesen 2013).

All the questions pertaining to entrepreneurial intention and its antecedents were adopted without alteration from Liñán and Chen (2009). In addition, the researcher included four questions that measured the extent to which the qualifications for which students were registered impacted on entrepreneurial intention, the attitude towards becoming an entrepreneur and perceived behavioural control. Questions

measuring entrepreneurial intention and its antecedents were based on a five-point Likert scale (1=Strongly disagree, 5=Strongly agree), as shown in Table 1. The use of five-point Likert scales is also found in previous entrepreneurial intent studies, such as Gird and Bagraim (2008); Schwarz et al. (2009); Engle et al. (2010) and Angriawan et al. (2012). The questionnaire also included demographic questions based on a nominal scale, namely, gender, age, name of institution and qualifications enrolled for, prior employment experience, and prior entrepreneurial exposure (whether the respondents currently own a business, or have tried to start a business before, or were from an entrepreneurial family background, or have friends who run a business, or know other people who are entrepreneurs, with 1=Yes and 2=No). These demographic questions were used as control variables.

The reliability of the measuring instrument was tested by means of Cronbach's alpha. Garson (2009) states that the cut-off criteria for internal consistency reliability is 0.60 for exploratory research and that an alpha value of at least 0.70 or higher is required to retain an item in an adequate scale. Cronbach's coefficient alpha was calculated for the questionnaire used in this study and for the different constructs. The alpha values ranged from 0.818 to 0.903. Therefore, given the high reliability scores of the constructs, the questionnaire was considered to be reliable.

Population and sampling method

The population comprised 814 third-year students registered for full-time studies in 2010 for the following three diplomas (or groups of diplomas): National Diploma: Entrepreneurship/Small Business Management (ND: E/SBM=120 students), National Diplomas: Internal Auditing, Cost and Management Accounting and Financial Information Systems (NDs: IAUD, CMA and FIS=514 students) and National Diploma: Management (ND: Management=180 students) at two selected universities in the provinces of Limpopo and the Eastern Cape. The two universities, a comprehensive university in the Eastern Cape and a university of technology in Limpopo, both offer qualifications of the type presented by the former technikons. The researcher had intended to use a census survey of all 814 students, but owing to circumstances beyond the researcher's control, only 355 students participated in the study.

In line with previous research on entrepreneurial intention (Krueger et al. 2000; Liñán & Chen 2009; Liñán et al. 2011), this sample of students from rural universities was chosen, because as final-year students they were facing important career decisions upon completion of their studies, and starting their own business was a possible option. Another reason for using this sample of students was their different

Table 1: Questions measuring entrepreneurial intention and its antecedents

Variable	Items	Cronbach's coefficient alpha scores
Entrepreneurial intention	1. I am ready to do anything to be an entrepreneur (Entint1). 2. My professional goal is to be an entrepreneur (Entint2). 3. I will make every effort to start and run my own business (Entint3). 4. I am determined to create a business venture in the future (Entint4). 5. I do not have doubts about ever starting my own business in the future (Entint5). 6. I have very seriously thought of starting a business in the future (Entint6). 7. I have a strong intention to start a business in the future (Entint7). 8. My qualification has contributed positively towards my interest in starting a business (Entint8). 9. I had a strong intention to start my own business before I started with my qualification (Entint9).	0.903
Attitude towards becoming an entrepreneur or starting a business	1. Being an entrepreneur implies more advantages than disadvantages to me (Att1). 2. A career as an entrepreneur is totally attractive to me (Att2). 3. If I had the opportunity and resources, I'd like to start a business (Att3). 4. Amongst various options, I would rather be an entrepreneur (Att4). 5. Being an entrepreneur would give me great satisfaction (Att5). 6. My qualification has contributed positively to my attitude towards becoming an entrepreneur (Att6).	0.872
Perceived behavioural control	1. To start a business and keep it working would be easy for me (Pbc1). 2. I am able to control the creation process of a new business (Pbc2). 3. I believe I would be completely able to start a business (Pbc3). 4. I am prepared to do anything to be an entrepreneur (Pbc4). 5. I know all about the necessary practical details needed to start a business (Pbc5). 6. If I wanted to, I could easily start and run a business (Pbc6). 7. If I tried to start a business, I would have a high chance of being successful (Pbc7). 8. It would be very easy for me to develop a business idea (Pbc8). 9. My qualification has provided me with sufficient knowledge required to start a business (Pbc9).	0.818
Subjective norms	1. My immediate family would approve of my decision to start a business (SNorm1). 2. My friends would approve of my decision to start a business (SNorm2). 3. My colleagues would approve of my decision to start a business (SNorm3).	0.826

levels of exposure to entrepreneurship education, which met the requirements for this study. The researcher requested permission from the heads of department at the two selected institutions to involve their lecturers and students in the research project. Students completed the questionnaires during their lectures and returned them immediately to their lecturers after completion. The only group that was given the questionnaires to complete at home was the entrepreneurship students in the Eastern Cape province.

