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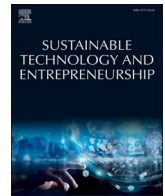
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## Full Length Article

# From perceived parental entrepreneurial passion to technopreneurship intention: The moderating role of perseverance and perceived parental entrepreneurial rewards

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## ABSTRACT

In light of significant advancements in both theoretical and practical aspects of technopreneurship, supported by empirical research, there remains an unexplored area within the academic domain pertaining to the impact of perceived parents' entrepreneurial passion towards a career in technopreneurship and technopreneurship intention among Generation Z students remains unexplored in the academic domain. This study thus aims to examine how perceived parents' entrepreneurial passion, perceived desirability and perceived feasibility would stimulate attitude towards a career in technopreneurship and technopreneurship intention among Generation Z students in Zimbabwe. It is based on a nomothetic quantitative methodology, where a survey was applied to collect responses from Generation Z university students in the Harare Metropolitan Province of Zimbabwe. Through structural equation modelling, the findings are validated, confirming that perceived parents' entrepreneurial passion, perceived desirability and perceived feasibility do indeed influence attitudes towards pursuing a career in technopreneurship. The study also discovered that attitude towards a career in technopreneurship has a positive and a significant impact on technopreneurship intention. Moreover, the results support the moderation role of perseverance and perceived parental entrepreneurial rewards on the nexus between attitude towards a career in technopreneurship and technopreneurship intention. Based on the results, the study concludes that perceived parents' entrepreneurial passion, perceived desirability and perceived feasibility would stimulate attitude towards a career in technopreneurship and technopreneurship intention among Generation Z students.

## Introduction

Given the global popularity of the Fourth Industrial Revolution (4IR), artificial intelligence and the knowledge-based society over the past decade, the concept of technopreneurship has become widespread (Yingi et al., 2022; Bui & Lo, 2022). Owing to the adoption of social distancing and stay-at-home constraints, the COVID-19 pandemic has significantly accelerated the technology industry's remarkable growth from 2020 to 2022. Therefore, it is impossible to underestimate the importance of technopreneurship in terms of economic development and modernisation. In this regard, there is a consensus that technological advancement supports both economic growth and development

(Bomani et al., 2021). It is evident that technology-based industries are supplanting traditional sectors due to technopreneurship (Nikrahtar et al., 2022). This implies that, particularly in developing nations, it is pivotal to support technopreneurs who can create innovative technological solutions. Technopreneurship, as defined by Soomro and Shah (2021), is the fusion of high technology, innovation, and entrepreneurship. It encompasses tech-savvy individuals who exhibit creativity and innovation and are willing to take calculated risks. The developing world is lagging behind in the advancement of cutting-edge technology across all fields, a situation that is hindering swift progress in economic development. Despite the current digital age, Africa is only at the initial stages of technology development and implementation. Given this

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context, nurturing a technopreneurship culture emerges as a holistic strategy to address the sluggish pace of technological growth and integration in African nations. It is widely recognized that technopreneurship offers a diverse array of benefits, encompassing the capacity to generate income, alleviate poverty and generate employment opportunities (Nikraftar et al., 2022). Numerous governments are instituting varied programmes aimed at promoting commercialization, knowledge transfer and the creation of novel products to capitalize on these advantages. Greater emphasis needs to be placed on technopreneurship within this governmental context, particularly among university students. Nonetheless, technopreneurship is a multifaceted and intricate concept (Linton & Xu, 2021). It is evident that technology-based industries are experiencing exponential growth, unveiling fresh prospects. Consequently, it seems imperative to foster the development of technopreneurship (Groen et al., 2015; Nyagadza, 2021). Technopreneurship, which melds technology and entrepreneurship, assures a sustainable competitive advantage by conceiving and advancing informational communication tools and technologies to cater to consumer requirements in this digital era (Ali-Soomro & Shar, 2021).

The imperative to cultivate technopreneurs within university students is a focal point for numerous universities. Business opportunities have now permeated all academic disciplines, including information technology, computer science, chemistry, nursing, engineering, pharmacy and agriculture. This transformation has been observed in numerous African nations, where a paradigm shift towards science, technology, engineering and mathematics (STEM) is evident within various governmental strategies (Bomani et al., 2021). This underscores the notion that comparative advantage among nations is now entrenched in knowledge-driven policies rather than resource-centric approaches. Consequently, the establishment of innovation hubs for burgeoning high-growth startups has become the strategic direction adopted by many countries in nurturing technopreneurs (Amante & Ronquillo, 2017).

However, the technological entrepreneurial intentions of Zimbabweans have not yet received comprehensive investigation, even though technopreneurship is currently propelling the advancement of progressive nations worldwide. It is undeniable that Zimbabweans confront an array of economic and social challenges, including the contraction of the manufacturing sector, which correlates with elevated poverty and unemployment rates. Nevertheless, the nation was once the breadbasket of the Southern African Development Community (SADC) region. Considering these difficulties, it is disheartening to note that the inclination towards technopreneurship among Zimbabweans remains notably low (Kakara, 2015).

Moving forward, it is documented that there is an escalating media focus on technopreneurship within the Middle East and North Africa (MENA) region as a strategy for fostering technological advancement and industrialization (Nyagadza et al., 2022). Despite the burgeoning global interest in technopreneurship, limited research in this field is evident due to its relatively recent emergence (Najjari et al., 2021; Nikraftar et al., 2022). Alarming, most previous investigations into entrepreneurial intentions among university students have been confined to business students (Shah & Soomro, 2017). To exacerbate the situation, within non-business university students in Zimbabwe, the inclination towards technopreneurship is still in its nascent stage. Notably, the government has encapsulated the significance of technology and STEM within the National Development Strategy 1 (NDS1). However, there is an absence of a distinct roadmap for instilling a technopreneurship ethos within the country.

Against limited knowledge of technopreneurship, this study is an attempt to determine how perceived parents' entrepreneurial passion, perceived desirability and perceived feasibility would stimulate attitude towards a career in technopreneurship and technopreneurship intention among Generation Z students in Zimbabwe. Furthermore, there is little research on the role of perceived parental entrepreneurial rewards and perseverance as moderators between attitude towards a career in

technopreneurship and technopreneurship intention. As a result, this study will significantly contribute to closing this gap. A critical literature review methodological approach was used to gather and organize the literature. The aim of this approach is to achieve a thorough degree of analysis, focused on hypothesis development, conceptual model formulation, and subsequent testing (Grant and Booth, 2009). The research adopted a quantitative methodology, using cross-sectional survey method to collect data from Generation Z sampled university students. Due to paucity of convincing technopreneurship studies in Africa's emerging economies, this study contributes to bridging the knowledge gap as it investigates how perceived parents' entrepreneurial passion, perceived desirability and perceived feasibility would stimulate attitude towards a career in technopreneurship and technopreneurship intention among Generation Z students, with perseverance and perceived parental entrepreneurial rewards as the moderators, as a pioneering study in Zimbabwe.

In connection to the above, what motivated the study is to answer the main research question: *How perceived parents' entrepreneurial passion, perceived desirability and perceived feasibility would stimulate attitude towards a career in technopreneurship and technopreneurship intention among Generation Z students in Zimbabwe?*

Organisation of the article is structured as follows: First, the research context is provided and then a theoretical basis for the analysis is presented. Thereafter, a theoretical model is presented and the hypothesis established. The study design and methodology are then discussed, followed by the findings and discussion. The implications, limitations and future research directions are discussed in the article's final sections.

