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EXAMINING THE INFLUENCE OF CONTEXTUAL FACTORS THROUGH PERCEIVED BEHAVIOURAL CONTROL ON ENTREPRENEURIAL INTENTION

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Abstract

This study examines the influence of contextual factors on entrepreneurial intention among university students in Zambia, with perceived behavioural control (PBC) serving as a mediating mechanism. Drawing on the Theory of Planned Behaviour and Institutional Theory, the study investigates how formal networks, informal networks, structural support, and educational support shape students' entrepreneurial intentions. A quantitative research design was adopted, and data were collected from university students in Kitwe, Zambia. The data were analysed using Partial Least Squares Structural Equation Modelling (PLS-SEM) in Jamovi. The findings reveal that contextual factors significantly influence entrepreneurial intention through perceived behavioural control, highlighting the importance of entrepreneurial confidence in translating environmental support into entrepreneurial aspirations. The study further demonstrates that educational, structural, and social support mechanisms play a critical role in fostering entrepreneurial intention among students. This research contributes to entrepreneurship literature by extending the Theory of Planned Behaviour through the mediating role of perceived behavioural control, integrating TPB and Institutional Theory, and providing empirical evidence from Zambia, a context that remains underrepresented in entrepreneurial intention research. The findings offer important implications for policymakers, universities, and entrepreneurship support institutions seeking to promote youth entrepreneurship and graduate self-employment.

Keywords: *Entrepreneurial intention, Perceived behavioural control, Contextual factors, Structural Equation Modelling, Zambia.*

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1.0 Introduction

The global economy continues to face persistent socio-economic challenges, with extreme poverty remaining one of the most pressing issues. Approximately 736 million people survive on less than $2.15 a day (Ozoh et al., 2020), a situation further worsened by the COVID-19 pandemic, which pushed an additional 97 million people into poverty (Agarwala et al., 2022). Zambia is among the countries most affected, with over 58% of its population living below the extreme poverty line of $2.15 per day (Paul et al., 2021). Unemployment remains a key driver of poverty, and in contexts of high unemployment, individuals often experience reduced socio-economic participation and increased vulnerability to insecurity (Sunde, 2026).

In response to these challenges, universities play a critical role in preparing graduates for meaningful economic participation. However, in many developing African countries, a university qualification no longer guarantees immediate employment after graduation (Mwiya et al., 2017, 2026). In Zambia, graduate unemployment remains a major concern, with more than 20% of graduates unemployed and 72.3% of unemployed graduates under 35 (Zambia Labour Force Survey Report, 2013). This situation highlights the urgency of promoting entrepreneurship as a viable pathway for job creation, poverty reduction, and sustainable economic development (Mwiya et al., 2024).

Entrepreneurship is defined as the process of identifying, evaluating, and exploiting opportunities through deliberate effort to create value (Högberg & Mitchell, 2023). It plays a central role in economic transformation by fostering job creation, innovation, and competitiveness (Audretsch et al., 2026). Additionally, entrepreneurship enhances economic development through knowledge transfer, market competition, and increased economic diversity (Barbar, 2026; Meziani & Bekhouche, 2025). Entrepreneurs are therefore essential agents of economic progress, as they initiate ventures that respond to unmet needs through innovation and opportunity recognition (Eftekhari & Bogers, 2015).

Within this context, entrepreneurship education has become increasingly important. Evidence suggests that well-educated entrepreneurs are more likely to establish successful and rapidly growing ventures compared to their less-educated counterparts (Ahmad et al., 2025; Feola et al., 2024). Graduates are also more likely to access both formal and informal funding sources, including government and institutional support systems (Jones et al., 2017; Mainga et al., 2022). In Zambia, business graduates account for 26% of employers compared to only 1% of non-graduates, reinforcing the potential of graduate entrepreneurship in addressing unemployment (Machacha, 2021).

Entrepreneurial intention remains a strong predictor of actual entrepreneurial behaviour and is therefore central to understanding future entrepreneurship outcomes (Baber et al., 2026; Mwiya et al., 2019; Parvaneh, 2011). The Theory of Planned Behaviour (TPB) provides a widely accepted framework for explaining entrepreneurial intention, positing intention as the immediate antecedent of behavior (Ajzen, 1991; Mwiya et al., 2017). Prior studies conducted in countries such as Iran (Karimi et al., 2016a), Pakistan (Saeed et al., 2015), China (Schmodde & Wehner, 2024) and Vietnam (Thanh et al., 2025) have identified various determinants of

entrepreneurial intention, including subjective norms, perceived behavioural control, and contextual influences.

Although these studies provide valuable insights, most evidence originates from Asian and Middle Eastern contexts, which differ significantly from Sub-Saharan African environments in terms of institutional development, labour market conditions, and entrepreneurial ecosystems. More importantly, while contextual factors have been widely examined, limited attention has been given to the mechanisms through which these factors influence entrepreneurial intention among university students in Sub-Saharan Africa. In particular, the mediating role of perceived behavioural control (PBC), as conceptualised using measurement items adapted from Mwiya et al. (2017), remains underexplored in the Zambian context. Furthermore, although several studies on entrepreneurial intention have been conducted in Zambia, a clear niche remains in understanding how specific contextual factors operate through psychological mechanisms to shape entrepreneurial intention among university students. To address this gap, this study focuses on four carefully selected contextual factors grounded in prior TPB and institutional literature, chosen for their relevance to the university environment and their demonstrated influence on entrepreneurial cognition in similar developing-country settings.