Statistical analysis

The data were analysed by means of the SPSS using descriptive statistics and hierarchical multiple regression analysis. Descriptive statistics were used for the frequencies of the sample. The association between the attitude towards becoming an entrepreneur, perceived behavioural control, subjective norms and entrepreneurial intention was tested using hierarchical multiple regression analysis. The data were tested for multicollinearity and violation of the assumption of independence of errors. The value of the Durbin-Watson statistic of 1.755 was well within the acceptable range from 1 to 3 as suggested by Field (2013). Therefore, the data did not violate the assumption of independence of errors. The tolerance values for the independent variables ranged from 0.693 to 0.924. Since the tolerance values for all the independent variables were larger than 0.10, this means that multicollinearity was not a problem. Variance inflation factors (VIF) for the independent variables were also highly satisfactory, ranging from 1.083 to 1.443. Before testing the association between the independent variables and the dependent variable, control variables were entered, followed by the second regression, which included control variables and independent variables. The last regression consisted of the antecedents of entrepreneurial intention and entrepreneurial intention. The independent variables of the study are the attitude towards becoming an entrepreneur or starting a business (Att1 to Att6), perceived behavioural control (Pbc1 to Pbc9) and subjective norms (SNorm1 to SNorm3). The dependent variable was entrepreneurial intention (Entint1 to Entint9).

Results

Demographic profile of the respondents

A total of 355 final-year commerce students who were registered for the 2010 academic year completed the entrepreneurial intention questionnaire. Of these, 77.7% were from a comprehensive university in the Eastern Cape and 22.3% from

a university of technology in Limpopo. In terms of the qualifications enrolled for at the two institutions, 19.7% were enrolled for the ND: E/SBM, 18% for the ND: Management and 62.3% for the NDs: IAUD, CMA or FIS. Of the respondents, 67.8% were female and 32.2% were male. The majority (76.1%) of these respondents were aged between 14 and 24 years; 22.5% were between 25 and 34 years; and just over 1% were between 35 and 64 years. With 98.6% of the respondents falling below the age of 35 years, the respondents comprised an ideal group for studying the entrepreneurial intention of the youth. Thus, the results could be valuable for policy makers dealing with youth entrepreneurship development issues, particularly rural youth. In terms of prior exposure to entrepreneurship, 6.6% of the respondents were currently running their own businesses; 26.7% had tried to start a business before; 34% came from families with members who were running businesses; 28% had friends who were running businesses while 57.8% knew other people who were entrepreneurs. With regard to employment experience, 30.8% of the respondents were previously employed.

Descriptive statistics and correlations among the variables are shown in Table 2. The results revealed some significantly positive and negative correlations among control variables and between control variables, antecedents of entrepreneurial intention and entrepreneurial intention. Entrepreneurial intention did not have a significant correlation with an entrepreneurial family background. Prior employment experience did not have a significant correlation with perceived behavioural control. The results with regard to prior employment experience and an entrepreneurial family background contradict those of earlier research on entrepreneurial intention. In line with prior studies, entrepreneurial intention had a significant and positive correlation with the attitude towards becoming an entrepreneur ($r = 0.70$, $p < .01$), perceived behavioural control ($r = 0.45$, $p < .01$) and subjective norms ($r = 0.30$, $p < .01$).

Of the control variables, it emerged that the likelihood of being someone who is currently running a business and having tried to start a business before increases when an individual is from an entrepreneurial family background, has friends who are running businesses and knowledge of other people who are entrepreneurs. Positive correlations among these variables ranged from 0.189 to 0.357, $p < 0.01$, confirming the importance of role models in the choice of an entrepreneurial career. The results revealed a positive correlation between prior employment experience and the likelihood of being someone who is currently running a business ($r = 0.162$, $p < 0.01$) or having tried to start a business before ($r = 0.182$, $p < 0.01$). Gender had a significant relationship with entrepreneurial intention ($r = -0.163$, $p < 0.01$), the attitude towards becoming an entrepreneur ($r = -0.171$, $p < 0.01$), perceived behavioural control ($r = -0.173$, $p < 0.01$) and subjective norms ($r = -0.112$, $p < 0.05$).