## Research contextualization

### *The relevance and significance of choosing generation Z students*

Based on the rationale that the adoption of technopreneurship by Generation Z students presents a distinct way of contributing to the job market, the present research employs a sample from this age group. Under normal circumstances, Generation Z is confronted by independence, self-actualization and self-employment challenges (Soomro & Shah, 2021). As a consequence, the domain available literature (Abdulgani et al., 2016; Yordanova et al., 2020; Sharma, 2018; Shah & Soomro, 2017) and/or bodies of knowledge mainly show empirical inquiries on the antecedents impacting technopreneurship (Abdulgani et al., 2016), whereas among Generation Z students (in countries such as Zimbabwe), the perceived parental entrepreneurial passion to technopreneurship adoption is still at its emerging levels. The rapid global technological developments have pushed the agenda for the innovation development and signalled competitiveness of the business incubation through technopreneurship among Generation Z students, in knowledge-driven economies. The embarkation of the Generation Z on technopreneurial activities is worth investigating as this, in turn, would develop strengthening strategies meant to reduce the government's burden in public sector opportunities for jobs (Singhry, 2015), especially in economic situations after the pandemic outbreak (Koe et al., 2021). It is within this context that Ernst and Young (2021) observed that 53% of survey respondents mentioned that they hope to be running their own businesses focusing on technology. Moreover, the proportion increased for Generation Z respondents who were currently in the workforce, with 65% optimistic that they will be running their own businesses in 2030. Notably, the Generation Z students showed a high level of entrepreneurial aspiration with the aim to utilise the opportunity to address complex problems (Ernst & Young, 2021). This implies that Generation Z students have entrepreneurial traits that are required in technopreneurship (Schwieger & Ladwig, 2018).

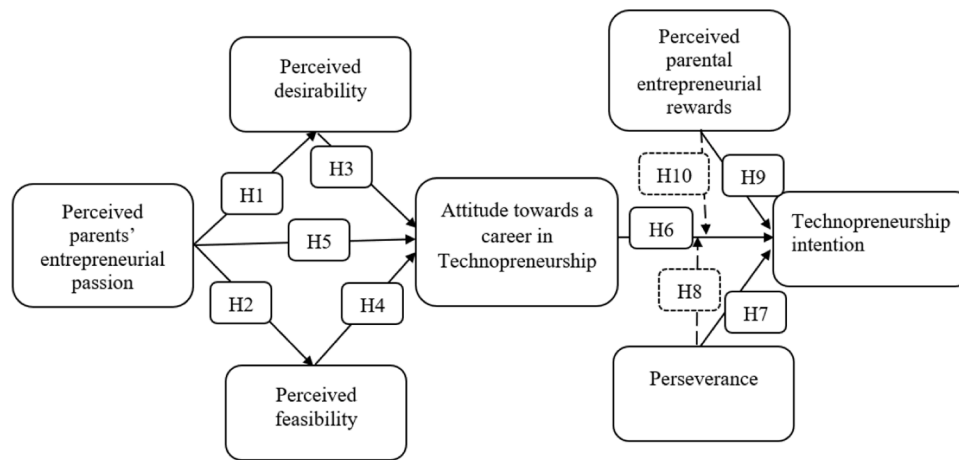


Fig. 1. Theoretical model.

### Theoretical lens

Diverse models and theories exist for seeking to predict and explain human behavior. The study is based on two theories: The empowerment theory and the social cognitive career theory. The following sections discuss these theories.

#### Social cognitive career theory

Lent, Brown and Hackett (1994) propounded the social cognitive career theory. This theory was borrowed from Bandura (2001) and then applied to capture major interconnected issues related to career development. These issues are how career interests develop, career choices are made and career success is attained. This theory is built on three variables that are beliefs related to self-efficacy, outcome expectations and goals (Anh & Minh, 2022; Munir et al., 2022). In this sense, self-efficacy can be described as the person's belief related to his or her competencies and capabilities to perform a certain course of action or behavior. Outcome expectations can be defined as the person's beliefs about the consequences of performing a particular behavior. For instance, what will be a consequence of performing this behavior? In this regard, a rational person will engage in activities with positive consequences or outcomes. Personal goals can be described as the individual's aim to embark on a certain activity, for instance, to pursue a career in technopreneurship.

In the context of entrepreneurship, the social cognitive career theory captures the influence of people's attributes and their background antecedents on entrepreneurship intention, self-efficacy and entrepreneurial outcome expectation (Anh & Minh, 2022; Munir et al., 2022; Oben & Van-Rooyen, 2022). More interestingly, Tran and Von-Kar-flesch (2016) postulate that entrepreneurial intentions play a major role in entrepreneurial practice and academia when it comes to career selection. This implies that social cognitive career theory is hailed for capturing the psychological aspects related to entrepreneurial career-driven decision behavior. Specifically, Ferreira-Neto et al. (2023) as well as Locke and Baum (2007) documented those three psychological aspects, namely, self-efficacy, outcome expectations and goals, dictate an individual's willingness to engage in entrepreneurial activities. The social cognitive career theory helps in investigating how perceived parents' entrepreneurial passion, perceived desirability and perceived feasibility would stimulate attitude towards a career in technopreneurship intention among Generation Z students. This theory illuminates the concepts related to psychological aspects of entrepreneurial intention.

#### Empowerment theory

The empowerment theory was developed by Perkins and Zimmerman (1995). They suggested that empowerment refers to the participation with others in attaining goals, efforts to secure resources and understanding of the political, economic and social environment. Empowerment theory received much attention when it comes to empowering the less privileged people (Joseph, 2019; Kumar et al., 2022; Wu et al., 2022). As such, it has been applied by many scholars and researchers in various disciplines as it has been hailed for dealing with marginalized members of this world like women, youth, immigrants, prisoners and the disabled. In this sense, Mahmoud, Ahmad and Poespowidjojo (2022) advocated that entrepreneurship empowers previously disadvantaged people. Kantor (2002) observed that entrepreneurial activities, such as establishing micro-enterprises ensure empowerment in terms of equality, power and domination as well as resource mobilization.

Moreover, entrepreneurship education empowers students through engaging in entrepreneurial activities (Santos et al., 2018). Additionally, Eib and Siegert (2019) hailed entrepreneurship as an alternative career model for women's empowerment. This implies that entrepreneurship is widely referred to as a powerful empowerment tool associated with autonomy. This is also an empowerment tool for unemployed people, which is supported by Eib and Siegert (2019) who pinpointed that self-employment is the best way to empower people in decision-making. It can also be linked to personal fulfilment in the economic realm. Notably, a greater sense of entrepreneurship is reflected in self-efficacy linked to entrepreneurial roles and tasks (Zhao et al., 2005). More interestingly, poverty creates a sense of powerlessness, which can be dealt with by venturing into entrepreneurial activities (Santos et al., 2018). Self-employment can empower the poor (Morris et al., 2018). Moreover, the empowerment theory is of relevance to this study by taking into consideration that this study will examine the role of perceived parental entrepreneurial rewards. If parents are to empower their children with entrepreneurial rewards, this would stimulate the technopreneur intention. The empowerment theory helps in investigating how perceived parents' entrepreneurial passion, perceived desirability and perceived feasibility would stimulate attitude towards a career in technopreneurship intention among Generation Z students. In this regard, this theory illuminates the concepts related to empowerment of Generation Z students through technopreneurship given that they are digital natives.

#### Theoretical model and hypotheses formulation

The research model for the study was created (Fig. 1). The theoretical

model demonstrates proposed connections between the study's seven constructs.