This study contributes to entrepreneurship literature in three ways. First, it extends the Theory of Planned Behaviour by examining the mediating role of perceived behavioural control between contextual factors and entrepreneurial intention. Second, it integrates TPB with Institutional Theory to better explain how external environments shape individual entrepreneurial cognition. Third, it provides empirical evidence from Zambia, a context that remains underrepresented in entrepreneurial intention research, thereby enhancing the generalisability of existing theoretical models within Sub-Saharan Africa. The rest of the paper is structured as follows: First, the literature is reviewed, and hypotheses are developed; then, the methods are highlighted before presentation and discussion of results. Lastly, limitations, future directions and conclusions are provided.

2.0 Literature Review and Hypotheses Development

The literature consistently shows that entrepreneurial intention is shaped by contextual factors operating through psychological mechanisms such as perceived behavioural control. Entrepreneurial intention is understood as a cognitive state that precedes new venture creation and reflects a deliberate decision-making process (Mwiya et al., 2019; Valencia et al., 2026). This implies that intention is not spontaneous but is influenced by both individual cognition and environmental conditions.

Contextual factors, defined as the cultural, social, economic, political, and technological environment in which individuals operate (McMullen et al., 2021), have been widely cited as key antecedents of entrepreneurial intention (Parvaneh, 2011). These factors are typically contrasted with internal psychological drivers, such as perceived behavioural control, which reflects an individual's belief in their capability to perform entrepreneurial behaviour (Ajzen, 1991; Tetteh et al., 2025; Xiao et al., 2026). While contextual factors shape opportunity perception, perceived behavioural control determines whether individuals feel capable of acting on those opportunities, thereby linking external conditions to intention formation.

Prior studies comparing different contexts show mixed findings regarding the strength of these relationships. For example, evidence from the United States (Wijenayake et al., 2020), Turkey (Keskiner et al., 2024), and Uganda (Owomugisha

et al., 2025) confirms the relevance of both contextual and psychological determinants, although their effects vary depending on institutional conditions. In Zambia, similar relationships have been observed (Mwiya et al., 2026), yet the evidence remains limited and fragmented. Critically, much of the existing literature is dominated by non-African contexts, with insufficient attention to Zambia's entrepreneurial ecosystem, including regulatory constraints, limited access to finance, and evolving entrepreneurship education policies. This gap justifies further investigation into how contextual factors translate into entrepreneurial intention within the Zambian university environment, particularly through the mediating role of perceived behavioural control.

2.1 Theoretical Background

This section focuses on the theoretical underpinnings and contexts of this study's conceptualisation, highlighting the most relevant and underpinning theories.

2.1.1 Theory of Planned Behaviour

The Theory of Planned Behaviour (TPB), developed by Ajzen (1991), suggests that intention is the most immediate predictor of behaviour. This intention is influenced by three components: attitude toward the behaviour, subjective norms, and perceived behavioural control (PBC). Attitude reflects personal evaluations of entrepreneurship, subjective norms involve perceived social pressure, and PBC represents one's belief in their capacity to perform entrepreneurial tasks (Murire et al., 2026). While TPB has been widely applied in entrepreneurship research globally, there is limited empirical application in Zambia (Mwiya et al., 2017). This study adopts TPB to investigate how contextual factors, through perceived behavioural control, affect entrepreneurial intention. It seeks to fill the gap by analysing the mediating role of PBC in the relationship between context and entrepreneurial intention among university students.

2.1.2 Institutional theory

Institutional theory provides a framework for understanding how formal and informal institutional environments shape individual and organisational behaviour (Berthod, 2018). In entrepreneurship, it explains how regulatory, normative, and cultural-cognitive institutions influence entrepreneurial activity (Urban, 2019). Empirical studies in China, India, Pakistan, and various African countries (e.g., Ghana, Tunisia, South Africa) have confirmed the relevance of Institutional Theory in different socio-economic contexts. However, Zambia remains under-researched in this regard, with only limited contributions by Mwiya et al. (2017). This study adopts Institutional Theory to examine how contextual factors, such as formal and informal networks, shape perceived feasibility and entrepreneurial intention among university students.

2.2 Hypotheses Development and Conceptual Framework

This section presents the development of the hypotheses beginning with formal networks, informal networks, structural support, educational support, and perceived behavioural control, and how they may be related to entrepreneurial intention.

2.2.1 Formal Networks and Perceived Behavioural Control

Formal networks, including banks, trade associations, and consultancy services, provide structured institutional support that enhances entrepreneurial capability and reduces uncertainty (Saridakis et al., 2026). Within the Theory of Planned

Behaviour, perceived behavioural control (PBC) reflects an individual's belief in their ability to perform entrepreneurial behaviour based on available resources and opportunities (Ajzen, 1991).When students are connected to formal support systems, they are more likely to perceive entrepreneurship as feasible due to improved access to finance, mentorship, and legitimacy (Mothibi et al., 2025). Empirical findings are mixed, with (Marsal et al., 2024) reporting no significant effect, while (Makuya & Mfumbilwa, 2024) found positive relationships. In Zambia, limited evidence exists, although institutional barriers remain prominent. Therefore, formal networks are expected to strengthen students' control beliefs. Accordingly, we propose the following hypothesis:

H_1: Formal networks have a significant influence on perceived behavioural control.

2.2.2 Informal Networks and Perceived Behavioural Control

Informal networks, such as family, friends, and peer groups, provide emotional encouragement, advice, and informational support that shape entrepreneurial confidence (Pugalia et al., 2020). From a TPB perspective, these social interactions influence perceived behavioural control by reducing perceived risk and increasing self-efficacy in entrepreneurial tasks (Vamvaka et al., 2020). Strong informal ties are particularly important in uncertain environments, where students rely on close relationships for guidance and motivation (Yu & Leung, 2024). Empirical evidence supports this relationship, with Mumtaz et al. (2025) in Nigeria and Mwiya. et al. (2024) in Zambia confirming positive effects. However, variations across contexts suggest that the strength of informal support depends on socio-cultural conditions. In Zambia, such networks remain critical due to limited formal entrepreneurial infrastructure. Therefore, it is hypothesised as follows:

H_2: Informal networks have a significant influence on perceived behavioural control.

