

The strategized business model for successful technopreneurs in Malaysian Small-Medium Enterprise (SME) using Business Intelligence (BI) as a moderator

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ABSTRACT

The rise of digital marketing channels and e-commerce has compelled businesses to shift to a digital economy, where the use and use of technology in business operations necessitates the development of technopreneurs rather than entrepreneurs. Moreover, technopreneurs can transform a technical idea into and market-ready product that consists of intellectual wealth as the gateway to financial wealth. This study aims to inspect the relationship between strategizing business models for transformation and development as well as the moderating role of Business Intelligence (BI) towards becoming a successful technopreneur. The study obtained 313 respondents among entrepreneurs from Small-Medium Enterprise (SME) in Malaysia using a simple random sampling method by utilizing an online survey (Google Forms) to participate in the main survey. They are recognized as highly knowledgeable respondents who use digital technology to improve their businesses; as a result, they possess the knowledge necessary to give a trustworthy response based on their actions and experiences to succeed as technopreneurs. The collected dataset was analyzed using SmartPLS software to test the hypotheses, and a structural model was utilized in the study to assess direct relationships. Based on p-values and t-statistics, the bootstrapping technique was used to increase the significance of both direct and indirect impacts (path coefficient). The findings of this study highlight that strategized business models and successful technopreneurs may become an innovative high technology-intensive context with the moderating role of BI technology prowess and entrepreneurial talent and skills that develop technopreneurs in the new age of entrepreneurs who make use of the digital economy.

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1. Introduction

The phrase “technopreneur” highlights the mix of intelligent and tech-savvy individuals for the venture's success. A contemporary business owner who leverages technology to develop something unique for profit or promotion is referred to as a technopreneur. According to (Kahpi et al. 2024), technopreneurs are tech-savvy businesspeople who specialize in developing strategic thinkers to thrive in a dynamic, all-encompassing setting. In line with the worldwide shift towards the digital economy and industrial revolution, many scholars are identifying technopreneurs as the catalysts for economic growth (Jayakrishnan et al., 2023; Sudaryana et al., 2025) because it is connected to economic growth, competitiveness, and wealth generation (Virjan et al. 2023). In this instance, technopreneurs are thought to be a significant contributor to a country's economic development. The Malaysian government has begun to take the growth of technopreneurs seriously in response to the shifting digital economy brought about by sophisticated technology development. Additionally, the necessity for training technopreneurs has increased due to Business Intelligence (BI) tools that mandate enterprises to be done digitally. Technopreneurs are entrepreneurs who try to transform Malaysia into an information-based economy by combining their love of innovation with business.

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The new generation of technopreneurs is leading the charge towards a future filled with innovation and technology, as Malaysia aims to establish itself as a major hub for technology startups. Consequently, fostering technopreneurs has emerged as a top national priority. In this respect, it is believed that entrepreneurs need to be transformed into technopreneurs because technopreneurs have an impact on the country's growth through the skills needed by the market demands that focus on technology and innovation capabilities for advanced long-term economic ventures (Abd Halin and Mohd Shahrudin Abd Manan 2024). However, the effect of technopreneurs in Malaysia is still in its infancy because today's entrepreneurs have not evolved into global leaders. Furthermore, the digital economy is the cause of this conundrum, as Malaysia has the largest percentage of entrepreneurs digitizing their businesses. By leveraging effective skills and digital resources from BI tools, this research also contributes to Malaysia's national goal of fostering a digital technopreneur society, recognizing that the adoption of digital technology can accelerate business development and enhance the overall quality of the economy.

In line with the worldwide movement that is promoting a digital economy built on digital technology (Jayakrishnan, Karim, and Mohd 2022), developing technopreneurs rather than merely entrepreneurs has become an important agenda globally. Most entrepreneurs are aware of and realize the importance of technopreneur ventures, but their actual participation in them is still not embraced (Bala & Arora 2023). In this setting, technopreneurs refer to entrepreneurs who leverage technology-focused industries for the process of innovatively bringing products to market (Majid et al. 2024), and through the market's desired skills, which focus on technological and innovative capacities for complex long-term economic projects, have the potential to greatly influence the country's development (Moşteanu, 2023). In addition, studies concerning technopreneurship among the owners of entrepreneurs are also lacking (Halim, Ahmad, and Waqas 2025). Technopreneurs strive for better success through learning experiences that emphasize continuous growth in the digital realm. They function with an extensive application of knowledge and face challenges head-on. In addition, a technopreneur is an entrepreneur who employs technology-based sectors for creative commercialization.