Table 2: Descriptive statistics and correlations among variables

	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13
Gender	1.68	.468	1.000												
Age	1.24	.456	-.097	1.000											
Qualifications	2.44	.783	-.028	.019	1.000										
Employed previously	1.70	.460	.113*	-.101	-.153**	1.000									
Currently runs a business	1.94	.237	.078	-.055	-.017	.162**	1.000								
Family members run a business	1.66	.475	.101	.047	-.015	.157**	.223**	1.000							
Friends run businesses	1.71	.453	.090	-.121*	.005	.307**	.322**	.357**	1.000						
Know other entrepreneurs	1.42	.495	.156**	-.032	.011	.158**	.225**	.287**	.352**	1.000					
Tried to start a business before	1.73	.443	.184**	-.061	-.049	.182**	.355**	.189**	.213**	.206**	1.000				
Entrepreneurial intention	2.13	.959	-.163**	.121*	-.213**	-.117*	-.146**	-.039	-.209**	-.155**	-.187**	1.000			
Attitudes towards becoming an entrepreneur	2.07	.942	-.171**	.093	-.209**	-.116*	-.128*	-.060	-.127*	-.194**	-.167**	.696**	1.000		
Perceived behavioural control	2.16	.938	-.173**	.168**	-.148**	-.045	-.142**	-.119*	-.192**	-.194**	-.200**	.451**	.378**	1.000	
Subjective norms	2.17	.908	-.112*	.029	-.053	-.032.	-.130*	-.121*	-.170**	-.214**	-.083	.300**	.315**	.288**	1.000

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

* Correlation is significant at the 0.05 level (2-tailed).

The qualifications that the respondents were registered for were significantly related to entrepreneurial intention ($r = -0.213$, $p < 0.01$), the attitude towards becoming an entrepreneur ($r = -0.209$, $p < 0.01$) and perceived behavioural control ($r = -0.148$, $p < 0.01$). Age had a significant relationship with entrepreneurial intention ($r = 0.121$, $p < 0.01$) and perceived behavioural control ($r = 0.168$, $p < 0.01$).

Entrepreneurial intention of the respondents

The respondents were asked to indicate whether they have the intention to start a business by answering nine questions on entrepreneurial intention (Entint1 to Entint9 in Table 1) on a five-point Likert scale ranging from (1 = Strongly disagree to 5 = Strongly agree). The results in Table 3 show that the majority of the respondents had the intention to start their own businesses in the future. Based on a combination of scores on 'agree' and 'strongly agree', the highest percentage of the respondents who had the intention to start their own businesses was observed on Entint4 (80%), followed by Entint3 (78.1%), Entint6 (77%), Entint8 (76.5%), Entint7 (72.5%), Entint5 (71.8%), Entint1 (62.3%) and Entint2 (54.8%).

The lowest percentage was observed on Entint9 at 38.9%. A comparison of the entrepreneurial intention of the respondents before they started with their qualifications (Entint9, 38.9%) and the contribution of the qualification to the formation of entrepreneurial intention (Entint8, 76.5%) reveals that exposure to education (the majority received at least six months' entrepreneurship education) contributed positively to their interest in starting their own businesses.

Furthermore, it seems from Table 3 that the respondents differentiated between becoming an entrepreneur (Entint1 & Entint2) and starting one's own business (Entint3 to Entint7). With regard to starting one's own business, higher percentages of the respondents 'agreed' and 'strongly agreed' with Entint3 up to Entint7. With regard to becoming an entrepreneur, lower percentages of the respondents 'agreed' and 'strongly agreed' to Entint1 and Entint2.

Relationship between the antecedents of entrepreneurial intention and entrepreneurial intention

The results showed that there is a statistically significant association between the attitude towards becoming an entrepreneur and entrepreneurial intention ($\beta = 0.597$, $p < 0.01$). Thus the first hypothesis was supported. From the results it is evident that entrepreneurial intention develops from the attitudes that individuals hold about becoming an entrepreneur or starting a business. A statistically significant relationship was found between perceived behavioural control and the intention to

Table 3: Entrepreneurial intention of the respondents

Entrepreneurial intent factors	Frequency	Percentage (%)					Total
		Strongly disagree	Disagree	Unsure	Agree	Strongly agree	
Entint1	350	4.3	6.5	26.9	32.9	29.4	100
Entint2	348	7.2	15.2	22.7	28.4	26.4	100
Entint3	347	3.5	6.6	11.8	34.6	43.5	100
Entint4	350	2.0	2.6	15.4	41.7	38.3	100
Entint5	348	3.4	6.3	18.4	31.3	40.5	100
Entint6	347	2.9	7.5	12.7	37.5	39.5	100
Entint7	346	2.9	7.2	17.3	37.0	35.5	100
Entint8	345	3.5	7.5	12.5	36.5	40.0	100
Entint9	347	8.9	27.4	24.8	23.9	15.0	100

start a business ($\beta = 0.209$, $p < 0.01$). Therefore, the second hypothesis was supported. From the results it follows that individuals develop intentions to start a business based on their perceptions of self-efficacy or ability to perform the entrepreneurial behaviour. No relationship was found between subjective norms and entrepreneurial intention. Therefore, the null hypothesis (H_{03}) could not be rejected.