2.2.3 Structural Support and Perceived Behavioural Control

Structural support refers to institutional and policy-related conditions such as regulatory frameworks, financial access, and government support systems that shape entrepreneurial environments. Within TPB, such contextual conditions indirectly influence behaviour by shaping perceived behavioural control, which reflects perceived ease or difficulty of performing entrepreneurial actions (Ajzen, 1991). Supportive structures reduce barriers, increase resource accessibility, and enhance confidence in starting businesses (Mwiya & Chanda, 2022). However, empirical findings are inconsistent; Otchengco and Akiate (2021) found a significant relationship in Turkey, whereas Xiong and Sun (2025) reported no effect. This contrast suggests contextual dependency of institutional support. In Zambia, structural challenges such as limited financing and regulatory constraints may weaken perceived behavioural control, making this relationship particularly relevant. Therefore, the study posits as follows:

H_3: Structural support has a significant influence on perceived behavioural control.

2.2.4 Educational Support and Perceived Behavioural Control

Educational support, particularly entrepreneurship education, equips students with the knowledge, skills, and exposure necessary for venture creation (Gangi, 2017). According to TPB, perceived behavioural control is strengthened when individuals feel competent and capable of performing entrepreneurial tasks (Ajzen, 1991). Entrepreneurship education enhances self-efficacy by reducing uncertainty and building practical skills (Ozaralli & Rivenburgh, 2016). Empirical evidence from Liu

et al. (2025), Majd et al. (2024) and Karimi et al. (2016) confirms a positive relationship between education and perceived behavioural control. Nevertheless, effectiveness may vary depending on curriculum quality and experiential learning opportunities. In Zambia, entrepreneurship education is expanding but remains uneven across institutions, making its influence on perceived control an important area of inquiry. We therefore postulate as follows:

H_4: Educational support has a significant influence on perceived behavioural control.

2.2.5 Perceived Behavioural Control and Entrepreneurial Intention

Perceived behavioural control (PBC) refers to an individual's perceived ease or difficulty in performing entrepreneurial behaviour, based on skills, resources, and ability to overcome constraints (Muda et al., 2025). Within the Theory of Planned Behaviour, PBC is a direct predictor of intention because individuals are more likely to act when they believe they can successfully perform the behaviour. Empirical studies in Singapore (Hagger et al., 2022), Saudi Arabia (Al-Mamary & Alraja, 2022), and Zambia (Mwiya et al., 2017) consistently confirm this positive relationship. However, the strength of effect may vary depending on environmental support and individual experience. In developing contexts like Zambia, perceived capability becomes even more critical due to institutional constraints and limited entrepreneurial resources. Therefore, the study suggests the following:

H_5: Perceived behavioural control has a significant influence on entrepreneurial intention.

2.2.6 The mediating role of Perceived Behavioural Control

Perceived behavioural control (PBC) is proposed as a key mediating mechanism through which contextual factors influence entrepreneurial intention (EI). The Theory of Planned Behaviour (TPB) explains intention as being shaped not only by attitudes and subjective norms, but also by individuals' perceived ability to perform a behaviour under given conditions (Ajzen, 1991). In this study, contextual factors such as formal networks, informal networks, structural support, and educational support represent external environmental conditions that may facilitate or constrain entrepreneurial action (Parvaneh, 2011). However, their influence on entrepreneurial intention is not direct or automatic. Contextual support mechanisms do not automatically translate into entrepreneurial intention. Rather, they shape individuals' beliefs regarding their capability to perform entrepreneurial tasks, making PBC the psychological mechanism through which environmental conditions are transformed into entrepreneurial intentions.

Empirical evidence provides support for this mediating role, although findings vary across contexts. Studies in Turkey (Durmaz et al., 2024) and Iran (Karimi et al., 2016) show that institutional and educational support influence entrepreneurial intention mainly through enhanced perceived behavioural control. Similarly highlights the importance of perceived capability in linking contextual conditions to entrepreneurial outcomes. In the Zambian context, where regulatory constraints, limited access to finance, and uneven entrepreneurship education persist, students may be exposed to supportive structures but still not pursue entrepreneurship if they lack confidence in their abilities (Matoka & Mwange, 2024). This justifies integrating TPB with Institutional Theory, as institutional conditions shape cognitive perceptions that ultimately drive intention. Therefore, PBC functions as the critical bridge converting contextual support into entrepreneurial intention. We therefore theorise as follows:

H_6: Perceived behavioural control significantly mediates the relationship between contextual factors and EI.

2.3 Conceptual Framework

Based on the foregoing hypotheses, the conceptual Model in Figure 1 below reflects the direction of influence in the relationships being explored.

