

Ndofirepi, Takawira Munyaradzi

Article

The effect of entrepreneurial self-efficacy and entrepreneurial self-identity on entrepreneurial goal intentions of female and male college students in Zimbabwe

Administrative Sciences

Provided in Cooperation with:

MDPI – Multidisciplinary Digital Publishing Institute, Basel

Suggested Citation: Ndofirepi, Takawira Munyaradzi (2022) : The effect of entrepreneurial self-efficacy and entrepreneurial self-identity on entrepreneurial goal intentions of female and male college students in Zimbabwe, Administrative Sciences, ISSN 2076-3387, MDPI, Basel, Vol. 12, Iss. 4, pp. 1-15,
<https://doi.org/10.3390/admsci12040180>

This Version is available at:

<https://hdl.handle.net/10419/275450>

Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

Terms of use:

Documents in EconStor may be saved and copied for your personal and scholarly purposes.

You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.

If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.



<https://creativecommons.org/licenses/by/4.0/>

Article

The Effect of Entrepreneurial Self-Efficacy and Entrepreneurial Self-Identity on Entrepreneurial Goal Intentions of Female and Male College Students in Zimbabwe

Takawira Munyaradzi Ndofirepi 

Department of Business Support Studies, Faculty of Management Studies, Central University of Technology,
Bloemfontein 9300, South Africa; takandofirepi@gmail.com

Abstract: This article investigated how entrepreneurial self-identity and self-efficacy interact to affect the entrepreneurial goal intentions of a sample of female and male college students in Zimbabwe. Researchers are urged to examine these factors' combined influence, given that earlier studies looked at their effects separately. To achieve the research goal, a cross-sectional survey using a self-completion questionnaire on a convenience sample of 262 respondents was conducted in Zimbabwe among college students. The results confirmed that entrepreneurial self-identity and self-efficacy had statistically significant direct effects on the intention to pursue an entrepreneurial goal. They also confirmed that the relationship between entrepreneurial self-efficacy and entrepreneurial goal intention was mediated by entrepreneurial self-identity. The study, however, found no statistically significant differences in the pattern of results between males and females. The study adds to the body of knowledge by proposing and testing a conceptual model that has never been considered before. The findings of the study have implications for the formulation of interventions and policies aimed at promoting entrepreneurship.



Citation: Ndofirepi, Takawira Munyaradzi. 2022. The Effect of Entrepreneurial Self-Efficacy and Entrepreneurial Self-Identity on Entrepreneurial Goal Intentions of Female and Male College Students in Zimbabwe. *Administrative Sciences* 12: 180. <https://doi.org/10.3390/admsci12040180>

Received: 25 October 2022

Accepted: 23 November 2022

Published: 28 November 2022

Publisher's Note: MDPI stays neutral with regard to jurisdictional claims in published maps and institutional affiliations.



Copyright: © 2022 by the author. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

Keywords: self-efficacy; self-identity; intentions; mediation; moderation

1. Introduction

Entrepreneurship development is an important topic in the socio-economic development discourse today owing to its perceived contribution to advancing the United Nations' Sustainable Development Goals (SDGs) (Agu 2021; Surana et al. 2020). Scholars believe that entrepreneurship is critical for job creation, economic growth, and poverty eradication and that it should be promoted at the local, national, and international levels (Lukeš et al. 2019; Schwab and Sala-i-Martin 2014; Wagner et al. 2021). The present study focuses on the collective impact of entrepreneurial self-identity and entrepreneurial self-efficacy on college students' long-term objectives of starting their businesses. Previous research investigated the effects of these factors separately, prompting Ceresia and Mendola (2020) to call for additional research to investigate the combined influence of these factors. The evidence for this relationship is inconclusive, and it is important to determine whether entrepreneurial self-identity and self-efficacy are better predictors of entrepreneurial intentions when studied either separately or together. This work can provide new insights into this previously unexplored research area. For practice, the study addresses the need for credible empirical evidence to support policies aimed at encouraging the advancement of entrepreneurship.

The study builds on the results from previous entrepreneurial intention studies that validated the strong predictive influence of intentions on future entrepreneurial conduct (Fayolle and Liñán 2014; Hueso et al. 2021; Karimi 2020; Liñán and Fayolle 2015; Malebana 2017; Mohammad et al. 2014; Nabi et al. 2010; Neves and Brito 2020). Although the predictor variables in the previous studies, drawn mainly from cognitive-psychology-linked theories, account for a sizable variance of entrepreneurial intentions, they do not provide a complete explanation (Engle et al. 2010; Hockerts 2015; Krueger 2006; Liñán and

Fayolle 2015; Tornikoski and Maalaoui 2019) and leave room to explore the contribution of other variables. The predictors in the established frameworks, such as the theory of planned behaviour and the theory of entrepreneurial events, are insufficient to explain entrepreneurial intentions and thus highlight a theoretic knowledge gap that indicates the necessity of further research into other factors.

According to the literature, researchers should consider whether an individual's entrepreneurial self-identity, along with the other determinants captured in cognitive theories of entrepreneurial intentions, can account for additional variation in their entrepreneurial intentions (Ceresia and Mendola 2019; Liñán et al. 2018; Obschonka et al. 2015). The literature recommends this because aspects of the entrepreneurial process, such as starting a business, relate to the entrepreneur's identity (Brändle et al. 2018; Gregori et al. 2021). Scholars frequently employ Stryker's self-identity theory to explain the relationship between self-identity and behavioural intention. According to the theory, self-identity motivates both frequent and infrequent behaviour because it allows one to confirm one's self-perception (Stryker and Burke 2000). Extensive evidence from multiple fields supports this direct link (Obschonka et al. 2015; Ceresia and Mendola 2019; Dean et al. 2012; Ndofirepi 2021; Reid et al. 2018). Some studies, however, propose a tangential relationship in which self-identity moderates the influence of the theory of planned behaviour predictors on behavioural intentions and outcomes (Fekadu and Kraft 2001; Carfora et al. 2017).

Furthermore, some studies question the inclusion of self-identity as a predictor of behavioural intentions in addition to the variables captured in established frameworks such as the theory of planned behaviour, arguing that aspects of self-identity are already represented in the attitude variable (Sparks and Shepherd 1992; Sparks and Guthrie 1998). Others argue that self-identity is not a reliable predictor of any type of behavioural intention, because it is a result of past behaviour and thus cannot predict it (Rise et al. 2010; Sparks 2000; Eagly and Chaiken 1993). As a counterargument, it is claimed that while the concepts of attitude and self-identity are similar, they serve different purposes in determining actions, with attitude serving as an instrumental variable and self-identity serving self-verification purposes (Biddle et al. 1985; Stets and Burke 2000). Considering this, self-identity is regarded as a legitimate autonomous predictor of behavioural intentions, and it is investigated as such in this study.

In addition to theorising entrepreneurial self-identity as a predictor of entrepreneurial goal intention due to its role in self-affirmation (Leitch and Harrison 2016), the present study contends that individuals' prior entrepreneurial experience and entrepreneurial self-identity intervene in the effects of entrepreneurial self-efficacy on entrepreneurial intentions. Self-efficacy, a concept borrowed from Bandura's social cognitive theory, refers to a person's belief in their ability to complete a task and has been widely used to understand career choice and decision making (Arghode et al. 2021); thus, it is relevant to this study. Even though numerous studies have validated self-efficacy as a direct predictor of people's entrepreneurial intentions (Gorgievski et al. 2018; Hockerts 2017; Ip et al. 2017; Malebana and Swanepoel 2015; Santos and Liguori 2020), alternative mechanisms underlying the relationship between the two variables are still unknown. Taking this into account, the study contends that the greater the individuals' confidence in their ability to perform entrepreneurial tasks is, the greater the likelihood of developing an identity is, which leads to entrepreneurial career intentions.