*Perceived parents' entrepreneurial passion, perceived desirability and perceived feasibility*

Passion can contribute to perceived desirability and feasibility of entrepreneurship (Soleimanof et al., 2021). Desirability is enhanced when offspring perceive the parent is receiving more rewards (extrinsic and intrinsic) and greater satisfaction from engaging with the business (Schröder et al., 2011). Passion can serve to magnify these positive perceptions (St-Louis & Vallerand, 2015; Stenseng et al., 2015). It can also amplify the attractiveness of the resources surrounding the venture. Further, passion enables self-regulatory mechanisms that enable an entrepreneur to persevere with a continual movement toward goals set for their venture at its inception (Moeller et al., 2017). Observing how the entrepreneur's passion enables a parent to navigate difficult times and overcome obstacles can serve to reinforce children's self-efficacy (BarNir et al., 2011) and, consequently, the perceived feasibility of pursuing an entrepreneurial path. The passion of a role model can also translate into passion among those who are served by the role model (Fellnhöfer, 2017). If the child's passion is being nurtured, this could also enhance the perceived desirability and feasibility of an entrepreneurial career.

**H1.** Perceived parents' entrepreneurial passion has a positive and significant association with perceived desirability.

**H2.** Perceived parents' entrepreneurial passion has a positive and significant association with perceived feasibility.

*Perceived desirability, perceived feasibility and attitudes towards a career in technopreneurship*

The concept of desire defined by Bagozzi (1992) equalizes Gollwitzer's (1996) construct of wishes or "volitional desires" as the driving engines of transforming certain attitudes. While, on the other hand, Mahfud et al. (2020) states that perceived feasibility is the perception of a person's capacity to take specific actions (e.g., becoming an entrepreneur). Attitudes towards an entrepreneurial career are formed based on entrepreneurship's perceived desirability and feasibility (Soleimanof et al., 2021). People adopt positive attitudes toward entrepreneurial ideas and perceive entrepreneurship as desirable if the prospects perceived are professionally stimulating and financially rewarding (Păunescu et al., 2018). In addition, Păunescu et al. (2018) regarded the desirability of entrepreneurship as an expression of individuals perceived entrepreneurial attitude.

This study argues that if a student perceives the capacity to establish a new entrepreneurial venture (perceived feasibility), then positive attitudes towards an entrepreneurial career will be stimulated. Perceived feasibility in the entrepreneurial event model is associated with entrepreneurial attitudes in entrepreneurship (Krueger et al., 2000; Osorio et al., 2017). Moreover, in their study entitled "Parents' performance in entrepreneurship as a "double-edged sword" for the intergenerational transmission of entrepreneurship", Criaco et al. (2017) point out that as feasibility increase, offspring will strive to evaluate their entrepreneurship-related attitudes ideally using objective standards, before an actual entrepreneurial career intention forms.

**H3.** Perceived desirability has a positive and significant association with attitudes towards a career in technopreneurship.

**H4.** Perceived feasibility has a positive and significant association with attitudes towards a career in technopreneurship.

*Perceived parents' entrepreneurial passion and attitude towards a career in technopreneurship*

It is well-known that the family is a primary social institution in which values are inculcated in children. Notably, the parents cultivate a culture of high self-esteem by sending positive messages about entrepreneurship (Staniewski & Awruk, 2021). In the context of technopreneurship, Tanjung et al. (2020) suggested that passion is the key ingredient for instilling entrepreneurial spirit that will lead to business development. Moreover, the exposure of the children to different levels of parental entrepreneurial passion positively influences children's attitudes towards entrepreneurship (Soleimanof et al., 2021). Thus, it can be noted that:

**H5.** Perceived parents' entrepreneurial passion has a positive and significant association with attitudes towards a career in technopreneurship.

*Attitude towards a career in technopreneurship and technopreneurship intention*

Schwarz et al. (2009) discovered that students with a favourable attitude toward entrepreneurship are more likely to have a stronger intention to become entrepreneurs. Soomro and Shah (2021) observed that a positive attitude positively affects technopreneurship intention. In Indonesia, Nurhayati and Machmud (2019) documented that positive attitudes of the students are associated with a positive effect on technopreneurship. More interestingly, the development of positive attitudes towards technology is directly related to technopreneurship intention in Nigeria (Oladejo et al., 2022).

**H6.** Attitude towards a career in technopreneurship has a positive and significant association with technopreneurship intention.

*Perseverance and technopreneurship intention*

Perseverance influences a person's course of action and is considered one of the key motivating factors necessary for entrepreneurship, as it acts as an inner drive towards a given goal (Urban & Richard, 2015). Additionally, Van Gelderen et al. (2008) discovered that students who rate themselves higher in terms of perseverance are more likely to have intentions of starting a business. It is of great importance to mention that Sudarmaji and Munirah (2019) found that perseverance has a positive effect on technopreneurship intention among Indonesian young digital talent. In the context Malaysia, Salman et al. (2020) documented that perseverance in technopreneurship is substantiated by opening technology business. Notably, according to Agung et al. (2018), the students in the vocational schools who developed perseverance engaged in technology-based in Indonesia.

**H7.** Perseverance has a positive and significant association with technopreneurship intention.

*The moderating role of perseverance*

In addition to the proposed links shown in the conceptual model, direct and indirect relationships between the variables under enquiry are conceivable. Therefore, perseverance is included as a moderating variable in Fig. 1. Even though hypothesis statements (H1, H2, H3, H4, H5 and H6) established the fundamental connections between the research variables, a clearer comprehension of these intricate connections might shed light on this occurrence. Perseverance is considered as a moderator variable in previous studies. For instance, Anestis and Selby (2015) empirically examined the moderating effect of perseverance on the relationship between non-suicidal self-injury and suicide attempts. In addition, Liu et al. (2022) determined that grit-perseverance moderates the relationship between behavioral



inhibition system and internet addiction. Moreover, [Dvorak et al. \(2013\)](#), established the moderating effects of perseverance on the relationship between depressive symptoms and suicide proneness.

In light of the above, it is important to note that, despite studies that have examined the moderating effect of perseverance, there have been no accurate empirical estimates of how perseverance may influence technopreneurship intention in ways that go beyond linear relationship. This leads to the following research question:

*RQ1. Does perseverance moderate the relationship between attitude towards a career in technopreneurship and technopreneurship intention?*

By addressing this research question, a better theoretical understanding is gained of the relationship between attitude towards a career in technopreneurship and technopreneurship intention. Additionally, some empirical insights are provided into whether perseverance moderately influences this relationship. Therefore, based on the previous elucidations, the following hypothesis is proposed:

**H8.** Perseverance positively and significantly moderates the link between attitude towards a career in technopreneurship and technopreneurship intention.

#### *Perceived parental entrepreneurial rewards and technopreneurship intention*

The researchers argue that although there is some knowledge about perceived parental entrepreneurial rewards, there is a dearth of literature that directly links perceived parental entrepreneurial rewards and technopreneurship intention. This scholarly caveat presents ample justification to consider close studies. A case in point is the research by [Hutabarat et al. \(2021\)](#), which provides empirical validation for the existence of a positive effect of perceived parental rewards and entrepreneurial intention. In addition, [Muigai et al. \(2021\)](#) discovered that perceived parental entrepreneurial rewards positively influence entrepreneurial intention. Technopreneurship is a discipline of two combinations (i.e., technology and entrepreneurship) and potential technopreneurs might have an openness to change if they perceive their parental entrepreneurial rewards positively. Therefore, the following hypothesis is formulated:

**H9.** Perceived parental entrepreneurial rewards have a positive and significant association with technopreneurship intention.

#### *The moderating role of perceived parental entrepreneurial rewards*

Previous studies ([Byers, 1983](#); [Okorie et al., 2014](#); [Hisrich et al., 2017](#)) have indicated the perceived parental entrepreneurial rewards moderating role between the attitude towards a career in technopreneurship and technopreneurship intention among Generation Z students. This is so understanding technopreneurship intention could be an integral first step towards the technopreneurship development ([Hisrich et al., 2017](#)), since a person may show certain level of attitudinal and behavioral intentions towards something before embarkation ([Koe et al., 2021](#)). However, in some societies, the development of Generation Z's attitude towards a career in technopreneurship and technopreneurship intention can be contradicting to some cultures or communities because of differences in religion, tradition and belief systems ([Abbas, 2018](#)). Further to this, Generation Z, despite these contradictions, are deemed to be techno savvy and may highly tend to use technology to execute their entrepreneurial activities ([Byers, 1983](#); [Koe et al., 2021](#)). In connection with this, what may hamper the seamless flow of the technopreneurship activities among the Generation Z students could be lack of strategic management skills, attitudes and skills ([Dana, 2004](#)). Following on from the previous discussion, this research proposes that:

**H10.** Perceived parental entrepreneurial rewards positively and significantly moderate the link between attitude towards a career in

technopreneurship and technopreneurship intention.