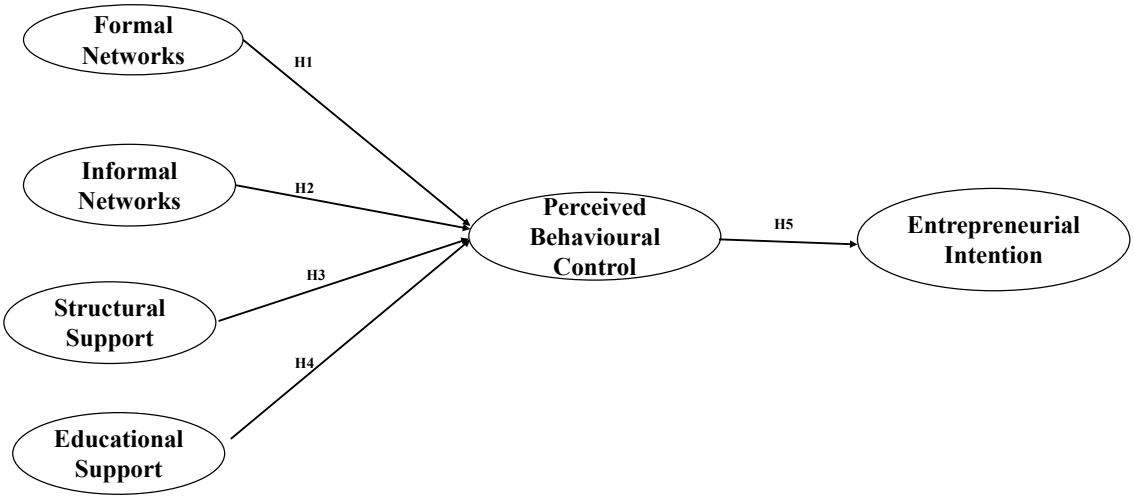


Figure 1: Conceptual Framework

3.0 Methods and Measurements

3.1 Population, unit of analysis, and sample

This study adopted a quantitative research design to examine the relationships among contextual factors, perceived behavioural control, and entrepreneurial intention. The approach is grounded in positivism and focuses on hypothesis testing, objective measurement, and generalisable findings (Creswell, 2013). A structured questionnaire was used to collect primary data, consisting of closed-ended items measured on a five-point Likert scale, which was preferred due to its simplicity, higher response rate, and reduced respondent fatigue compared to longer scales. The target population comprised approximately 20,000 university students in Kitwe, Zambia. Using the Raosoft sample size calculator at a 5% margin of error, 95% confidence level, and 50% response distribution, a minimum sample of 377 respondents was recommended; however, 380 usable responses were collected to ensure adequacy and representation. A simple random sampling technique was applied to reduce selection bias and ensure an equal chance of participation. Ethical considerations were observed through voluntary participation, informed consent, confidentiality assurance, and anonymity of respondents. A pilot test was conducted to refine questionnaire clarity and ensure content validity before full data collection. The resulting sample profile is shown in Table 1.

Table 1: Sample Profile

Variable	Description	Frequency	Percent	Valid percent	Cumulative percent
Gender	Male	234	61.6	61.6	61.6
	Female	146	38.4	38.4	100.0
Age-group	16-20 years	50	13.2	13.2	13.2
	21-25 years	301	79.2	79.2	92.4
	26-30 years	22	5.80	5.80	98.2
	31-34 years	6	1.60	1.60	99.7
	35 and Above	1	0.30	0.30	100.0
School type	Business	282	74.2	74.2	74.2
	Non-Business	98	25.8	25.8	100.0
Study mode	Full-time	364	95.8	95.8	95.8
	Evening	15	3.90	3.90	99.7
	Distance	1	0.30	0.30	100.0
Sponsorship	GRZ	281	73.9	73.9	73.9
	Self (Guardian)	99	26.1	26.1	100.0
Sponsorship level	100%	170	44.7	44.7	44.7
	75%	106	27.9	27.9	72.6
	50%	6	1.60	1.60	74.2
	Not applicable	98	25.8	25.8	100.0
Mother occupation	Public sector employee	100	26.3	26.3	26.5
	Private sector employee	101	26.6	26.6	52.9
	Retired	58	15.3	15.3	68.2
	Unemployed	45	11.8	11.8	80.0
	An entrepreneur	76	20.0	20.0	100.0
Father occupation	Public sector employee	112	29.5	29.5	29.5
	Private sector employee	109	28.7	28.7	58.2
	Retired	68	17.9	17.9	76.1
	Unemployed	29	7.60	7.60	83.7
	An entrepreneur	62	16.3	16.3	100.0
Entrepreneurship education	Yes	157	41.3	41.3	41.3
	No	223	58.7	58.7	100

Data were analysed using Jamovi software with Partial Least Squares Structural Equation Modelling (PLS-SEM) to test both measurement and structural models simultaneously (Hair and Alamer, 2022). PLS-SEM was considered appropriate due

to its predictive orientation, suitability for complex models, and ability to handle latent constructs with minimal distributional assumptions (Arunraju, 2025). The analysis followed a two-step approach, beginning with assessment of the measurement model using Harman's single-factor test, factor loadings, Cronbach's alpha, composite reliability, and average variance extracted (AVE), followed by discriminant validity using HTMT criteria. Bootstrapping with 5,000 resamples was employed to test the significance of path coefficients, t-values, and p-values at a 95% confidence interval. This procedure enhances the robustness and reliability of estimates. Jamovi's PLS-SEM capability is particularly useful in exploratory research as it integrates measurement and structural model evaluation while maintaining predictive accuracy.

4.0 Results

The measurement model explains how endogenous and exogenous constructs are measured through observed indicators. Six constructs with reflective indicators were assessed for reliability and validity using factor loadings, indicator reliability, internal consistency, and convergent and discriminant validity. Appendix A shows the measurement items. To mitigate common method bias (CMB), both procedural and statistical remedies were applied, including ensuring respondent anonymity, improving item clarity, and separating items conceptually (Podsakoff et al., 2024). Additionally, Harman's single-factor test and marker variable techniques were used to detect bias, in line with (Podsakoff et al., 2024). The evaluation of common method variance (CMV) using the Harman single-factor test has been carried out, and the variance value is 28.943%. If the percentage variance is below 50%, then it can be said that the measurement of the research indicators has a bias (Pangarso et al., 2020).

Exploratory Factor Analysis (EFA) was performed using Principal Component Analysis (PCA) with and without Varimax rotation. Table 2 states the results of the Harman single-factor test for CMV testing with Bartlett's Sphericity at Chi-square (x^2) = 5791.584, df = 378, $p<0.001$ and KMO Measure of Sample adequacy at 0.898 in the acceptable range for factor analysis. In Bartlett's Sphericity, a significant result gives confidence that the correlations within the data are meaningful and not just random chance, making the dataset suitable for factor analysis. The KMO test assesses whether the data are suitable for factor analysis by comparing observed correlations to partial correlations. A high KMO value indicates strong correlations between variables, making factor analysis appropriate (0.80 to 1 is high, 0.70 middle, below 0.50 unacceptable).