The study is conceptualised using Stryker's (1968) identity theory and Lent et al.'s (2002) Social Cognitive Career Theory. According to the identity theory, entrepreneurial self-identity is assumed to be a generally consistent and unique set of features that make up parts of the self and which comprise ways in which individuals identify with the diverse functions that they routinely play in today's highly diversified society (Stryker and Burke 2000). Pursuing one's self-identity entails discovering one's interests, passions, and values, including making a career choice. The Social Cognitive Career Theory, on the other hand, seeks to explain, among other things, how career choices are made. The theory is built on three components: goals, self-efficacy beliefs, and outcome expectations. According to

the Social Cognitive Career Theory, people are likely to take an interest in, plan to follow, and excel at tasks wherein they hold strong self-efficacy beliefs if they also possess the required abilities.

Due to Zimbabwe's distinct socioeconomic situation, which is marked by a high rate of graduate unemployment and poverty, the study focuses on students in vocational education in the country. Since 2000, Zimbabwe has experienced sustained de-industrialisation, high rates of youth unemployment, and economic hardship (Kanyenze et al. 2017; Shonhe 2019). Therefore, college graduates who are unable to find traditional employment options have the choice of looking for entrepreneurial opportunities or moving to other nations in search for employment that suits their skill sets (Crush et al. 2015). It cannot be overstated how important it is to understand the factors that influence students' intentions to engage in such activities, especially considering the pressing need to provide youth in economies under stress with the skills necessary to initiate business enterprises. The main research question is, therefore, stated as follows:

"How are entrepreneurial self-efficacy, entrepreneurial self-identity, and entrepreneurial goal intentions of students at Zimbabwean vocational education institutions related, and how does gender influence this association?"

The rest of the paper is organized as follows: The first section provides a summary of the theories and literature on the variables under consideration. Following that is an explanation of the research methodology used to answer the research questions. In the fourth section, the research data are analysed to determine the suitability of the measurement and structural models. The implications for practice are then discussed, as well as how the findings relate to previous research. The paper concludes by discussing the study's limitations and future research directions.

2. Literature Review and Hypothesis Development

2.1. *Intentionality and Intentions*

Intentionality refers to "a state of mind directing a person's attention (and therefore experience and action) toward a specific object (goal) or a path to achieve something (means)" (Bird 1988, p. 442). The concept of intention is critical for understanding and explaining predetermined human behaviour in a variety of situations (Ajzen 1991). Previous research from various fields of study supports the effectiveness of intentions as a predictor of behavioural outcomes (Ajzen 2011). The intentions variable has been shown to account for a significant amount of variation in entrepreneurial behaviour (Liñán and Fayolle 2015; Tornikoski and Maalaoui 2019).

Following the emergence of the process perspective, researchers in entrepreneurship seeking to forecast future entrepreneurial behaviour have also harnessed intentions due to their reliability and validity in predicting the likelihood of a delayed or uncertain behavioural outcome (Fini et al. 2009). When using the intention variable to predict entrepreneurial activity, entrepreneurship researchers assume that intentions motivate action, which leads to the formation of new ventures (Fayolle and Liñán 2014). Intentions theories from cognitive psychology, such as Ajzen and Fishbein's Theory of Reasoned Action, Ajzen's Theory of Planned Behavior, and Bandura's Self-Efficacy Theory, have been successfully incorporated into the study of future entrepreneurship behaviour (Krueger 2017), with other scholars such as Krueger et al. (2000) and Lüthje and Franke (2003) expanding on these theories to better understand the emergence of entrepreneurship activity.

Despite being validated by a large body of research since Shapero and Sokol's (1982) pioneering work, entrepreneurship intentions continue to be a central theoretical framework for entrepreneurship researchers as new measures and applications of the concept emerge. Given the maturity of the entrepreneurship intention research area, Krueger (2017) suggests exploring new research directions in the area to gain a better understanding of the concept. In response, Liñán and Fayolle (2015), and Fayolle and Liñán (2014) identified potential research avenues in the area, such as re-examining theoretical and methodological nuances, the contribution of different arrangements of determinants of entrepreneurial intention,

the role of entrepreneurship education, the impact of institutional and situational factors on intentions, and the process that links intentions to behaviour. Based on Krueger's suggestion, this study sought to comprehend some of the factors underlying entrepreneurial intentions by investigating the joint roles of self-efficacy and entrepreneurial self-identity.

2.2. The Concept of Entrepreneurial Self-Identity

Self-identity is a psychological construct that varies from person to person (Dean et al. 2012). The (Merriam-Webster n.d.) dictionary defines self-identity as “the state or quality of being aware of who one is and what one stands for.” Self-identity is a state of being rather than a description of how others perceive one. Self-identity is the base upon which humans decide things, plan, and discover their aspirations (Brändle et al. 2018). Thus, it is an internal compass that helps humans to navigate life. The concept of “identity” is intriguing, because it is about discovering who one is and what one wants to be in life (Leitch and Harrison 2016).

The notion of self-identity formation is more complicated in the context of entrepreneurship and all its intricacies. Personal development, including career progression, is shaped by one's sense of self-identity (Hand et al. 2020; Kašperová and Kitching 2014; Newbery et al. 2018). Entrepreneurial education and training in schools, as well as other vicarious entrepreneurial experiences, help young people to develop a sense of entrepreneurial self-identity, as well as problem-solving, logical thinking, and creativity, in a social context (Alsos et al. 2016; Brändle et al. 2018; Leitch and Harrison 2016). Entrepreneurial self-identity is a component of an individual's multiple identities, which emerge at different places and times (Leitch and Harrison 2016). The foundation of entrepreneurial self-identity lies in an individual's life experiences and or personality profile (Obschonka et al. 2015) and is motivated by the need to self-verify (Rise et al. 2010) and express one's uniqueness (Shepherd and Haynie 2009). Thus, self-belief about one's identity as an entrepreneur is likely to be expressed or affirmed through entrepreneurial activity (Krueger 2003).

2.3. The Concept of Entrepreneurial Self-Efficacy

Self-efficacy is the belief that one can succeed at a given task or challenge and is important in almost every aspect of life as it reflects confidence in one's abilities and trust in one's capability to perform a certain task (Newman et al. 2019). Self-efficacy has long been studied in the social sciences, beginning with the social cognitive theory (Bandura 1986). According to research, self-efficacy influences a person's decision, the amount of intensity, and willpower, making it a valuable concept for understanding human behaviour (Arghode et al. 2021). In other words, people with higher levels of self-efficacy are more confident and likely to be determined in their pursuits than those with lower levels.