## **Materials and methods**

In terms of the research philosophy of the study, it can be stated the ontological perspective of the research was objectivism. As such this investigation adopted a positivist paradigm and deductive reasoning, as it seeks to discover a link between the variables presented for this analysis and the use of measurement instruments for gathering data. Therefore, a quantitative approach was applied as it improves accuracy of findings using statistical analysis. The design was suitable to solicit the required information relating to perceived parental entrepreneurial passion, perceived desirability, perceived feasibility, attitudes toward a career in technopreneurship, perseverance, perceived parental entrepreneurial rewards and technopreneurship intention.

### *Sample and data collection*

In line with previous studies on entrepreneurial intentions with business-orientated groups as respondents (e.g., [Carr & Sequeira 2007](#); [Newman et al. 2019](#)), our sample consisted of students at a large university in the Harare Zimbabwe. Students consider important career choices, such as becoming founders of entrepreneurial firms and employees of start-ups and mature enterprises ([Shepherd & DeTienne, 2005](#)). This study used a non-probability convenience sampling, which is a prevalent approach in entrepreneurial intention studies ([Nowinski & Haddoud, 2019](#); [Shepherd & DeTienne, 2005](#)). In addition, this study used a convenience sampling method, which is a non-probability technique that was considered appropriate because the sample faced similar conditions in a competitive market environment ([Malhotra, 2018](#)). Convenience sampling was also cost-effective and timely. Other non-probability sampling methods like snowball sampling were not suitable for this study since the target population of students in Zimbabwe is not small or specialized.

To be precise, this study used self-administered questionnaires to gather data from final year undergraduate students in Faculty of Business Management Sciences and Economics. The students were recruited from four departments: Accountancy, Business Studies, Tourism, Leisure and Hospitality Studies, and the Graduate School of Management. Before distributing the questionnaires, the researchers arranged with the lecturers to distribute them during one of their class sessions. Before the commencement of the session, the researcher explained to the students the purpose of the study, their rights and expectations around the study. The researchers encouraged only those students inclined to start new ventures in the technology space. In addition, the students were asked to sign an informed consent form, which explained confidentiality, voluntary participation and voluntary withdrawal before completion of the questionnaires. Students who signed the informed consent form were asked to complete the questionnaire during their free time and return the completed questionnaires by dropping them in a collection box at the entrance to the faculty.

### *Respondent profile*

A sample of 600 final year undergraduate students were recruited from four departments of the Faculty of Business Management Sciences and Economics. However, only 559 (approximately 93%) questionnaires were found to be complete and considered suitable for further analysis after ignoring outliers and partial responses. Our sample of students consisted of a variety of age groups with various frequencies across age groups (41.6% aged 18–21 years and 58.3% aged 22–25 years). Regarding gender, 222 students (39.7%) were male and 337 (60.3%) were female. Pertaining to the department where final undergraduate studies are conducted, 225 of the most students (40.3%) were from the Graduate school of management. Moreover, in terms of their father's and mother's occupations, there were a wide variety of jobs, including

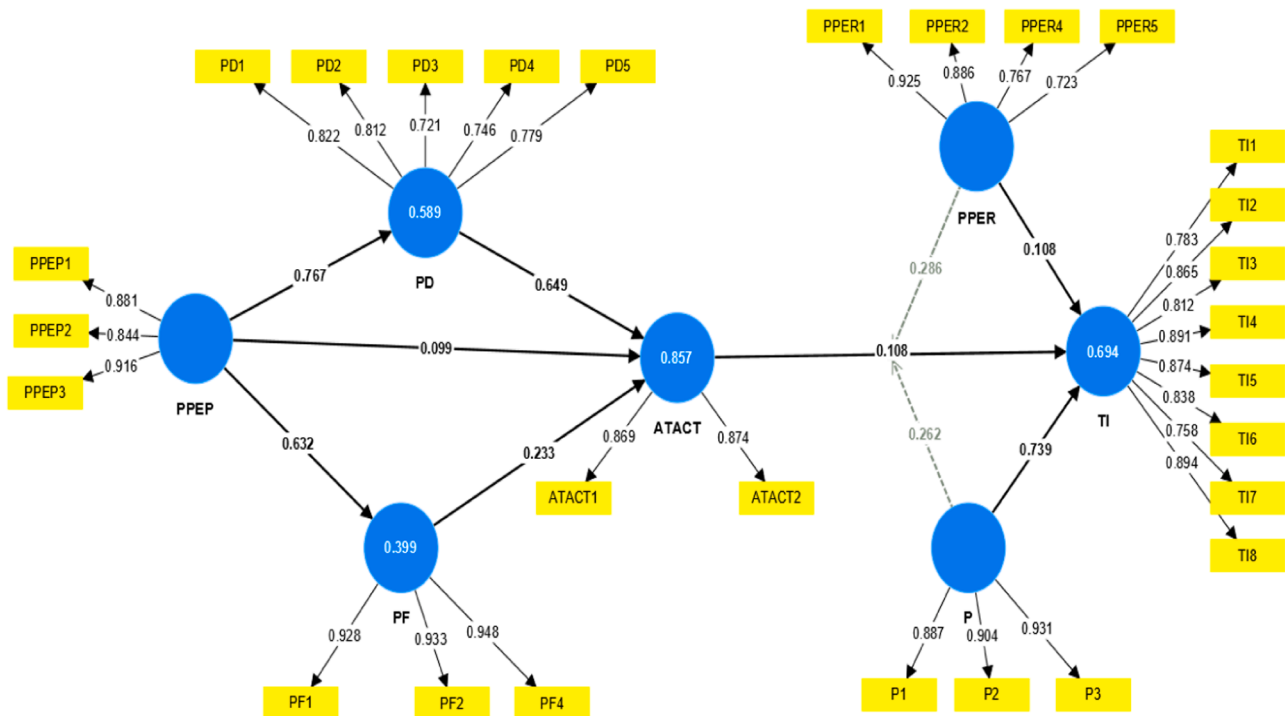


Fig. 2. Structural model.

self-employed (29.0 and 27.9%, respectively), staff in an organization (14.3 and 13.4%, respectively), manager in an organization (4.1 and 6.1%, respectively) and others (52.6 and 52.6%, respectively).

#### Questionnaire design

All the constructs in this study, except respondents' demographic profile, were affixed to a strongly disagree (1) to strongly agree (5) Likert-scale continuum. The scale items were adapted from past investigations and modified to fit the setting of this study. Perceived parental entrepreneurial passion was measured with the thirteen-item scale developed by [Soleimanof et al. \(2021\)](#). Perceived desirability was measured using a five item-scale adapted from the works of [Liñán and Chen \(2009\)](#). Perceived feasibility was measured using a four item-scale adapted from the works of [Souitaris et al. \(2007\)](#). Attitude towards a career in technopreneurship was measured by five items adopted from [Arshad et al. \(2016\)](#). Perseverance was measured with the three-item scale developed by [Santos et al. \(2020\)](#). Perceived parental entrepreneurial rewards were evaluated using a six-item measure based on the scale developed by [Neblett and Cortina \(2006\)](#). Technopreneurship intentions were measured with an eight-item scale developed by [Nengomasha \(2018\)](#).