Table 2: Harman single factor test Total Variance Explained

Initial Eigenvalues			
Component	**Eigenvalue**	**% of Variance**	**Cumulative %**
1	8.104	28.943	28.943
2	3.626	12.95	41.892
3	2.656	9.484	51.377
4	1.692	6.043	57.42
5	1.448	5.171	62.591
6	1.141	4.074	66.665
7	0.98	3.502	70.166
8	0.735	2.625	72.791

9	0.669	2.391	75.181
10	0.603	2.155	77.336
11	0.56	2.002	79.338
12	0.543	1.939	81.277
13	0.505	1.804	83.081
14	0.485	1.732	84.813
15	0.459	1.639	86.452
16	0.449	1.605	88.057
17	0.409	1.46	89.517
18	0.363	1.298	90.815
19	0.329	1.176	91.991
20	0.314	1.122	93.113
21	0.304	1.087	94.2
22	0.287	1.024	95.224
23	0.264	0.941	96.165
24	0.256	0.913	97.078
25	0.23	0.822	97.9
26	0.216	0.772	98.672
27	0.188	0.672	99.344
28	0.184	0.656	100

In Table 3, the measurement model demonstrates strong reliability and validity, with most outer loadings exceeding the recommended threshold (Floyd & Widaman, 1995). Factor loadings below 0.40 do not contribute meaningfully to the model and are therefore removed, according to guidelines by Hair and Alamer (2022). In this study, one item belonging to the Structural Support variable (SS2) had a loading below 0.40 and was consequently excluded from the model. Although some lower loadings may indicate potential measurement issues that require further refinement, such indicators can be re-specified to ensure (Wipulanusat *et al.*, 2017). Overall, the dominance of high loading values affirms the construct validity and provides sufficient justification to proceed with hypothesis testing.

Table 3: Factor Loadings

Construct	Items	Loadings
Formal networks	FN1	0.705
	FN2	0.816
	FN3	0.840
	FN4	0.815
Informal networks	IN1	0.711
	IN2	0.889
	IN3	0.701
	IN4	0.594
	IN5	0.633
Structural support	SS1	0.657

	SS3	0.642
	SS4	0.669
Educational support	ES1	0.774
	ES2	0.883
	ES3	0.802
Perceived behavioral control	PBC1	0.462
	PBC2	0.717
	PBC3	0.824
	PBC4	0.877
	PBC5	0.797
	PBC6	0.714
Entrepreneurial intention	EI1	0.584
	EI2	0.671
	EI3	0.813
	EI4	0.888
	EI5	0.860
	EI6	0.867

4.1 Construct validity test results

The results presented in Table 4 indicate strong internal consistency reliability across all constructs. Cronbach's alpha values exceeded the recommended threshold of 0.60 for social science research, demonstrating acceptable reliability according to George and Mallery (2018). Furthermore, composite reliability (CR) values ranged from 0.670 to 0.901, confirming satisfactory internal consistency among the measurement items. Convergent validity was assessed using the Average Variance Extracted (AVE), with most constructs meeting the recommended threshold. Although the AVE value for structural support was slightly below 0.50, convergent validity may still be considered acceptable when composite reliability exceeds 0.60 (Henseler et al., 2015). Nevertheless, this construct may require further refinement in future studies.

Table 4: Reliability and Convergent Validity

Variable	Cronbach's alpha	Composite Reliability	Average Variance Extracted (AVE)
Education Support	0.878	0.881	0.712
Structural Support	0.630	0.670	0.373
Informal Networks	0.839	0.843	0.519
Formal Networks	0.876	0.878	0.645
Perceived Behavioral Control	0.872	0.879	0.557
Entrepreneurial Intention	0.903	0.901	0.605

Furthermore, items and constructs exhibiting a Variance Inflation Factor (VIF) score higher than 5 would indicate potential multicollinearity concerns (Magno et al., 2024). However, as detailed in Table 5, the VIF scores for all constructs remained lower than the threshold of concern. Specifically, the VIF scores were between 1.170

and 1.470, which were comfortably within the acceptable range, suggesting that multi-collinearity was not an issue (Hair et al., 2019; Magno et al., 2024).

Table 5: Multi-Collinearity Test (VIF)

	VIF
Educational Support	1.330
Structural Support	1.470
Informal Networks	1.170
Formal Networks	1.430

The HTMT criterion has recently gained prominence, replacing the (Fornell & Larcker, 1981) criterion, as it provides a more comprehensive and less restrictive measure of discriminant validity. The primary objective of HTMT is to assess whether the ratio approaches 1, with values closer to 1 indicating weaker discriminant validity. According to Henseler (2018), recommended threshold values are 0.85 and 0.90. The results presented in Table 6 indicate that all HTMT values are below the 0.85 threshold, thereby confirming discriminant validity.