Self-efficacy is essential for an individual's ability to take risks, deal with setbacks, and keep pushing even when things do not go as planned (Zimmerman 2010). Taking this into account, entrepreneurial self-efficacy is defined as “the extent to which individuals believe that they are capable of performing the tasks associated with new-venture management” (Forbes 2005, p. 599). Entrepreneurship researchers disagree on the dimensionality of self-efficacy. While some scholars believe the construct is unidimensional, others believe it has many sub-components (Pruett 2012). The current study investigates the role of entrepreneurial self-efficacy in the development of entrepreneurial intentions. For the purpose of this investigation, entrepreneurial self-efficacy is viewed as a one-dimensional variable.

2.4. Entrepreneurial Self-Efficacy and Entrepreneurial Intentions

The relationship between self-efficacy and entrepreneurial intentions has been widely investigated (Hockerts 2017; Malebana and Swanepoel 2015; Newman et al. 2019; Ngeke-Neneh 2020). The results of such investigations suggest that people with a higher level of self-efficacy demonstrate stronger entrepreneurial intentions, while those with lower levels of self-efficacy demonstrate weaker ones. This pattern of results has been consistent even in those studies that have sought to establish the separate impacts of general self-efficacy and

entrepreneurial self-efficacy on entrepreneurial intentions. For instance, [Laguna's \(2013\)](#) longitudinal study of the determinants of the entrepreneurial intentions of 332 unemployed individuals in Poland found that both entrepreneurial and general self-efficacy beliefs were key determinants of entrepreneurial intentions. This finding was complemented by [Santos and Liguori \(2020\)](#), whose study based on US university students underscored the positive contribution of both general and entrepreneurial self-efficacy toward shaping entrepreneurial intentions. While acknowledging the contribution of both general and entrepreneurial self-efficacy, [Cardon and Kirk \(2015\)](#) and [Drnovšek et al. \(2010\)](#) highlight the greater influence of task-specific self-efficacy beliefs, in this case, entrepreneurial self-efficacy, in influencing entrepreneurial outcomes. Thus, the scholars conclude that higher entrepreneurial self-efficacy equips one with the capacity to deal with the demands of entrepreneurial tasks and the identification of entrepreneurial opportunities, as well as incline one towards entrepreneurship. The relationships highlighted in the above exposition are not surprising given the claims in the Social Cognitive Career theory (SCCT) and the Social cognitive theory about how self-belief in one's confidence and competence to perform a specific task increases the chances of completing it. Given this, self-efficacy can function as a motivating factor to engage in actions to complete the task. The following hypothesis is, thus, proposed:

H1. *Entrepreneurial self-efficacy is a positive predictor of entrepreneurial intentions.*

2.5. Entrepreneurial Self-Identity and Entrepreneurial Intentions

Entrepreneurial self-identity defines "one's identification with an entrepreneurial role" ([Obschonka et al. 2015](#), p. 774). Following this interpretation, identifying oneself as an entrepreneur entails job-related behavioural obligations that must be met to maintain the self-image. Additionally, the affected parties must disseminate profiles that support their identities ([Bjursell and Melin 2011](#)). The above interpretations are based on Stryker's identity theory ([Stryker 1987](#)), which proclaims that performing identity-linked duties entrenches resilient repetitive behaviour that contributes to self-authentication. The emergent literature stresses the significance of understanding the antecedents and outcomes of entrepreneurial self-identity ([Liñán et al. 2018](#); [Obschonka et al. 2015](#); [Pfeifer et al. 2016](#)). Regarding antecedents, scholars acknowledge that entrepreneurial self-identity, as other forms of identity, is constructed in one's formative years and evolves over one's life span ([Alsos et al. 2016](#); [Leitch and Harrison 2016](#); [Lewis 2016](#)).

A variety of determinants of entrepreneurial self-identity, at both personal and situational levels, have been proposed. For instance, [Obschonka et al. \(2015\)](#) suggest that one's past entrepreneurial activity, having parents who are self-employed, entrepreneurial personality structure, and early entrepreneurial competencies in adolescence directly impact entrepreneurial self-identity. In addition, [Obschonka et al.](#) affirm that entrepreneurial self-identity moderates the impact of attitudes, subjective norms, and perceived behavioural control on entrepreneurship intentions. [Ndofirepi \(2021\)](#) underscores the impact of social factors such as social approval and the cultural environment on persons' development of entrepreneurial identity and subsequently on entrepreneurship intentions. Lastly, [Fredriksen and Berglund \(2020\)](#) highlight the role of entrepreneurship education in shaping entrepreneurial self-identity.

In terms of outcomes, according to the emerging literature, the entrepreneurial self-identity factor and the intentions to start businesses are strongly correlated ([Dheer and Lenartowicz 2018](#); [Liñán et al. 2018](#); [Obschonka et al. 2015](#)). This link substantiates [Leitch and Harrison's \(2016\)](#) claim that entrepreneurial activities are an expression of an individual's identity. An entrepreneurial self-identity, according to [Bjursell and Melin \(2011\)](#), can motivate entrepreneurship behaviour. Against this background, the following hypothesis is advanced:

H2. *Entrepreneurial self-identity is a positive predictor of entrepreneurial intentions.*

2.6. The Mediating Effects of Entrepreneurial Self-Identity on the Effect of Entrepreneurial Self-Efficacy on Entrepreneurial Intentions

Although earlier research highlights the direct connection between self-efficacy and entrepreneurial intentions, researchers need to investigate alternative mechanisms in this relationship to gain a more comprehensive understanding of the link. According to the Self-Efficacy Theory, people actively consider and plan their behaviour based on their self-confidence perceptions (Bandura 1986). Considering this, one contends that people are more likely to identify with entrepreneurial roles if they believe that they can perform an entrepreneurial task. In the same vein, Cardon and Kirk (2015, p. 1032) affirm that “identification with an entrepreneurial role should be more likely to occur when entrepreneurs feel efficacious about tasks associated with that role.” This viewpoint supports Vignoles et al.’s (2006) assertion that people are most satisfied with identities that fulfil their self-esteem and self-efficacy requirements. Thus, one can speculate that such individuals are likely to act in a way that affirms specific role identities. Because of this, the following hypothesis is proposed for this study:

H3. *Entrepreneurial self-identity mediates the effect of entrepreneurial self-efficacy on entrepreneurial intentions.*

3. Research Methodology

3.1. Population and Sampling

Using positivist philosophy and quantitative research methodologies, this study examined how self-efficacy and entrepreneurial self-identity, moderated by previous experiences, affected students’ intentions of pursuing entrepreneurial goals in Zimbabwe. It was founded on an examination of cross-sectional data obtained from a sample of undergraduate students chosen from different areas of study enrolled full-time at technical and vocational education and training (TVET) institutions in Zimbabwe. These institutions are mandated by the government of Zimbabwe to provide practically oriented education and produce vocationally ready graduates. Of importance, they provide compulsory entrepreneurship education classes to all enrolled students.

A convenient sample of 505 respondents was given questionnaires by 3 trained research assistants. Respondents were selected from various departments based on their willingness to participate in the survey voluntarily. The questionnaires were distributed by the research assistants at the end of lectures. The respondents were asked to complete the questionnaires and either hand them back to the research assistants soon after or complete the questionnaires at a convenient time and deposit them in boxes placed at designated points at the different institutions. Data were collected between May and July of 2019. Before being asked to complete the questionnaires, potential participants from the target population were informed of the purpose of the study, their rights as research participants, and the confidentiality of their contributions. Individuals had to be enrolled as undergraduate college students and be taking or have completed the required entrepreneurial skill development course to be eligible. The researcher obtained the voluntary consent of respondents.