#### Statistical analysis procedure

The investigators used the Statistical Package for Social Science (SPSS), version 26, to evaluate the data pertaining to the demographic profile of the respondents, while on the other hand, the latest software version of SMART-PLS 3.2.7 was used to analyze the data captured. PLS SEM was preferred to covariance-based SEM because of its improved statistical power in parameter estimates and the maximization of understood variance ([Tajvidi et al., 2018](#)). This research study adopted a reflective measurement model in which measurements represent latent variables and the direction of the connection is from the construct or latent variable to the measure ([Diamantopoulos & Winklhofer, 2001](#)). The statistical analysis performed in this study includes measures such as: (1) Measurement model – testing of reliability analysis and validity

analysis and (2) Structural model analysis – examining the path coefficients between observed coefficients.

#### Reliability analysis

[Table 2](#) specifies the different measures that were used to assess the reliability and validity of the constructs for the study.

#### Measurement model assessment

The outer model was assessed first by values of composite reliability (to assess internal consistency), outer loadings (to assess indicator reliability) and average variance extracted (to assess convergent validity). Composite reliability is an appropriate measure of internal consistency reliability because it accounts for the different outer loadings of the indicator variable. In contrast, Cronbach's alpha assumes all indicators to be equally reliable ([Hair et al., 2016](#)).

All individual item loadings surpassed the recommended value of 0.5 ([Anderson & Gerbing, 1988](#)). This shows that all measuring instruments are satisfactory and reliable as all items showed convergent validity, with more than 50% of the variance of each item shared with their respective construct ([Fraering & Minor, 2006](#)). All items that had item loadings less than 0.5 were deleted because they were not in accord with the thresholds for convergent validity. As shown in [Table 2](#), the Cronbach's alpha test results ranged between 0.784 and 0.940, which is above the 0.70 benchmark for acceptable internal consistency reliability ([Field, 2013](#)). As revealed in the [Table 3](#) results, the lowest composite reliability (CR) value of 0.864 is well above the suggested value of 0.6 ([Hulland, 1999](#)), while the lowest obtained average variance extracted (AVE) value of 0.603 is also above the recommended value of 0.4 ([Anderson & Gerbing, 1988](#)). This shows the accomplishment of convergent validity and further confirms the excellent internal consistency and reliability of the measuring instruments used. As such, a sufficient level of discriminating validity was revealed by all the variables. These results have generally provided evidence of acceptable levels of reliability of the research scale ([Chinomona & Chinomona, 2013](#)). [Field \(2013\)](#) states that discriminant validity refers to items

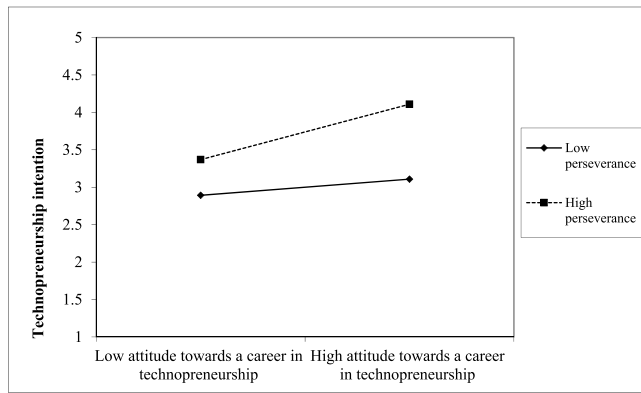


Fig. 3. Moderation effect of entrepreneurial education.

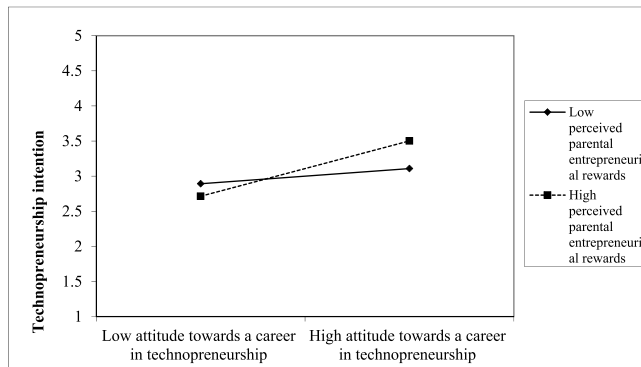


Fig. 4. Moderation effect of perceived parental entrepreneurial rewards.

**Table 1**  
Sample demographic characteristics.

| Demographic  | Variables  | Frequency (n) | Percentage (%) |
|--|--|---------------|----------------|
| Gender   | Male   | 222           | 39.7           |
|  | Female   | 337           | 60.3           |
| Age  | From 18 to 21 years old                                | 233           | 41.6           |
|  | From 22 to 25 years old                                | 326           | 58.3           |
| Department where final undergraduate studies are conducted | Department of Accountancy                              | 134           | 24.0           |
|  | Department of Business Studies                         | 121           | 21.6           |
|  | Department of Tourism, Leisure and Hospitality Studies | 79            | 14.1           |
|  | Graduate School of Management                          | 225           | 40.3           |
| Mother's occupation  | Self-employed  | 156           | 27.9           |
|  | Staff in an organisation                               | 75            | 13.4           |
|  | Manager in an organisation                             | 34            | 6.1            |
| Father's occupation  | Other  | 294           | 52.6           |
|  | Self-employed  | 162           | 29.0           |
|  | Staff in an organisation                               | 80            | 14.3           |
|  | Manager in an organisation                             | 23            | 4.1            |
|  | Other  | 294           | 52.6           |

Source: Secondary data (2022).

measuring different concepts. Table 3 presents the results of the discriminant validity analysis.

Discriminant validity was evaluated using the hetero-trait-monotrait ratio (HTMT) criterion (Table 4), despite recommendations from previous studies (Henseler et al., 2016; Verrijika & De Wet, 2018), indicating that HTMT is more suitable to evaluate discriminant validity than Fornell-Larcker's commonly used criteria. When taking a more conservative position, discriminant validity is reached when the HTMT value is below 0.9 or 0.85 (Verrijika & De Wet, 2018). Table 4 reveals that the highest obtained HTMT value is 0.731, below the conservative value of 0.85. As such, all the constructs meet the criteria for discriminant validity.

#### Structural model assessment

The inner model (structural model) (Fig. 2) was assessed to test the relationship between the endogenous and exogenous variables. The path coefficients were obtained by applying a non-parametric, bootstrapping routine (Vinzi et al., 2010). Precisely, a consistent bootstrapping approach was used because of its reflective nature. The subsamples selected to run the bootstrapping were 5 000, as seen in Fig. 2 and Table 5. The fitness of the model was assessed using the goodness of fit (GoF) and the standardised root mean square residual (SRMR). These indices will be elucidated in the subsequent sections.

#### Assessment of the goodness of fit (GoF)

Overall,  $R^2$  for attitude towards a career in technopreneurship, perceived desirability, perceived feasibility and technopreneurship intention in Fig. 2 indicate that the research model explains 85.7%, 58.9%, 39.9% and 69.4% respectively, of the variance in the endogenous variables. The following formulae was given by Tenenhaus et al. (2005) and the global GoF statistic for the research model was calculated using the equation:

$$\begin{aligned}
 \text{Goodness of fit} &= 2\sqrt{(\text{average of all AVEs values} * \text{average of all } R^2)} \\
 &= 2\sqrt{0.749 \times 0.634} \\
 &= 0.68
 \end{aligned}$$

Where AVE represents the average of all AVE values for the research variables while  $R^2$  represents the average of all  $R^2$  values in the full path model. The calculated global GoF is 0.68, which exceeds the threshold of  $\text{GoF} > 0.36$  suggested by Wetzels et al. (2009). Therefore, it can be concluded that the research model has a good overall fit.