Table 6: Heterotrait-monotrait ratio (HTMT)

	Construct	1	2	3	4	5	6
1	Education Support (ES)						
2	Structural Support (SS)	0.656					
3	Informal Networks (IN)	0.261	0.153				
4	Formal Networks (FN)	0.380	0.636	0.412			
5	Perceived Behavioural Control (PBC)	0.551	0.535	0.348	0.326		
6	Entrepreneurial Intention (EI)	0.287	0.022	0.364	0.098	0.529	

The mean, standard deviation (SD), and correlation coefficients for all four study constructs are presented in Table 7. The results indicate that structural support ($r = 0.118$, $p < 0.05$), formal networks ($r = 0.188$, $p < 0.05$), educational support ($r = 0.261$, $p < 0.001$), and informal networks ($r = 0.320$, $p < 0.001$) all exhibit significant and positive correlations with perceived behavioural control. In addition, the correlations Table 7 below shows various correlations which can be interpreted using (Cohen, 1988) criteria of small = 0.10 to 0.29, medium = 0.30 to 0.49, and large = 0.50 to 1.00. Therefore, structural support ($r = 0.188$, $p < 0.001$) and educational support ($r = 0.188$, $p < 0.001$), formal networks ($r = 0.261$, $p < 0.001$) have a small effect size, while informal networks ($r = 0.320$, $p < 0.001$) have medium effect sizes. It is seen that perceived behavioural control improves the levels of entrepreneurial intention of students ($r = 0.475$, $p < 0.001$). Perceived behavioural control shows a positive correlation with entrepreneurial intention and has a medium effect size.

Table 7: Correlations among all variables

#	Variable	Mean	Std Dev	N	1	2	3	4	5	6
1	Entrepreneurial Intention	4.175	0.734	380	—					

2	Perceived Behavioral Control	3.704	0.85	380	0.476**	—				
3	Structural Support	3.342	0.817	380	0.118*	0.400**	—			
4	Formal Networks	3.487	0.921	380	0.118*	0.299**	0.457**	—		
5	Educational Support	3.579	1.081	380	0.261**	0.496**	0.464**	0.340**	—	
6	Informal Networks	3.822	0.841	380	0.320**	0.296**	0.158*	0.357**	0.233**	—

.* $p < .05$, ** $p < .01$, *** $p <. 001$

4.2 Interpretation of hypothesis testing outcomes

Having established the reliability, convergent validity, discriminant validity, and absence of multicollinearity concerns, the study proceeded to evaluate the structural model and test the proposed hypotheses. The hypothesis testing results, illustrated in Figure 2 and detailed in Table 8, conform to the standard that a hypothesis is supported when the t-value surpasses 1.65 or is below 0.10 (Hair et al., 2019).

Figure 2 shows that most t-values are greater than 1.65, indicating statistical significance, while the formal network construct has a t-value below 1.65, indicating non-significance. The findings are consistent with the path coefficients presented in Table 8, showing that formal networks do not significantly influence perceived behavioural control (β = 0.025, t = 0.523, p = 0.601). Similarly, the relationship between informal networks and perceived behavioural control is statistically significant (β = 0.175, t = 3.741, p = 0.001). Structural support also positively influences perceived behavioural control (β = 0.204, t = 3.774, p = 0.001), while educational support is significantly associated with perceived behavioural control (β = 0.280, t = 7.201, p = 0.001). Perceived behavioural control also significantly influences entrepreneurial intention (β = 0.412, t = 10.500, p = 0.001). Overall, the results highlight the important role of perceived behavioural control in shaping students' entrepreneurial intentions.

Thus, the hypotheses, according to the results, are confirmed as follows:

H_1: Formal networks have a significant influence on perceived behavioural control. The hypothesis is not supported.

H_2: Informal networks have a significant influence on perceived behavioural control. This hypothesis is supported.

H_3: Structural support has a significant influence on perceived behavioural control. The hypothesis is supported.

H_4: Educational support has a significant influence on perceived behavioural control. The hypothesis is supported.

H_5: Perceived behavioural control has a significant influence on entrepreneurial intention. The hypothesis is supported.

Table 8: Path Coefficients in the Structural Model

Path	Path Coefficient (β)	Standard Error	T-value	P values
Structural Support→ Perceived Behavioral Control	0.204	0.054	3.774	0.001
Formal Networks→ Perceived Behavioral Control	0.025	0.047	0.523	0.601
Educational Support→ Perceived Behavioral Control	0.280	0.039	7.201	0.001
Informal Networks →Perceived Behavioral Control	0.175	0.047	3.741	0.001
Perceived Behavioral Control→ Entrepreneurial Intention	0.412	0.039	10.500	0.001

The statistical analysis presented in Table 9 provides insights into the model's explanatory power and predictive relevance regarding perceived behavioural control. The R^2 value is 0.402, indicating that 40.2% of the variance in the dependent variable is explained by the model, reflecting moderate explanatory power. According to Cohen (1992), R^2 values of 0.25, 0.50, and 0.75 represent weak, moderate, and substantial effect sizes, respectively. The SRMR, a residual fit index, assesses the discrepancy between observed and predicted correlations. Values below 0.05 indicate an excellent fit, while values between 0.05 and 0.08 indicate an acceptable fit. The SRMR value of 0.054 suggests an excellent model fit. However, as noted by Nordhoff et al. (2021), fit indices may vary depending on model complexity; therefore, multiple evaluation criteria should be considered when assessing model quality. Overall, the results indicate satisfactory model performance.

Table 9: R-squared and SRMR

Explanatory R^2	Model fit (SRMR)
PBC 0.402 EI 0.309	Contextual Factors -> PBC -> EI 0.054

4.3 The Mediating Role of Perceived Behavioural Control

Mediation analysis is crucial for understanding how an independent variable influences a dependent variable through a mediator. According to Baron and Kenny (1986), full mediation occurs when the direct effect of the independent variable X becomes insignificant ($p > 0.05$) once the mediating variable M is introduced. On the other hand, a partial mediation is deemed to have occurred if the relationship between the independent variable X and the dependent variable Y is still significant after controlling for the effects of the mediating variable M. Furthermore, a variable can be regarded as a mediator if it transfers the impact of a particular independent variable (IV) to a certain dependent variable (DV). In this study, perceived behavioural control (PBC) was examined as a mediating variable between structural support, educational support, formal networks, informal networks, and entrepreneurial intention. Using bootstrapping mediation analysis in Jamovi, several significant direct and indirect effects were identified, as summarised in Table 10.