There were only 297 questionnaires completed and returned. However, 262 of these were deemed suitable for further evaluation. As a result, 51.9% per cent of people responded. Of the final sample of 262, the majority (52.3 per cent, $n = 137$) were female, aged between 21 and 30 (72.6 per cent, $n = 188$), single (79.4 per cent, $n = 216$), had only a high school certificate as their highest educational achievement (79.4 per cent, $n = 208$), studied engineering (48.1 per cent, $n = 126$), and had some prior entrepreneurial experience (53.4 per cent, $n = 140$).

3.2. Measurement Instrument

The data collection questionnaire was divided into four sections, A to D, each with a series of closed-ended questions. Respondents chose one of the options provided for each survey item. Section A asked about the respondent’s gender, age, course of study,

highest qualification obtained, entrepreneurial experience, and knowledge on a nominal and ordinal scale. Sections B–D used a five-point Likert scale to assess entrepreneurial self-identity, entrepreneurial self-efficacy, and entrepreneurial goal intentions. The scale points for entrepreneurial self-identity and goal intentions ranged from 1 (strongly disagree) to 5 (strongly agree). For entrepreneurial self-efficacy, the scale points ranged from 1 (very ineffective) to 5 (very effective).

Entrepreneurial self-identity was measured using Liñán and Fernandez-Serrano's (2018) three-item scale, which required respondents to indicate the extent to which they agreed that the following activities reflected their identity: "Inventing new solutions to problems", "To be a founder of a business", and "To make companies grow and develop".

Entrepreneurial self-efficacy was measured using the five items designed by Liñán et al. (2016), which required respondents to indicate how effectively they were able to perform the following activities: "To define my business idea and the strategy of a new company", "To maintain the process of creating a new company under control", "To negotiate and maintain favourable relationships with potential investors and banks", "To recognize opportunities in the market for new products and/or services", "To connect with key people to obtain capital to create a new company", and "To start a new company".

Entrepreneurial goal intentions were measured using Liñán and Chen's (2009) six-item scale, which included the following: "It is very likely that I will start a venture one day", "I am willing to make every effort to become an entrepreneur", "I have serious doubts whether I will ever start a venture", "I am determined to start a venture in the future", and "My professional objective is to be an entrepreneur". The scales' validity and reliability are described in the section of this paper that deals with the measurement model.

3.3. Statistical Procedure

The data were analysed using structural equation modelling partial least squares. The analysis was carried out using Smart PLS 4 software. A researcher can use partial least squares structural equation modelling to test predictive models by integrating latent and observable variables (Garson 2016). The procedure assesses the measurement and structural validity of a conceptual model. As a result, the analysis focuses on the validity and reliability of latent variables, as well as the statistical significance and strength of the latent variables' direct and indirect relationships.

3.4. Common Method Bias

Herman's one-factor method was used in the study to measure the likelihood of common method bias. Using this procedure, all the indicator items for the three latent variables were fixed into one factor in the exploratory factor analysis. The components explained 35.1 per cent of the variance in the single factor, according to the evaluation. This result confirmed the absence of common method variance, because the variance explained was less than 50%.

3.5. Control Variables

The control variables included respondents' gender, marital status, age group, the field of study, the highest qualification attained, and entrepreneurship experience. The demographic variables' predictive effects on the entrepreneurship intentions variable were not statistically significant.

4. Results

4.1. Evaluating the Measurement Model

Table 1 shows Cronbach's alpha, composite reliability (ρ), and average variance extracted values for entrepreneurial goal intentions, entrepreneurial self-identity, and entrepreneurial self-efficacy.

Table 1. Latent variables reliability and convergent validity.

	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)
Entrepreneurial goal intentions	0.873	0.905	0.615
Entrepreneurial self-efficacy	0.830	0.879	0.597
Entrepreneurial self-identity	0.772	0.867	0.685

Cronbach's alpha and composite reliability values of more than 0.7 suggest acceptable levels of reliability, while those higher than 0.9 indicate excellent reliability (Garson 2016). Thus, the details in Table 1 suggest that entrepreneurial goal intentions, entrepreneurial self-identity, and entrepreneurial self-efficacy had satisfactory levels of reliability.

Table 1 also demonstrates that all three latent variables met the convergent validity requirement—entrepreneurial self-identity (0.685), self-efficacy (0.597), and entrepreneurial goal intentions (0.615). Convergent validity, a measure of whether the indicator variables being investigated are connected to the same latent variable or construct, is confirmed when a latent variable has an average extracted variance value of at least 0.5.

Finally, the heterotrait–monotrait ratio of correlations (HTMT) criterion was used to determine whether the measures for the different latent variables were unrelated. If the HTMT value is less than 0.90, the discriminant validity between two latent variables is demonstrated (Hair et al. 2014). As shown in Table 2, the discriminant validity criterion was met, because the HTMT values for all pairwise comparisons were less than 0.9.

Table 2. Discriminant validity (HTMT) criterion.

	Entrepreneurial Goal Intentions	Entrepreneurial Self-Efficacy	Entrepreneurial Self-Identity
Entrepreneurial goal intentions	-	-	-
Self-efficacy	0.451	-	-
Self-identity	0.678	0.382	-

Table 3 also supports the discriminant validity of the measuring items for entrepreneurial goal intentions, entrepreneurial self-identity, and entrepreneurial self-efficacy by demonstrating that there is no evidence of item cross-loading across variables.

Table 3. Factor loadings.

	Entrepreneurial Goal Intentions	Self-Efficacy	Self-Identity
EGI1	0.676	0.301	0.397
EGI2	0.697	0.236	0.388
EGI3	0.846	0.338	0.404
EGI4	0.799	0.358	0.452
EGI5	0.856	0.357	0.510
EGI6	0.812	0.269	0.486
ESI1	0.393	0.205	0.772
ESI2	0.532	0.294	0.869
ESI3	0.462	0.294	0.839

Table 3. *Cont.*

	Entrepreneurial Goal Intentions	Self-Efficacy	Self-Identity
ESE1	0.200	0.594	0.152
ESE2	0.262	0.734	0.181
ESE3	0.263	0.804	0.247
ESE4	0.363	0.881	0.334
ESE5	0.395	0.820	0.284

4.2. Evaluating the Structural Model

The structural validity of the proposed model was assessed using the coefficients of determination and path coefficients of the hypothesised relationships. The data were checked for potential collinearity issues using variance inflation factors before estimating the regression (VIF). VIF values less than 3 indicate that the predictor variables are not multi-collinear. Collinearity was unlikely in this study, because the VIFs in Table 4 are all less than 3.

Table 4. Variance inflation factors.

	Entrepreneurial Goal Intentions	Self-Identity
First-hand entrepreneurial experience	0.000	1.001
Entrepreneurial self-efficacy	1.117	2.586
Entrepreneurial self-identity	1.117	0.000

For the two endogenous variables, entrepreneurial self-identity and entrepreneurial goal intentions, the coefficients of determination (R-square) were 0.105 and 0.37, respectively. As a result, the predictors' effect sizes ranged from weak to moderate (Garson 2016).