#### Common method bias (CMB)

For PLS-SEM, common method bias (CMB) is detected through a full collinearity assessment approach (Kock, 2015). VIF values should be lower than the 3.3 threshold (Hair et al., 2011; Kock, 2015). This is indicative that the model is free from common method bias. Any value greater than 3.3 means the model is affected by CMB. Therefore, following standard procedures in business research, the variance inflation factor (VIF) values were computed instead of reporting the collinearity issues in this work. As shown in Table 3, multicollinearity was evaluated by looking at the variance inflation factor (VIF) and the findings showed that VIF values of all constructs were less than 3.3 (Kock & Lynn, 2012). The outcome thus supported the notion that CMB does not seem to be a problem in the investigation.

#### The standardized root mean square residual (SRMR)

The SRMR is an index of the average standardized residuals between the observed and the hypothesized covariance matrices (Chen, 2007). The SRMR is a measure of estimated model fit. When  $\text{SRMR} < 0.08$ , then the study model has a good fit (Hu & Bentler, 1998); with a lower SRMR being a better fit. The theoretical model's SRMR was 0.07, which revealed that the model had a good fit, whereas the chi-square was equal to 1918.087 and NFI equal to 0.900 was also measured, meeting the



**Table 2**  
Reliability and validity.

| Research constructs                            | Variable | Cronbach's test $\alpha$ | CR    | AVE   | $\lambda$ | VIF (outer) values |
|--|----------|--------------------------|-------|-------|-----------|--------------------|
| Attitude towards a career in technopreneurship | ATACT1   | 0.784                    | 0.864 | 0.760 | 0.869     | 1.370              |
|  | ATACT2   |                          |       |       | 0.874     | 1.371              |
| Perseverance                                   | P1       | 0.893                    | 0.933 | 0.823 | 0.887     | 2.586              |
|  | P2       |                          |       |       | 0.904     | 2.507              |
|  | P3       |                          |       |       | 0.931     | 2.550              |
| Perceived desirability                         | PD1      | 0.837                    | 0.884 | 0.603 | 0.822     | 2.146              |
|  | PD2      |                          |       |       | 0.812     | 1.736              |
|  | PD3      |                          |       |       | 0.721     | 1.705              |
|  | PD4      |                          |       |       | 0.746     | 1.744              |
|  | PD5      |                          |       |       | 0.779     | 1.679              |
| Perceived feasibility                          | PF1      | 0.930                    | 0.955 | 0.877 | 0.928     | 2.388              |
|  | PF2      |                          |       |       | 0.933     | 2.784              |
|  | PF4      |                          |       |       | 0.948     | 1.316              |
| Perceived parental entrepreneurial passion     | PPEP1    | 0.858                    | 0.912 | 0.776 | 0.881     | 1.902              |
|  | PPEP2    |                          |       |       | 0.844     | 2.306              |
|  | PPEP3    |                          |       |       | 0.916     | 2.882              |
| Perceived parental entrepreneurial rewards     | PPER1    | 0.846                    | 0.897 | 0.688 | 0.925     | 2.812              |
|  | PPER2    |                          |       |       | 0.886     | 3.213              |
|  | PPER4    |                          |       |       | 0.767     | 2.391              |
|  | PPER5    |                          |       |       | 0.723     | 1.518              |
| Technopreneurship intention                    | TI1      | 0.940                    | 0.951 | 0.707 | 0.783     | 2.200              |
|  | TI2      |                          |       |       | 0.865     | 2.365              |
|  | TI3      |                          |       |       | 0.812     | 2.729              |
|  | TI4      |                          |       |       | 0.891     | 2.826              |
|  | TI5      |                          |       |       | 0.874     | 2.235              |
|  | TI6      |                          |       |       | 0.838     | 2.913              |
|  | TI7      |                          |       |       | 0.758     | 2.300              |
|  | TI8      |                          |       |       | 0.894     | 2.046              |

Note:  $\lambda$  =factor loadings; CR= Composite reliability; Source: Authors own compilation.

**Table 3**  
Discriminant validity (HTMT).

|              | ATACT | P     | PD    | PF    | PPEP  | PPER  | TI    | PPER x ATACT | P x ATACT |
|--------------|-------|-------|-------|-------|-------|-------|-------|--------------|-----------|
| ATACT        |       |       |       |       |       |       |       |              |           |
| P            | 0.454 |       |       |       |       |       |       |              |           |
| PD           | 0.408 | 0.473 |       |       |       |       |       |              |           |
| PF           | 0.668 | 0.471 | 0.401 |       |       |       |       |              |           |
| PPEP         | 0.654 | 0.687 | 0.446 | 0.498 |       |       |       |              |           |
| PPER         | 0.626 | 0.777 | 0.542 | 0.413 | 0.504 |       |       |              |           |
| TI           | 0.618 | 0.762 | 0.639 | 0.533 | 0.686 | 0.428 |       |              |           |
| PPER x ATACT | 0.548 | 0.451 | 0.652 | 0.701 | 0.625 | 0.599 | 0.627 |              |           |
| P x ATACT    | 0.623 | 0.509 | 0.731 | 0.754 | 0.750 | 0.645 | 0.670 | 0.671        |           |

Source: Secondary data (2022).

**Table 4**  
Coefficient of determination ( $R^2$ ), effect size ( $f^2$ ) and predictive relevance ( $Q^2$ ).

| Variables                                      | R Square | $Q^2$ | Effect size |
|--|----------|-------|-------------|
| Attitude towards a career in technopreneurship | 0.857    | 0.357 | 3.423       |
| Perceived desirability                         | 0.589    | 0.291 | 2.824       |
| Perceived feasibility                          | 0.399    | 0.347 | 3.345       |
| Technopreneurship intention                    | 0.694    | 0.256 | 3.293       |

Source: Field data (2022).

recommended threshold for NFI (Afthanorhan, 2013).

#### Coefficient of determination ( $R^2$ )

The coefficients of determination, or  $R^2$  values, were used to assess the research model's explanatory power. The  $R^2$  values for attitudes toward a career in technopreneurship ( $R^2=0.857$ ), perceived desirability ( $R^2=0.589$ ), perceived feasibility ( $R^2=0.399$ ) and technopreneurship intention ( $R^2=0.694$ ) were greater than the recommended criterion benchmark of 0.10 (Chin, 1998). Thus, the results showed that the exogenous constructs in the research model accurately explained the endogenous constructs.

#### Predictive relevance ( $Q^2$ )

In addition to  $R^2$  as a predictive criterion, Hair et al. (2017) recommend that researchers examine  $Q^2$  to assess the predictive relevance of the structural model. Predictive applicability of constructs must be positive and with values greater than zero (Hair et al., 2017). The size of the  $Q^2$  effect (in Table 6) allows evaluating how an exogenous construct contributes to an endogenous latent construct  $Q^2$  as a measure of predictive relevance, which can be small (0.02), medium (0.15) or large (0.35). The  $Q^2$  values are explained in Table 5. The study obtained a  $Q^2$  of 0.357 for attitudes towards a career in technopreneurship, 0.291 for perceived desirability, 0.347 for perceived feasibility and 0.256 for technopreneurship intention, which is within the required limit and supports that the path model's predictive relevance was adequate for the endogenous construct.

#### Effect size ( $f^2$ )

Effect size ( $f^2$ ) is a measurement that tells the impact of change in the  $R^2$  value when a specified exogenous construct is ignored in the model (Hair et al., 2019). An effect size  $f^2 \leq 0.30$ ,  $0.3 < f^2 \leq 0.50$  and  $f^2 > 0.50$  is thought to represent a weak, moderate and strong effect, respectively (Bliwise, 2006).