The results indicate that for formal networks, the total effect was statistically significant (path c: FN → EI, β = 0.094, p = 0.020, LLCI = 0.014, ULCI = 0.173), while the indirect effect was also statistically significant (path ab: FN → PBC → EI, β = 0.115, p = 0.001, LLCI = 0.072, ULCI = 0.158). The direct effect became statistically insignificant after the inclusion of the mediator (path c′: FN → EI, β = −0.021, p = 0.572, LLCI = −0.095, ULCI = 0.052). According to Baron and Kenny (1986), these findings indicate full mediation. The VAF value of 100% further suggests that the effect of formal networks on entrepreneurial intention is entirely transmitted through perceived behavioural control.

For informal networks, the total effect was statistically significant (path c: IN → EI, β = 0.279, p = 0.001, LLCI = 0.196, ULCI = 0.362), while the indirect effect was also statistically significant (path ab: IN → PBC → EI, β = 0.108, p = 0.001, LLCI = 0.066, ULCI = 0.150). Since the direct effect remained statistically significant after introducing the mediator, perceived behavioural control partially mediates the relationship between informal networks and entrepreneurial intention (path c' i.e. IN -> EI, β= 0.171, p=0.001, LLCI 0.092, ULCI 0.250), with a VAF value of 38.7%.

The structural support show that the total effect was statistically significant (path c, i.e. SS -> EI β = 0.106, p = 0.020, LLCI = 0.017, ULCI = 0.196), indirect effect was statistically significant (path ab, i.e. SS ->PBC -> EI, β=0.184, p=0.001, LLCI= 0.129, ULCI= 0.239), with variance accounted for (VAF) at 100% since the direct effect was statistically insignificant (path c' i.e. SS -> EI, β= -0.077, p< 0.079, LLCI= -0.164 ULCI= 0.009), signifying full mediation. Education support show that the total effect was statistically significant (path c, i.e. ES-> EI β = 0.177, p = 0.001, LLCI = 0.111, ULCI = 0.199), indirect effect was statistically significant (path ab, i.e. ES ->PBC -> EI, β=0.155, p=0.001, LLCI= 0.111, ULCI= 0.243), with variance accounted for (VAF) at 87.6% since the direct effect was statistically insignificant (path c' i.e. ES -> EI, β=-0.022, p=0.534, LLCI= -0.047 ULCI=0.091), signifying full mediation. The VAF entails that 87.6% of the influence of X on Y is transmitted through the indirect effect (i.e. indirect effect divided by total effect). These findings highlight the crucial role of perceived behavioural control as a mediator, demonstrating the complex interactions between key determinants influencing entrepreneurial intention both directly and indirectly.

Table 10: Mediation Results

Procedure	Path	Total effect	Direct effect	Indirect effect	P-Values	boot LLCI	boot ULCI	VAF	Hypotheses
X on Y with M present	FN -> EI (c')		-0.021		0.572	-0.095	0.052		
X on Y	FN -> EI (c)	0.094			0.020	0.014	0.173		
X on Y via M	FN ->PBC -> EI (ab)			0.115	0.001	0.072	0.158	100%	S
X on Y with M present	IN -> EI (c')		0.171		0.001	0.092	0.250		
X on Y	IN -> EI (c)	0.279			0.001	0.196	0.362		
X on Y via M	IN ->PBC -> EI (ab)			0.108	0.001	0.066	0.150	38.7%	S
X on Y with M present	SS-> EI (c')		-0.077		0.079	-0.164	0.009		
X on Y	SS -> EI (c)	0.106			0.020	0.017	0.196		
X on Y via M	SS ->PBC -> EI (ab)			0.184	0.001	0.129	0.239	100%	S
X on Y with M present	ES -> EI (c')		0.022		0.534	-0.047	0.091		
X on Y	ES -> EI (c)	0.177			0.001	0.243	0.199		
X on Y via M	ES ->PBC-> EI (ab)			0.155	0.001	0.111	0.199	87.6%	S



Figure 2. Results of SEM Model using Jamovi

5.0 Discussion and Implications

The findings of this study provide important insights into the influence of contextual factors on entrepreneurial intention among university students in Kitwe, Zambia. The results indicate that informal networks, structural support, and educational support significantly influence perceived behavioural control (PBC), while formal networks do not directly influence PBC. Furthermore, PBC significantly influences entrepreneurial intention, confirming its central role within the Theory of Planned Behaviour (TPB). The moderate explanatory power of the model ($R^2 = 0.402$) suggests that contextual factors explain a substantial proportion of the variation in students' perceived control over entrepreneurial behaviour.

The significant effect of informal networks supports previous studies by Suseno and Horak (2024) and Mwiya et al. (2024), which emphasise the importance of family, friends, and social relationships in shaping entrepreneurial confidence. In the Zambian context, where family and social ties often influence career decisions, informal support systems appear to strengthen students' confidence to engage in entrepreneurial activities. Similarly, the positive effects of structural support and educational support are consistent with the findings of Abdullahi et al. (2021), Jalili et al. (2026), and Yesmin et al. (2024), suggesting that favourable institutional

environments and entrepreneurship education enhance individuals' perceived capability to start a business.

In contrast, formal networks did not significantly influence PBC; therefore, H1 was not supported. This also indicates that formal networks failed to exert a significant indirect influence on entrepreneurial intention through PBC in this sample. This finding contrasts with studies conducted in Iran (Khalafi, 2024) and Herzegovina (Rankhumise et al., 2023), which reported positive relationships between formal networks and entrepreneurial perceptions. The result may reflect the Zambian entrepreneurial environment, where university students may have limited interaction with banks, professional associations, and business support organisations or perceive such institutions as less accessible during the early stages of venture development (Mwiya et al., 2019). Consequently, informal, structural, and educational support mechanisms appear more relevant in strengthening students' PBC.