When the proposed model's hypothesised relationships were examined (Table 5), the results confirmed the statistical significance of the direct relationships between entrepreneurial self-efficacy and entrepreneurial goal intentions ($\beta = 0.324$, $p < 0.000$), as well as entrepreneurial self-identity and entrepreneurial goal intentions ($\beta = 0.488$, $p < 0.000$). Entrepreneurial self-identity was also found to have a significant mediating effect on the relationship between entrepreneurial self-efficacy and entrepreneurial goal intentions ($\beta = 0.154$, $p = 0.006$).

Table 5. Hypothesis testing.

	Hypothesis	Indirect Effect	Direct Effect	T Statistic	p-Value	Hypothesis Supported Yes/No
H1	Entrepreneurial self-efficacy -> Entrepreneurial goal intention		0.324	0.3533	0.000	Yes
H2	Entrepreneurial self-identity -> Entrepreneurial goal intention		0.488	5.685	0.000	Yes
H3	Entrepreneurial self-efficacy -> Self-identity -> Entrepreneurial goal intention	0.158		2.746	0.006	Yes

4.3. Post-Hoc Analysis: Multigroup Test

To determine whether the outcomes were different for male and female respondents, an evaluation of the theorised relationships was conducted using multiple group analysis

premised on permutations. This technique, which involves the measurement invariance of composite models, was carried out using Smart PLS 4. Compositional invariance, Equivalence of Composite Mean Values and Composite Variances, and Configurational Invariance are the three main parts of MICOM. Table 6 summarises the result of the MICOM test. Because the correlations for entrepreneurial goal intentions and entrepreneurial self-efficacy did not significantly differ between males and females, while the correlations for entrepreneurial self-identity differed significantly between males and females, the permutation-based confidence intervals supported partial compositional invariance. The mean values and variances of entrepreneurial goal intentions, entrepreneurial self-efficacy, and entrepreneurial self-identity did not differ significantly between the gender categories according to the permutation-based confidence intervals. Because of the partial measurement invariance, the results of the multi-group analysis need to be interpreted with caution.

Table 6. MICOM test results.

	Compositional Invariance			Equality of Means			Equality of Variances		
	Original correlation	Correlation Permutation Mean	Permutation <i>p</i> -Value	Original Difference	Permutation Mean Difference	Permutation <i>p</i> -Value	Original Difference	Permutation Mean Difference	Permutation <i>p</i> -Value
Entrepreneurial goal intentions	0.996	0.998	0.170	−0.025	−0.010	0.846	0.419	0.018	0.205
Entrepreneurial self-identity	0.986	0.997	0.025	−0.176	−0.009	0.151	0.342	0.016	0.264
Entrepreneurial self-efficacy	0.987	0.989	0.297	−0.058	−0.006	0.631	0.037	0.006	0.916

Based on a comparative analysis of gender groups, the study offers empirical proof of the positive and significant effect of entrepreneurial self-identity on entrepreneurial goal intentions. In females, the effect was slightly higher ($\beta = 0.506$) than in males ($\beta = 0.451$). Likewise, the analysis confirmed a positive and significant effect of entrepreneurial self-efficacy on entrepreneurial goal intentions, with the effects being weaker in females ($\beta = 0.348$) than in males ($\beta = 0.467$). Again, the effect of entrepreneurial self-efficacy on entrepreneurial self-identity was weaker in females ($\beta = 0.319$) than in males ($\beta = 0.355$). Finally, the findings show that the indirect effects of entrepreneurial self-efficacy on entrepreneurial goal intentions mediated by entrepreneurial self-identity were $\beta = 0.161$ and $\beta = 0.160$ for females and males respectively. However, there were no statistically significant differences between males and females in the strength of any of the relationships described in this section (see Table 7).

Table 7. Multigroup analysis path coefficients.

	Original (Gender_Female)	Original (Gender_Male)	Original Difference	Permutation Mean Difference	2.5%	97.5%	Permutation <i>p</i> -Value
Entrepreneurial self-identity -> Entrepreneurial goal intentions	0.506	0.451	0.055	0.010	−0.343	0.341	0.757
Self-efficacy -> Entrepreneurial goal intentions	0.348	0.467	−0.119	−0.001	−0.319	0.353	0.474
Self-efficacy -> Entrepreneurial self-identity	0.319	0.355	−0.036	0.000	−0.378	0.365	0.866
Self-efficacy -> Entrepreneurial self-identity -> Entrepreneurial goal intentions	0.161	0.160	0.001	0.004	−0.224	0.237	0.993

5. Discussion of Findings

The study focused on the influence of entrepreneurial self-efficacy and entrepreneurial self-identity on the entrepreneurial goal intentions of higher-education students exposed to entrepreneurship education. There is limited research on the collective influence of the predictor variables on the outcome variable. Our research examined both the direct and indirect effects of entrepreneurial self-efficacy on entrepreneurial intentions, emphasising the mediating role of entrepreneurial self-identity and the moderating influence of prior entrepreneurial experience. The study contributes to theory by investigating these understudied relationships, which researchers have rarely investigated in a single study.

Not all the hypothesised relationships were statistically significant. Only entrepreneurial self-identity, followed by entrepreneurial self-efficacy, had statistically significant influences on entrepreneurial intentions. Furthermore, the mediation effect of entrepreneurial self-identity on the effect of entrepreneurial self-efficacy on entrepreneurial intentions was positive. However, the proposed moderation effects of prior experience on the relationships among entrepreneurial self-efficacy, entrepreneurial intentions, and entrepreneurial self-identity were not statistically significant.

The finding that entrepreneurial self-efficacy is a positive predictor of entrepreneurial intentions is consistent with previous research ([Drnovšek et al. 2010](#); [Laguna 2013](#); [Santos and Liguori 2020](#)) and emphasises the importance of entrepreneurial self-efficacy in shaping entrepreneurship intentions. This lends credence to the Social Cognitive Career Theory's claim that people are more likely to take an interest in, plan to follow, and excel at tasks in which they have strong self-efficacy.

The finding that entrepreneurship self-identity had the strongest influence on entrepreneurial intentions is intriguing, given that some scholars ([Sparks 2000](#); [Eagly and Chaiken 1993](#)) downplay the individual influence of this factor. This finding supports those of [Liñán et al. \(2018\)](#) and [Obschonka et al. \(2015\)](#) and portrays self-identity as a key factor in the emergence of behaviour-related outcomes that policymakers and other key stakeholders in entrepreneurship must consider when devising measures to support future entrepreneurs. That entrepreneurial self-identity was a significant mediator of the effects of entrepreneurial self-efficacy on entrepreneurial intentions is consistent with the findings of [Ndofirepi \(2021\)](#), whose study confirmed the interventional role of entrepreneurial self-identity in the influence of a set of a personal-level and situational variables on entrepreneurial intentions.

The study found no statistically significant differences in the pattern of relationships among entrepreneurial self-efficacy, entrepreneurial self-identity, and entrepreneurial goal intentions between male and female respondents. However, because the findings are based on the perspectives of 262 respondents recruited through non-probability sampling, they may not be representative of the target population (full-time technical college students in Zimbabwe) and should be interpreted with caution.

The study's findings have important implications for future practice, particularly in terms of increasing youth interest in entrepreneurship careers. To increase the number of active entrepreneurs and start-up businesses, stakeholders involved in entrepreneurship support must include measures that activate target groups' self-efficacy and self-identity. For example, entrepreneurship education content at higher-education institutions should be designed to emphasise entrepreneurial competencies to boost students' self-belief in their ability to conduct entrepreneurship-related tasks. The competencies addressed should include those specific to entrepreneurship as well as those that are general to the business domain, allowing aspiring entrepreneurs to believe in their ability to succeed.