Effect size is calculated using the following equation:

**Table 5**

Results of structural equation model analysis.

| Hypothesis                        | Proposed hypothesis relationship | Beta coefficients ( $\beta$ ) | T-statistics | P-values | Decision  |
|-----------------------------------|----------------------------------|-------------------------------|--------------|----------|-----------|
| H <sub>1</sub>                    | PPEP → PD                        | 0.767                         | 15.033       | 0.000    | Supported |
| H <sub>2</sub>                    | PPEP → PF                        | 0.632                         | 11.953       | 0.000    | Supported |
| H <sub>3</sub>                    | PD → ATACT                       | 0.649                         | 12.401       | 0.000    | Supported |
| H <sub>4</sub>                    | PF → ATACT                       | 0.233                         | 2.767        | 0.000    | Supported |
| H <sub>5</sub>                    | PPEP → ATACT                     | 0.099                         | 1.971        | 0.009    | Supported |
| H <sub>6</sub>                    | ATACT → TI                       | 0.108                         | 1.985        | 0.006    | Supported |
| H <sub>7</sub>                    | P → TI                           | 0.739                         | 14.449       | 0.000    | Supported |
| H <sub>8</sub> Moderating effect  | P × ATACT → TI                   | 0.262                         | 3.234        | 0.000    | Supported |
| H <sub>9</sub>                    | PPER → TI                        | 0.108                         | 1.976        | 0.005    | Supported |
| H <sub>10</sub> Moderating effect | PPER × ATACT → TI                | 0.286                         | 3.978        | 0.000    | Supported |

Note: Arrows signify the relationships between each construct to indicate the proposed hypothesis.

\* $p < 0.05$ .

\*\* $p < 0.01$ .

Source: Calculated from survey result.

$$\text{Effectsize} = \frac{R^2}{1 - R^2}$$

where,  $R^2$  is the coefficient of determination.

From Table 5,  $f^2$  values for attitudes towards a career in technopreneurship, perceived desirability, perceived feasibility and technopreneurship intention are considered strong.

#### Path model

The PLS estimation path coefficients values and the item loadings for the research construct are shown in Fig. 2.

#### Hypotheses testing results

After evaluating and concluding the hypothesized measurement and structural model, the next action was to evaluate the cause-and-effect relationships among latent variables through path analysis (Nusair & Hua, 2010). In addition, Nusair and Hua (2010) observe that SEM states that specific latent variables directly or indirectly influence other specific latent variables with the model, causing estimation results that depict how these latent variables are associated. For this study, estimation results obtained through hypothesis testing are illustrated in Table 5. The table demonstrates the proposed hypotheses, path coefficients,  $t$ -statistics and whether a hypothesis is rejected or supported. According to Beneke and Blampied (2012),  $t$ -values indicate whether a significant relationship exists between variables in the model and path coefficients, demonstrating the strength of the relationships in the model. In addition, Chin (1998) also suggests that  $t > 1.96$  indicates a relationship significance and that higher path coefficients indicate strong relationships among latent variables. Drawing from the results in Table 5, all the relationships are supported significantly because the  $t$ -statistics are greater than 1.96.

#### Discussion of results

It was discovered that perceived parents' entrepreneurial passion has a positive and significant relationship with perceived desirability and feasibility. This result is consistent with Soleimanof et al. (2021) who found that a person's passion might influence entrepreneurship's perceived desirability and feasibility. This study made the case that a Generation Z student may be inspired by the perceived entrepreneurial zeal of their parents, which in turn may boost their desire and aptitude to launch and manage a technological entrepreneurial enterprise. According to Li et al. (2020), a new venture's launch is also aided by a high level of passion. People frequently believe they can start their own business (Li et al., 2020).

Perceived desirability and perceived feasibility had a positive and significant association with attitudes towards a career in technopreneurship. These results echo the work of Păunescu et al. (2018) who regarded the desirability of entrepreneurship as an expression of

individuals perceived entrepreneurial attitude. The findings are also consistent with the findings of Krueger et al. (2000) and Osorio et al. (2017) who state that perceived feasibility in the entrepreneurial event model is associated with entrepreneurial attitudes in entrepreneurship.

This study discovered that perceived parents' entrepreneurial passion has a positive and significant association with attitudes towards a career in technopreneurship. It is important to note that these results are consistent with research by Soleimanof et al. (2021) who discovered that there is a positive relationship between a child's perception of their parents' entrepreneurial passion and the child's attitude toward an entrepreneurial career.

In this study, it was discovered that attitude towards a career in technopreneurship has a positive and significant association with technopreneurship intention. Also, the findings align with the works of Urban and Richard (2015) who found out that attitudes influence behavior by shaping intentions. In addition, these results also echo the work of Schwarz et al. (2009) who discovered that students with a favorable attitude toward entrepreneurship are more likely to have a stronger intention to become entrepreneurs.

In this study, it was discovered that perseverance has a positive and significant association with technopreneurship intention. These results are in accord with the works of Van Gelderen et al. (2008) who found that students who rate themselves higher in terms of perseverance are more likely to have intentions of starting a business. Hence, the findings obtained in this study suggest that if a Generation Z student is persistent in his or her efforts, the intention to pursue technopreneurship will be stimulated.

This study also discovered that perseverance is instrumental in determining the technopreneurship intention. The statistical analysis showed that perseverance moderates or strengthens the relationship between attitude towards a career in technopreneurship and technopreneurship intention. These results are in line with various international studies (Anestis & Selby, 2015; Dvorak et al., 2013; Liu et al., 2022) that have determined the moderating effect of perseverance in different contexts. As there are gaps in research on the moderating effect of perseverance on the nexus between attitude towards a career in technopreneurship and technopreneurship intention, this study adds a fresh understanding or adds a new theoretical knowledge by broadening our understanding of perseverance as a factor that can stimulate the technopreneurship intention of Generation Z. Understanding how the moderating variable (perseverance) interacts with the nexus between attitude towards a career in technopreneurship and technopreneurship intention is important. For instance, the practical implication of the findings of the study is that if Generation Z can continually put effort into a task when faced with challenges, they will have a strong desire and a positive attitude towards a career in technopreneurship. In sync with small medium enterprises' perspective, entrepreneurs with an innovative mindset will prioritize innovation as a tool to achieve

business success. This supports the notion that the higher the level of perseverance in people, the more positive they become towards a particular idea.

The statistical analysis showed that perceived parental entrepreneurial rewards were positively and significantly associated with technopreneurship intention. These findings are in line with Muigai et al. (2021) who observe that parental entrepreneurial rewards positively influence entrepreneurial intention. The results are also in line with the works of Hutabarat et al. (2021) who reveal that perceived parental reward positively influences entrepreneurial intention.

The relative influence of attitude towards a career in technopreneurship-on-technopreneurship intention is contingent upon the perceived parental entrepreneurial rewards. H10 was statistically significant ( $p < 0.05$ ) and therefore supported. It is important to note that there are deficiencies in literature pertaining to the role of perceived parental entrepreneurial rewards as moderator. A study by Wang et al. (2018) found out that the relationship between perceived parental entrepreneurial rewards and entrepreneurial intentions was significant. As there are gaps in literature on the moderating effect of perceived parental entrepreneurial rewards on the relationship between attitude towards a career in technopreneurship and technopreneurship intention, this study adds new insights to the body of literature. For instance, the practical implication of the findings of the study is that parents need to improve conversations with their children that are centered on the intrinsic and extrinsic rewards of running a techno-business. Resultantly, this may shape not only the technopreneur entry path of their offspring but also the willingness to establish a business that may grow and lead to continuity of the family business.