The regression results for the base model (Model 1) in Table 4 show that control variables explained 15% of variance in entrepreneurial intention compared to the theoretical antecedents of entrepreneurial intention in Model 3 which accounted for over 52%. Of the control variables, only gender, qualifications enrolled for and previous employment experience were statistically significant but negatively related to entrepreneurial intention ($F [9, 308] = 6.046$; $p < 0.01$). The regression that combined the three antecedents of entrepreneurial intention with control variables in Model 2 accounted for 53.9% of variance in entrepreneurial intention ($F [12, 305] = 29.681$; $p < 0.01$), indicating that control variables explained the least variance in entrepreneurial intention.

Similar to previous research, the results showed that subjective norms were not significant in predicting entrepreneurial intention. The attitude towards becoming an entrepreneur and perceived behavioural control were statistically significantly associated with entrepreneurial intention ($F [3, 351] = 130.906$; $p < 0.01$). The results indicate that the attitude towards becoming an entrepreneur explained the most variance in entrepreneurial intention (59.7%) followed by perceived behavioural control (20.9%).

Discussion

The purpose of this study was to investigate the entrepreneurial intention of rural university students based on the TPB. The majority of the respondents in this study

Table 4: Hierarchical regression model for the relationship between the antecedents of entrepreneurial intention and entrepreneurial intention

	Model 1	**Model 2**	**Model 3**
	β	**β**	**β**
Control variables			
Gender	-0.131*	-0.024	
Age	-0.100	0.033	
Qualifications enrolled for	-0.257**	-0.090*	
Has been employed before	-0.115*	-0.058	
Currently runs a business	-0.024	0.006	
Family members run a business	0.048	-0.031	
Friends run business businesses	-0.096	-0.075	
Know other people who are entrepreneurs	-0.046	0.048	
Has tried to start a business before	-0.095	-0.034	
Independent variable			
Attitude towards becoming an entrepreneur		0.570**	0.597**
Perceived behavioural control		0.196**	0.209**
Subjective norms		0.047	0.060
Multiple R	0.387	0.734	0.727
R Square (R^2)	0.150	0.539	0.528
Δ Adjusted R^2	0.125	0.521	0.524
Δ F-Ratio	6.046	29.681	130.906
Significance of F	0.000**	0.000**	0.000**

* P < .05 ** P < .01.

had the intention to start a business in the future. The percentage of the respondents who had the intention to start a business was much higher than the national 15.4% of respondents who have entrepreneurial intentions, as reported in the 2013 GEM study by Herrington and Kew (2014). This could perhaps be explained by the fact that the respondents were aware of the reality of unemployment and this made entrepreneurship their only viable career option. Hence they have high levels of entrepreneurial intention, which are supported by Lucas et al. (2008); Krishna (2013) and Herrington and Kew (2014). Since previous research had found a statistically significant relationship between entrepreneurial intentions and entrepreneurial behaviour (Kolvereid & Isaksen 2006; Zhang & Yang 2006; Delanoë 2013), the positive intention of the respondents to start a business is encouraging given the low total entrepreneurial activity rates in South Africa since 2002 (Turton & Herrington 2013; Herrington & Kew 2014). The findings suggest that it is crucial

to provide those with entrepreneurial intentions with the necessary support in order to enable them to contribute to entrepreneurial activity in the form of new start-ups. By starting new ventures, more job opportunities could be created.

The findings supported previous research regarding the use of the TPB as a valuable model for understanding entrepreneurial intention in South Africa. The TPB explained a significantly higher percentage of variance (close to 53%) in entrepreneurial intention of rural university students compared to the variance of over 27% that was reported by Gird and Bagraim (2008). Although the three antecedents of entrepreneurial intention were correlated with entrepreneurial intention, the results indicated that the entrepreneurial intention of the respondents can be predicted from the attitude towards becoming an entrepreneur and perceived personal capability of doing so. These results are similar to those of Liñán and Chen (2009) in which the TPB explained 55% of variance in entrepreneurial intention based on the attitude towards becoming an entrepreneur and perceived behavioural control. Based on these findings, it is concluded that the intention to engage in a particular behaviour depends on individuals' perceptions regarding the attractiveness of and the personal capability of performing that behaviour. The findings corroborate those of Liñán et al. (2013), Liñán et al. (2011), Liñán and Chen (2009), Li (2006) and Krueger et al. (2000) regarding the impact of the attitude towards the behaviour and perceived behavioural control on entrepreneurial intention.