This study's findings also provide evidence for policymakers who decide what should be done to support entrepreneurship. Given that entrepreneurial self-identity can be formed during one's formative years, educational institutions at all levels should design educational curricula and establish institutional philosophies that support the entrepreneurship agenda and emphasise the desirability of entrepreneurship as a career. Because the literature indicates that the new venture creation stage is critical to identity formation,

entrepreneurship education and training programmes should place a greater emphasis on course content that is related to this stage of the entrepreneurship process. Business idea generation and business plan preparation are two examples of course elements that may resonate with entrepreneurial identity formation.

6. Limitations and Areas for Further Research

Regardless of its importance, the study has limitations. Firstly, the use of a convenience sample of respondents makes the results less generalizable to the Zimbabwean student population. Secondly, the number of variables investigated in this study limited the study's scope. Beyond entrepreneurial self-efficacy and entrepreneurial self-identity, the researcher acknowledges the existence of other important determinants of entrepreneurial intentions. Third, because the data generated in this study were based on self-reports, there is a risk of self-reporting bias, which could undermine the validity of the inference drawn from the study's findings.

The natural progression of this work is to investigate how the variables examined in this study interact with other personal and situational factors in shaping entrepreneurial intentions and, eventually, entrepreneurial behaviour. This study could also be repeated in a larger sample using more robust research designs to improve the generalizability of the findings. In the same vein, it is recommended that the study be replicated in other settings, contexts, and countries to validate the findings of the current study. The issue of the mediation effects of entrepreneurial self-identity is intriguing and could be further investigated in future studies, particularly how it relates to antecedents to entrepreneurial goal intentions other than those examined in this study.

Funding: The APC was funded by the Central University of Technology, Free State.

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Informed consent was obtained from all subjects involved in the study.

Data Availability Statement: The data that support the findings of this study are available on request from the corresponding author.

Conflicts of Interest: The author declares no conflict of interest.

References

- Agu, Godswill. 2021. A survey of business and science students' intentions to engage in sustainable entrepreneurship. *Small Enterprise Research* 28: 206–27. [\[CrossRef\]](#)
- Ajzen, Icek. 1991. The theory of planned behavior. *Organizational Behavior and Human Decision Processes* 50: 179–211. [\[CrossRef\]](#)
- Ajzen, Icek. 2011. The theory of planned behaviour: Reactions and reflections. *Psychology and Health* 26: 1113–27. [\[CrossRef\]](#) [\[PubMed\]](#)
- Alsos, G. Agnete, Tommy Høyvarde Clausen, Ulla Hytti, and Sølvi Solvoll. 2016. Entrepreneurs' social identity and the preference of causal and effectual behaviours in start-up processes. *Entrepreneurship and Regional Development* 28: 234–58. [\[CrossRef\]](#)
- Arghode, Vishal, Sarah Heminger, and Gary N. McLean. 2021. Career self-efficacy and education abroad: Implications for future global workforce. *European Journal of Training and Development* 45: 1–13. [\[CrossRef\]](#)
- Bandura, Albert. 1986. *Social Foundation of Thought and Action: A Social Cognitive Theory*. Englewood Cliffs: Prentice- Hall.
- Biddle, Bruce J., Barbara J. Bank, Don S. Anderson, Ragnar Hauge, Daphne M. Keats, John A. Keats, Marjorie M. Marlin, and Simone Valantin. 1985. Social influence, self-referent identity labels, and behavior. *Sociological Quarterly* 26: 159–85. [\[CrossRef\]](#)
- Bird, Barbara. 1988. Implementing Entrepreneurial Ideas: The Case for Intention. *Academy of Management Learning and Education* 13: 442–53. [\[CrossRef\]](#)
- Bjursell, Cecilia, and Leif Melin. 2011. Proactive and reactive plots: Narratives in entrepreneurial identity construction. *International Journal of Gender and Entrepreneurship* 3: 218–35. [\[CrossRef\]](#)
- Brändle, Leif, Elisabeth S. C. Berger, Stephan Golla, and Andreas Kuckertz. 2018. I am what I am—How nascent entrepreneurs' social identity affects their entrepreneurial self-efficacy. *Journal of Business Venturing Insights* 9: 17–23. [\[CrossRef\]](#)
- Cardon, Melissa S., and Colleen P. Kirk. 2015. Entrepreneurial Passion as Mediator of the Self-Efficacy to Persistence Relationship. *Entrepreneurship: Theory and Practice* 39: 1027–50. [\[CrossRef\]](#)
- Carfora, Valentina, Daniela Caso, Paul Sparks, and Mark Conner. 2017. Moderating effects of pro-environmental self-identity on pro-environmental intentions and behaviour: A multi-behaviour study. *Journal of Environmental Psychology* 53: 92–99. [\[CrossRef\]](#)
- Ceresia, Francesco, and Claudio Mendola. 2019. Entrepreneurial self-identity, perceived corruption, exogenous and endogenous obstacles as antecedents of entrepreneurial intention in Italy. *Social Sciences* 8: 54. [\[CrossRef\]](#)