The mediating role of PBC constitutes one of the study's major theoretical contributions. The findings demonstrate that contextual support mechanisms do not automatically translate into entrepreneurial intention (Nazir et al., 2026). Rather, environmental conditions influence students' beliefs regarding their ability to perform entrepreneurial activities, which subsequently shape entrepreneurial intention. This supports the Theory of Planned Behaviour by confirming PBC as a critical psychological mechanism linking external factors to entrepreneurial intention (Chawala et al., 2022). Simultaneously, Institutional Theory explains how formal and informal institutional environments shape individual perceptions and behaviours. By integrating TPB and Institutional Theory, the study demonstrates that institutional conditions influence entrepreneurial intention indirectly through cognitive processes, thereby extending entrepreneurship literature within a developing-country context (Maradiaga et al., 2026).

The study also provides practical implications for policymakers, universities, and entrepreneurship support institutions in Zambia. Universities should strengthen entrepreneurship education through experiential learning, mentorship programmes, business incubation centres, and industry partnerships. Government agencies and financial institutions should improve access to entrepreneurial support services and create regulatory environments that encourage youth entrepreneurship. Strengthening both institutional and social support systems can enhance students' perceived behavioural control, thereby increasing entrepreneurial intention and contributing to employment creation and economic development in Zambia.

6.0 Limitations and Future Research

Despite the many valuable insights, like any other study (Mwiya, 2006), this research has some limitations. First, the focus on university students in Kitwe may limit the generalisability of the findings to other regions and non-student populations in Zambia. Second, the cross-sectional research design restricts the ability to establish causal relationships among the variables. Future studies may adopt longitudinal designs to examine how entrepreneurial intentions evolve. Additionally, qualitative approaches could provide deeper insights into the contextual and psychological factors influencing entrepreneurial intention. Future research should also expand the sample to include diverse demographic groups, geographical regions and aspects of innovation (Mwiya, 2012). Furthermore, while this study focused on perceived behavioural control as the mediating mechanism, future studies may incorporate the other core dimensions of the Theory of Planned Behaviour, namely attitude towards

entrepreneurship and subjective norms (Chawala et al., 2022), to provide more understanding of entrepreneurial intention formation.

Despite its contributions, this study has several limitations. First, its focus on university students in Kitwe may limit the generalisability of the findings to other regions and non-student populations in Zambia. Second, the cross-sectional design restricts the ability to establish causal relationships among the variables. Future studies could adopt longitudinal designs to examine changes in entrepreneurial intentions over time, while qualitative approaches could provide deeper insights into contextual and psychological influences. Future research should also include diverse demographic groups, geographical regions, and aspects of innovation (Mwiya, 2012). Importantly, further studies should investigate why formal networks failed to significantly influence PBC and entrepreneurial intention through PBC in this sample, including possible barriers to students' engagement with financial institutions, professional associations, and entrepreneurship support organisations. Finally, future studies may incorporate attitude towards entrepreneurship and subjective norms alongside PBC (Chawala et al., 2022) to provide a more comprehensive application of TPB.

7.0 Conclusion

This study examined the influence of contextual factors on entrepreneurial intention among university students in Kitwe, with PBC as the mediating mechanism. The findings demonstrate that informal networks, structural support, and educational support significantly influence PBC, which in turn significantly influences entrepreneurial intention. In contrast, formal networks did not significantly influence PBC, and H1 was therefore unsupported. Accordingly, formal networks failed to exert a significant indirect influence on entrepreneurial intention through PBC in this sample. The findings reinforce the importance of strengthening educational, structural, and informal support mechanisms while improving students' access to and engagement with formal entrepreneurial networks. Overall, the study contributes to the integration of TPB and Institutional Theory by demonstrating that the influence of contextual conditions on entrepreneurial intention depends on their capacity to strengthen individuals' perceived behavioural control.

Appendix A: Measurement items

Variables	Descriptions	Sources
Formal Networks	FN1 To start entrepreneurship activities, I will get benefit from an experienced consultant. FN2 To start entrepreneurship activities, I will get benefit from the country's entrepreneurs' network. FN3 To establish a business plan, I will get benefits from agencies related to entrepreneurship activities. FN4 To start entrepreneurship activities, I will get benefit from the customer and supplier networks.	(Parvaneh, 2011)
Informal Networks	IN1 If I decide to be an entrepreneur, my parents will support me. IN2 If I decide to be an entrepreneur, my family members will support me. IN3 If I decide to be an entrepreneur, I will consult my family members. IN4 If I decide to be an entrepreneur, my friends will support me. IN5 If I decide to become an entrepreneur, my families will give me emotional support	(Parvaneh, 2011)
Structural Support	SS1 In Zambia, the government encourages entrepreneurs to establish a firm. SS2 State laws (rules and regulations) are averse to running a business. SS3 Tax regulation gives facilities to entrepreneurs. SS4 The Zambian economy provides many opportunities for entrepreneurs.	(Parvaneh, 2011)
Educational Support	ES1 The education at university encourages me to develop ideas of being an entrepreneur. ES2 My university provides the necessary knowledge about entrepreneurship. ES3 My university develops my entrepreneurial skills and abilities.	(Parvaneh, 2011)
Perceived Behavioral Control	PBC1 To start a firm and keep it working would be easy for me. PBC2 I am prepared to start a viable firm. PBC3 I can control the creation process of a new firm. PBC4 I know the necessary practical details to start a firm. PBC5 I know how to develop an entrepreneurial project.	(Mwiya et al., 2017)
Entrepreneurial Intention	EI1 I am ready to do an entrepreneurial. EI2 My professional goal is to become an entrepreneur. EI3 I will make every effort to start and run my own firm.	(Parvaneh, 2011)

	EI4 I am determined to create a firm in the future. EI5 I have seriously thought about starting a firm. EI6 I have got the firm intention to start a firm someday.

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