Despite the fact that subjective norms were not significant in predicting entrepreneurial intention, the results supported those of Gird and Bagraim (2008), who reported that the attitude towards becoming an entrepreneur accounted for a higher percentage of variance in entrepreneurial intention than the other antecedents of entrepreneurial intention. The differences concerning the impact of the antecedents of entrepreneurial intention on entrepreneurial intention are also evident in Liñán et al. (2013). They found that attitudes had a stronger effect on entrepreneurial intention of their Spanish sub-sample whereas perceived behavioural control exerted a stronger effect on entrepreneurial intention in their British sub-sample, thus confirming Ajzen's (2005) view regarding the way in which the importance of the antecedents of entrepreneurial intention can vary in predicting entrepreneurial intention. Similarly, perceived behavioural control and attitudes impacted differently on the entrepreneurial intentions of Spanish and Taiwanese sub-samples (Liñán & Chen 2009).

Limitations

The study is cross-sectional and not longitudinal, and changes in entrepreneurial intent over a protracted time could thus not be measured. Neither could it be

established whether the students' intention to start a business would in fact translate into new ventures. The findings cannot be generalised to all final-year commerce students in the rural provinces of South Africa, because the study used convenience samples.

Control over the completion of the questionnaires was not possible, because the researcher had to rely on the assistance of lecturers at universities in the Eastern Cape and Limpopo to administer the questionnaires to their students. Questionnaires were only completed by students who attended the lectures on the days when they were distributed.

As studies on entrepreneurial intention are still new in South Africa, future research could apply entrepreneurial intention models to examine, for example, the determinants of entrepreneurs' growth intentions and actual growth of their businesses. There is a dearth of knowledge regarding whether entrepreneurial support influences the establishment of new ventures and the growth of existing enterprises. Entrepreneurial intention studies conducted in South Africa to date have been cross-sectional in nature (for example, Malebana 2014; Muofhe & Du Toit 2011; Gird & Bagraim 2008), thus making it difficult to establish a link between entrepreneurial intention and behaviour. Future studies that examine the link between entrepreneurial intention and behaviour would shed more light on the determinants of entrepreneurial behaviour in South Africa (Krueger et al. 2000; Liñán et al. 2013). Longitudinal studies could help in validating the theory of planned behaviour as a tool for designing and evaluating interventions aimed at changing the antecedents of entrepreneurial intentions and behaviour.

Conclusion

Entrepreneurial intentions without action are of no value, especially in solving the problem of low total entrepreneurial activity (TEA) rates and unemployment in South Africa. Entrepreneurial activity is dependent on entrepreneurs who identify, evaluate and exploit opportunities in the market (Shane & Venkataraman 2000; Krueger et al. 2011; Spinelli & Adams 2012). To exploit the identified opportunities and translate their intentions into new ventures, entrepreneurs should have access to the necessary resources (Spinelli & Adams 2012). Given limited market opportunities, little awareness of and lack of access to entrepreneurial support (Orford et al. 2005), intending rural entrepreneurs could benefit from information on market opportunities. Efforts to raise awareness of and access to entrepreneurial support should be increased. Such efforts could help intending rural entrepreneurs to implement their intentions by establishing new ventures. This is particularly

relevant in rural areas where entrepreneurial activity rates are reported to be very low in comparison with urban areas. Intending entrepreneurs are more likely to act on their intentions when they have access to and are aware of the available entrepreneurial support (Delanoë 2013) and have recognised opportunities that they can exploit.

Entrepreneurial support programmes and entrepreneurship educators could help improve entrepreneurial activity rates by increasing the attractiveness of an entrepreneurial career and enhancing the perceived capabilities for starting a business. This entails providing more information using various media relating to the available support for small, medium and micro enterprises (SMMEs); where and how to access such support; acknowledgement and appreciation of entrepreneurship as a viable career option in society; and celebration of successful entrepreneurship. Using entrepreneurial role models, for example, in entrepreneurship education could help in enhancing positive entrepreneurial attitudes and perceptions of behavioural control. It is also crucial that entrepreneurship education should equip students with the necessary skills and competencies to execute the entrepreneurial process. The TPB could also be a useful tool for entrepreneurship development in assessing the entrepreneurial intentions of potential entrepreneurs as part of a comprehensive rural entrepreneurship development programme.

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