- Ceresia, Francesco, and Claudio Mendola. 2020. Am I an entrepreneur? Entrepreneurial self-identity as an antecedent of entrepreneurial intention. *Administrative Sciences* 10: 46. [\[CrossRef\]](#)
- Crush, Jonathan, Abel Chikanda, and Godfrey Tawodzera. 2015. The third wave: Mixed migration from Zimbabwe to South Africa. *Canadian Journal of African Studies/Revue Canadienne des études Africaines* 49: 363–82. [\[CrossRef\]](#)
- Dean, Moira, Monique M. Raats, and Richard Shepherd. 2012. The Role of Self-Identity, Past Behavior, and Their Interaction in Predicting Intention to Purchase Fresh and Processed Organic Food. *Journal of Applied Social Psychology* 42: 669–88. [\[CrossRef\]](#)
- Dheer, Ratan J., and Tomasz Lenartowicz. 2018. Multiculturalism and entrepreneurial intentions: Understanding the mediating role of cognitions. *Entrepreneurship Theory and Practice* 42: 426–66. [\[CrossRef\]](#)
- Drnovšek, Mateja, Joakim Wincent, and Melissa S. Cardon. 2010. Entrepreneurial self-efficacy and business start-up: Developing a multi-dimensional definition. *International Journal of Entrepreneurial Behaviour and Research* 16: 329–48. [\[CrossRef\]](#)
- Eagly, Alice H., and Shelly Chaiken. 1993. *The Psychology of Attitudes*. Orlando: Harcourt Brace Jovanovich College Publishers.
- Engle, Robert L., Nikolay Dimitriadis, Jose V. Gavidia, Christopher Schlaegel, Servane Delanoe, Irene Alvarado, Xiaohong He, Samuel Buame, and Birgitta Wolff. 2010. Entrepreneurial intent: A twelve-country evaluation of Ajzen's model of planned behavior. *International Journal of Entrepreneurial Behaviour and Research* 16: 35–57. [\[CrossRef\]](#)
- Fayolle, Alain, and Francisco Liñán. 2014. The future of research on entrepreneurial intentions. *Journal of Business Research* 67: 663–66. [\[CrossRef\]](#)
- Fekadu, Zelalem, and Pål Kraft. 2001. Past behavior and its moderating effects on self-identity-intention relationships. *Social Behavior and Personality* 29: 671–86. [\[CrossRef\]](#)
- Fini, Riccardo, Rosa Grimaldi, Gian Luca Marzocchi, and Maurizio Sobrero. 2009. The Foundation of Entrepreneurial Intention. *Summer Conference* 2009: 1–36.
- Forbes, Daniel P. 2005. The effects of strategic decision making on entrepreneurial self-efficacy. *Entrepreneurship Theory and Practice* 29: 599–626. [\[CrossRef\]](#)
- Frederiksen, Signe Hedeboe, and Karin Berglund. 2020. Identity work in entrepreneurship education: Activating, scripting and resisting the entrepreneurial self. *International Small Business Journal: Researching Entrepreneurship* 38: 271–92. [\[CrossRef\]](#)
- Garson, David G. 2016. *Partial Least Squares: Regression and Structural Equation Models*. Asheboro: Statistical Associates Publishers.
- Gorgievski, Marjan J., Ute Stephan, Mariola Laguna, and Juan Antonio Moriano. 2018. Predicting Entrepreneurial Career Intentions: Values and the Theory of Planned Behavior. *Journal of Career Assessment* 26: 457–75. [\[CrossRef\]](#)
- Gregori, Patrick, Patrick Holzmann, and Erich J. Schwarz. 2021. My future entrepreneurial self: Antecedents of entrepreneurial identity aspiration. *Education and Training* 63: 1175–94. [\[CrossRef\]](#)
- Hair, Joe F., Jr., Marko Sarstedt, Lucas Hopkins, and Volker G. Kuppelwieser. 2014. Partial least squares structural equation modeling (PLS-SEM): An emerging tool in business research. *European Business Review* 26: 106–21. [\[CrossRef\]](#)
- Hand, Chris, Marfuga Iskandarova, and Robert Blackburn. 2020. Founders' social identity and entrepreneurial self-efficacy amongst nascent entrepreneurs: A configurational perspective. *Journal of Business Venturing Insights* 13: 26. [\[CrossRef\]](#)
- Hockerts, Kai. 2015. Antecedents of Social Entrepreneurial Intentions: A Validation Study. *Academy of Management Proceedings* 2013: 16805. [\[CrossRef\]](#)
- Hockerts, Kai. 2017. Determinants of Social Entrepreneurial Intentions. *Entrepreneurship: Theory and Practice* 41: 105–30. [\[CrossRef\]](#)
- Hueso, Juan Alberto, Inmaculada Jaén, and Francisco Liñán. 2021. From personal values to entrepreneurial intention: A systematic literature review. *International Journal of Entrepreneurial Behavior and Research* 27: 205–30. [\[CrossRef\]](#)
- Ip, Ching Yin, Shih-Chia Wu, Huei-Ching Liu, and Chaoyun Liang. 2017. Revisiting the Antecedents of Social Entrepreneurial Intentions in Hong Kong. *International Journal of Educational Psychology* 6: 301–23. [\[CrossRef\]](#)
- Kanyenze, Godfrey, Prosper Chitambara, and Judith Tyson. 2017. *The Outlook for the Zimbabwean Economy*. London: Supporting Economic Transformation.
- Karimi, Saeid. 2020. The role of entrepreneurial passion in the formation of students' entrepreneurial intentions. *Applied Economics* 52: 331–44. [\[CrossRef\]](#)
- Kašperová, Eva, and John Kitching. 2014. Embodying entrepreneurial identity. *International Journal of Entrepreneurial Behaviour and Research* 20: 438–52. [\[CrossRef\]](#)
- Krueger, Norris F. 2003. *The Cognitive Psychology of Entrepreneurship*. Boston: Springer, pp. 105–40.
- Krueger, Norris F. 2017. Entrepreneurial intentions are dead: Long live entrepreneurial intentions. In *Revisiting the Entrepreneurial Mind*. Cham: Springer, pp. 13–34.
- Krueger, Norris F., Jr., Michael D. Reilly, and Alan L. Carsrud. 2000. Competing models of entrepreneurial intentions. *Journal of Business Venturing* 15: 411–32. [\[CrossRef\]](#)
- Krueger, Norris. 2006. So You Thought the Intentions Model Was Simple? Cognitive Style and the Specification of Entrepreneurial Intentions. Paper presented at 2006 USASBE Conference, Tucson, AZ, USA, January 12–16; pp. 1–24.
- Laguna, Mariola. 2013. Self-efficacy, self-esteem, and entrepreneurship among the unemployed. *Journal of Applied Social Psychology* 43: 253–62. [\[CrossRef\]](#)
- Leitch, Claire M., and Richard T. Harrison. 2016. Identity, identity formation and identity work in entrepreneurship: Conceptual developments and empirical applications. *Entrepreneurship and Regional Development* 28: 177–90. [\[CrossRef\]](#)
- Lent, Robert W., Steven D. Brown, and Gail Hackett. 2002. Social cognitive career theory. *Career choice and Development* 4: 255–311.