#### *The interaction plot for the perseverance moderating variable*

To assess the moderating role of perseverance, this study used a product-indicator-method (PIM) using PLS-SEM (Chin, 2010). PIM was used because the suggested moderating construct was continuous (Rigdon et al., 1998). Cohen's (1988) rules were used to assess the moderating effects. Regarding H8 (Perseverance positively and significantly moderates the link between attitude towards a career in technopreneurship and technopreneurship intention), the interaction terms ( $\beta = 0.262, p = 0.000$ ) were significant (Table 5, Fig. 2). Hence, H8 was supported.

The interaction plot depicted in Fig. 3 provides a clearer understanding of how perseverance moderates the relationship between attitude towards a career in technopreneurship and technopreneurship intention. In simple terms, it shows how perseverance influences the strength of this connection.

In Fig. 3, the slope of the line indicates the intensity of the relationship between attitude towards a career in technopreneurship and technopreneurship intention, depending on the level of perseverance. When perseverance is high, the relationship between these two factors becomes stronger. This means that individuals with a strong inclination towards a career in technopreneurship are even more likely to have a higher intention to engage in technopreneurship if they also possess an elevated level of perseverance.

The graph in Fig. 3 visually demonstrates that as the attitude towards a career in technopreneurship increases, so does the intention to pursue technopreneurship. However, the increase in intention is more noticeable among individuals who exhibit an elevated level of perseverance, as opposed to those with a lower level of perseverance. In other words, individuals who show greater persistence and determination are more strongly influenced by their positive attitude towards technopreneurship, leading to a more pronounced increase in their intention to become technopreneurs.

#### *The interaction plot for the perceived parental entrepreneurial rewards (PPER) moderating variable*

The study proposed and empirically supported the view that a PPER would be beneficial for the establishment of attitude towards a career in technopreneurship and technopreneurship intention. This was supported by the significance of the interaction term PPER x ATACT  $\rightarrow$  TI ( $\beta = 0.286, p = 0.000$ ), thus supporting hypothesis H10. The nature of this interaction is presented in Fig. 4.

According to Fig. 4, when people have a positive attitude towards a career in technopreneurship, it has a stronger impact on their intention to pursue technopreneurship. However, this influence is even more significant for individuals who believe that their parents have experienced rewarding outcomes from being entrepreneurs. In other words, if someone thinks their parents have gained benefits and success from being entrepreneurs, their positive attitude towards a career in technopreneurship will have a greater effect on their intention to actually become a technopreneur.

On the other hand, for individuals who perceive their parents' entrepreneurial rewards to be low, the relationship between attitude towards a career in technopreneurship and technopreneurship intention is not as strong. This means that if someone does not believe their parents have achieved much from being entrepreneurs, their positive attitude towards a career in technopreneurship will not have as much impact on their intention to pursue it.

To sum up, the connection between attitude towards a career in technopreneurship and technopreneurship intention depends on how individuals perceive the rewards their parents have gained from being entrepreneurs. Those who perceive high parental entrepreneurial rewards experience a stronger link between their attitude and intention, while those with low perceived rewards have a weaker connection.

#### **Implications of the study**

The findings of this research have practical implications for entrepreneurs, entrepreneurial educators and policy makers alike and have a variety of practical implications to help develop significant entrepreneurial activity. By understanding how technopreneurship intentions are formed, practitioners may be able to leverage the strong relationship between intentions and actions to facilitate the creation of new businesses. The results of the current study indicate that Generation Z cohort who have a propensity for proactive behavior such as perceived parents' entrepreneurial passion, perceived desirability and feasibility for entrepreneurship are likely to form positive attitude towards a career in technopreneurship than those who are not proactive. This may indicate that one way for policy makers and entrepreneurial educators to detect potential technopreneurs is to find individuals with proactive personalities. In addition, by knowing how technopreneurship intentions are formed, it may be possible for policy makers to manipulate the process to encourage technopreneurship behavior. For example, with the potential to influence intentions is the perceived desirability of technopreneurship. Practically, the findings of the current study have impactful implications which go beyond the boundaries of Zimbabwe as a country and Africa as continent. They stretch to impact even the emerging and established economies (such as United Arab Emirates (UAE), Finland, the Netherlands) dotted around the world with serious potential to impact societal-human and economic development, in line with the Global Entrepreneurship Monitor (GEM) reports (World Economic Forum (WEF), 2022). Notably, top economies with successful technopreneurship on its youthful population include, but are not limited to, United States of America (USA), China, Singapore, Germany, Japan, United Kingdom and Canada, among others. To this effect, various governments' responsible ministries of the stated nations and states are creating specialized programs to encourage commercialization, knowledge transfer and new product creation, mainly meant to add value to the practice. Although this might be the case, due to lack of

impactful technopreneurship studies in Africa's emerging economies (South Africa, Nigeria, Egypt, Mauritius, Morocco, etc.) as well the fastest growing economies (Rwanda, Ethiopia, Côte d'Ivoire, Benin and Tanzania), this study contributes to bridging the knowledge gap as it investigates how perceived parents' entrepreneurial passion, perceived desirability and perceived feasibility would stimulate attitude towards a career in technopreneurship and technopreneurship intention among Generation Z students, with perseverance and perceived parental entrepreneurial rewards as the moderators, as a pioneering study in Zimbabwe. Greater focus should be directed towards fostering technopreneurship, especially among college students. However, technopreneurship is a multifaceted and difficult idea (Linton & Xu, 2021). It is observed that technology-based industries are exponentially increasing and opening new opportunities. However, it was once the breadbasket of the Southern African Development Community (SADC) region. With these challenges, it is discouraging to observe that technopreneurship intention of Zimbabweans is still very low (Kakara, 2015). The current study suggests that the positiveness of past entrepreneurship experience relate to the formation of perceptions of desirability. For example, by educating family and friends of potential technopreneurs about the value for technopreneurship, perceptions of desirability could be positively influenced. Relatedly, establishing mentor or incubator programs would be an additional method for enhancing perceptions of desirability and feasibility through positive social support. Moreover, the study results confirmed the significant and moderating role of perceived parental entrepreneurial rewards and perseverance on the nexus between attitude towards a career in technopreneurship and technopreneurship intention. These results imply that if potential technopreneurs are to be equipped with knowledge and skills of entrepreneurial perseverance and perceive entrepreneurial rewards, this would enhance their technopreneurship intentions and positive attitude towards a career in technopreneurship.

### Limitations and directions for future research

As with other studies, empirical studies have proven to have limitations. The first caveat was that students were the data collection sample, so the results could not be generalized to non-student samples. Future studies should, therefore, include non-students to generalize the results. The survey was limited to Harare, Zimbabwe and other provinces were excluded. This study should be replicated in other Zimbabwe provinces and other developing countries to obtain comparable results. It is also important to test the model in other generational cohorts such as Generation X and Generation Y. Perhaps some insightful results could be generated. Future examinations may, as necessary, explore indistinguishable points from the current examination using a blended process technique to improve the expansiveness of the outcomes of the examination.

### Conclusion

This study contributes to the existing literature by shedding light on the influence of perceived parents' entrepreneurial passion on the career aspirations and intentions of Generation Z students in the context of technopreneurship in Zimbabwe. The findings highlight that when young individuals perceive their parents as passionate entrepreneurs, it positively affects their attitude towards a career in technopreneurship, ultimately leading to a higher intention to pursue this path. Furthermore, the study identifies the important moderating roles of perseverance and perceived parental entrepreneurial rewards, emphasising their significance in shaping the relationship between attitude and intention. These insights provide valuable implications for policymakers, educators and parents to foster an environment that encourages and supports Generation Z students in their technopreneurial pursuits Table 1.

### Declaration of generative AI in scientific writing

All authors declare that the article was scientifically prepared without assistance of any enhanced generative artificial intelligence (AI) software.

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### Use of inclusive language

Our article uses inclusive language, acknowledges diversity, conveys respect to all people, is sensitive to differences and promotes equal opportunities.

### Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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