- Lewis, Kate V. 2016. Identity capital: An exploration in the context of youth social entrepreneurship. *Entrepreneurship and Regional Development* 28: 191–205. [CrossRef]
- Liñán, Francisco, and Alain Fayolle. 2015. A systematic literature review on entrepreneurial intentions: Citation, thematic analyses, and research agenda. *International Entrepreneurship Management Journal* 11: 907–33. [CrossRef]
- Liñán, Francisco, and José Fernandez-Serrano. 2018. Deliverable E3-ELITE Questionnaire for Nascent Entrepreneurs VIE: Cultural Values and Socioeconomics Variables in the Development of Entrepreneurial Intentions View Project Entrepreneurial Intention View Project. Available online: https://www.researchgate.net/publication/323006169_Deliverable_E3-ELITE_Questionnaire_for_nascent_entrepreneurs (accessed on 25 October 2022).
- Liñán, Francisco, and Yi-Wen Chen. 2009. Development and Cross-Cultural Application of a Specific Instrument to Measure Entrepreneurial Intentions. *Entrepreneurship Theory and Practice* 33: 593–617. [CrossRef]
- Liñán, Francisco, Francesco Ceresia, and Antonio Bernal. 2018. Who Intends to Enroll in Entrepreneurship Education? Entrepreneurial Self-Identity as a Precursor. *Entrepreneurship Education and Pedagogy* 1: 222–42. [CrossRef]
- Liñán, Francisco, Juan A. Moriano, and Inmaculada Jaén. 2016. Individualism and entrepreneurship: Does the pattern depend on the social context? *International Small Business Journal: Researching Entrepreneurship* 34: 760–76. [CrossRef]
- Lukeš, Martin, Maria Cristina Longo, and Jan Zouhar. 2019. Do business incubators really enhance entrepreneurial growth? Evidence from a large sample of innovative Italian start-ups. *Technovation* 82–83: 25–34. [CrossRef]
- Lüthje, Christian, and Nikolaus Franke. 2003. The “making” of an entrepreneur: Testing a model of entrepreneurial intent among engineering students at MIT. *R and D Management* 33: 135–47. [CrossRef]
- Malebana, Makgabo J. 2017. Knowledge of entrepreneurial support and entrepreneurial intention in the rural provinces of South Africa. *Development Southern Africa* 34: 74–89. [CrossRef]
- Malebana, Makgabo J., and Elena Swanepoel. 2015. Gender differences in entrepreneurial intention in the rural provinces of South Africa. *Journal of Contemporary Management* 12: 615–37.
- Merriam-Webster. n.d. Self-identity. In *Merriam-Webster.com Dictionary*. Available online: <https://www.merriam-webster.com/dictionary/self-identity> (accessed on 25 October 2022).
- Mohammad, Falahat Nejadmahani, Lau Teck Chai, Law Kian Aun, and Melissa W. Migin. 2014. Emotional Intelligence and Turnover Intention. *International Journal of Academic Research* 6: 211–20. [CrossRef]
- Nabi, Ghulam, Rick Holden, and Andreas Walmsley. 2010. Entrepreneurial intentions among students: Towards a re-focused research agenda. *Journal of Small Business and Enterprise Development* 17: 537–51. [CrossRef]
- Ndofirepi, Takawira. M. 2021. How spatial contexts, institutions and self-identity affect entrepreneurial intentions. *Journal of Entrepreneurship in Emerging Economies* 13: 153–74. [CrossRef]
- Neves, Sara, and Carlos Brito. 2020. Academic entrepreneurship intentions: A systematic literature review. *Journal of Management Development* 39: 645–704. [CrossRef]
- Newbery, Robert, Jonathan Lean, Jonathan Moizer, and Mohamed Haddoud. 2018. Entrepreneurial identity formation during the initial entrepreneurial experience: The influence of simulation feedback and existing identity. *Journal of Business Research* 85: 51–59. [CrossRef]
- Newman, Alexander, Martin Obschonka, Susan Schwarz, Michael Cohen, and Ingrid Nielsen. 2019. Entrepreneurial self-efficacy: A systematic review of the literature on its theoretical foundations, measurement, antecedents, and outcomes, and an agenda for future research. *Journal of Vocational Behavior* 110: 403–19. [CrossRef]
- Ngek-Neneh, Brownhilder. 2020. Studies in Higher Education Entrepreneurial passion and entrepreneurial intention: The role of social support and entrepreneurial self-efficacy. *Studies in Higher Education* 47: 587–603. [CrossRef]
- Obschonka, Martin, Rainer K. Silbereisen, Uwe Cantner, and Maximilian Goethner. 2015. Entrepreneurial Self-Identity: Predictors and Effects Within the Theory of Planned Behavior Framework. *Journal of Business and Psychology* 30: 773–94. [CrossRef]
- Pfeifer, Sanja, Nataša Šarlija, and Marijana Zekić Sušac. 2016. Shaping the entrepreneurial mindset: Entrepreneurial intentions of business students in Croatia. *Journal of Small Business Management* 54: 102–17. [CrossRef]
- Pruett, Mark. 2012. Entrepreneurship Education: Workshops and Entrepreneurial Intentions Entrepreneurship Education: Workshops and Entrepreneurial Intentions. *Journal of Education for Business* 87: 37–41. [CrossRef]
- Reid, Matthew, Paul Sparks, and Donna C. Jessop. 2018. The effect of self-identity alongside perceived importance within the theory of planned behaviour. *European Journal of Social Psychology* 48: 883–89. [CrossRef]
- Rise, Jostein, Paschal Sheeran, and Silje Hukkelberg. 2010. The Role of Self-identity in the Theory of Planned Behavior: A Meta-Analysis. *Journal of Applied Business Research* 40: 1085–105. [CrossRef]
- Santos, Susana C., and Eric W. Liguori. 2020. Entrepreneurial self-efficacy and intentions: Outcome expectations as mediator and subjective norms as moderator. *International Journal of Entrepreneurial Behaviour and Research* 26: 400–15. [CrossRef]
- Schwab, Klaus, and Xavier Sala-i-Martin. 2014. *The Global Competitiveness Report 2014*. Geneva: World Economic Forum.
- Shapero, Albert, and Lisa Sokol. 1982. *The Social Dimensions of Entrepreneurship*. Champaign: University of Illinois at Urbana-Champaign's Academy for Entrepreneurial Leadership Historical Research Reference in Entrepreneurship.
- Shepherd, Dean, and J. Michael Haynie. 2009. Birds of a feather don't always flock together: Identity management in entrepreneurship. *Journal of Business Venturing* 24: 316–37.
- Shonhe, Toendepi. 2019. The agrarian question in contemporary Zimbabwe. *Africanus* 49: 1–24. [CrossRef]

- Sparks, Paul. 2000. Subjective expected utility-based attitude-behavior models: The utility of self-identity. In *Attitudes, Behavior, and Social Context: The Role of Norms and Group Membership*. Edited by Deborah J. Terry and Michael A. Hogg. Hillsdale: Lawrence Erlbaum, pp. 31–46.
- Sparks, Paul, and Carol A. Guthrie. 1998. Self-identity and the theory of planned behavior: A useful addition or an unhelpful artifice? *Journal of Applied Social Psychology* 28: 1393–410. [[CrossRef](#)]
- Sparks, Paul, and Richard Shepherd. 1992. Self-identity and the theory of planned behavior: Assessing the role of identification with “green consumerism.”. *Social Psychology Quarterly* 55: 388–399. [[CrossRef](#)]
- Stets, Jan E., and Peter J. Burke. 2000. Identity theory and social identity theory. *Social Psychology Quarterly* 63: 224–37. [[CrossRef](#)]
- Stryker, Sheldon. 1968. Identity Salience and Role Performance. *Journal of Marriage and the Family* 4: 558–64. [[CrossRef](#)]
- Stryker, Sheldon, and Peter J. Burke. 2000. The Past, Present, and Future of an Identity Theory. *Social Psychology Quarterly* 63: 284–97. [[CrossRef](#)]
- Stryker, Sheldon. 1987. Identity theory: Developments and extensions. In *Self and Identity: Psychosocial Perspectives*. Edited by Krysia Yardley and Terry Honess. New York: John Wiley & Sons, pp. 89–103.
- Surana, Kavita, Anuraag Singh, and Ambuj D. Sagar. 2020. Strengthening science, technology, and innovation-based incubators to help achieve Sustainable Development Goals: Lessons from India. *Technological Forecasting and Social Change* 157: 120057. [[CrossRef](#)]
- Tornikoski, Erno, and Adnane Maalaoui. 2019. Critical reflections—The Theory of Planned Behaviour: An interview with Icek Ajzen with implications for entrepreneurship research. *International Small Business Journal: Researching Entrepreneurship* 37: 536–50. [[CrossRef](#)]
- Vignoles, Vivian L., Camillo Regalia, Claudia Manzi, Jen Golledge, and Eugenia Scabini. 2006. Beyond self-esteem: Influence of multiple motives on identity construction. *Journal of Personality and Social Psychology* 90: 308–33. [[CrossRef](#)] [[PubMed](#)]
- Wagner, Marcus, Stefan Schaltegger, Erik G. Hansen, and Klaus Fichter. 2021. University-linked programmes for sustainable entrepreneurship and regional development: How and with what impact? *Small Business Economics* 56: 1141–58. [[CrossRef](#)]
- Zimmerman, Barry J. 2010. Self-efficacy and educational development. In *Self-Efficacy in Changing Societies*. Cambridge: Cambridge University Press. [[CrossRef](#)]