Future-ready technopreneurs have become a major issue among developed countries in the world as well as developing countries like Malaysia (Purnama et al., 2023). Yet, due to a lack of expertise, lack of technicians, and ineffectiveness, the Malaysian government still struggles to implement the technopreneur (Nasution and Fauzie 2024). Despite its positive contributions to the digital economy, technopreneur has several issues that have significantly impacted organizational performance, digital innovations, and organizational ability. For instance, technopreneur business activities have contributed to digital degradation, resulting from market failure. Knowing the seriousness of the effects of digital degradation, technopreneurs are encouraged to take a more proactive approach to tackling issues about digital technology (Mohamad, Jayakrishnan, and Yusof 2022; Rosli et al. 2024). Moreover, businesses nowadays are using technology to disseminate their information and programs and reach audiences timely anywhere. The association between successful technopreneurs and strategic business models in Malaysian Small-Medium Enterprise (SMEs) is not well documented in sociological research. Yet, it is a process of merging technology prowess and entrepreneurial talent and skills that linking BI and strategizing business models to make a benefit for the entire organization has to turn into an essential practice among technopreneurs nowadays. Thus, understanding digital practice's intention to solve the scenarios through the BI context is important. Hence, the strategized business model plays a major role in creating a technopreneur that utilizes digital technology for creating commercially viable products. Strategizing business models focus on motivating, influencing, and leading technopreneurs towards an evolving digital environment that broaches business growth and measurable goals. Thus, a strategized business model focuses on skillfully and effectively coordinating between various management levels and creates a strong corporate culture that emphasizes values for the future. This study will bring new insight into technopreneurship on how BI approaches influence strategized business models and successful technopreneurs in SME Malaysia.

2. Literature review

The study's comprehensive literature review examines the connection between successful technopreneurs in Malaysian SMEs and strategic business models. Several theoretical frameworks are analyzed to determine numerous capacities about the relationship between strategic business models and successful technopreneurs in SME Malaysia. The research discovered that the theoretical framework is focused on the theory of planned behavior and the transformational leadership theory is related to the research problem. Changing people to assist one another and the organization as a whole is the main goal of transformational leadership theory (Ytterstad & Olaisen, 2023). Therefore, the adoption of the theoretical framework from the transformational leadership theory for developing the conceptual model of strategized business model and successful technopreneur, as shown in Fig. 1.



Fig. 1. Transformational Leadership Theory

According to Armitage and Christian (2017), using the Theory of Planned Behavior could be a theoretical assumption about the theory that focuses on understanding the tendency to look for the reason behind why people act the way they do. Moreover, it reasoned decisions to engage in specific behaviors by evaluating the information available to them, as shown in Fig. 2.

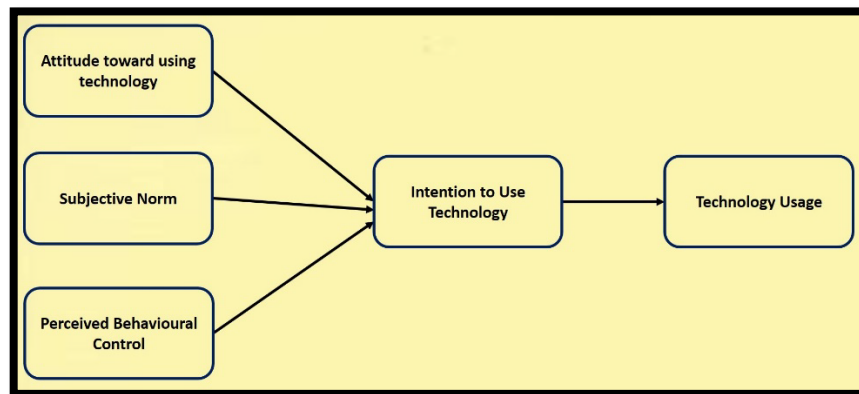


Fig. 2. Theory of Planned Behavior

The analysis of prior research theories and concepts was utilized to enhance the study's conceptual model. The conceptual model proposed in this study identified the moderator relationship between the BI approach towards a strategized business model and successful technopreneurs in SME Malaysia. The strategized business model provides an accurate insight into the strengths of being a professional that focuses on the skill set and the right skills to be an effective organization. The main reason a strategized business model is needed is to convey the goal of the organization that fosters a positive vibe in the entire organization. Furthermore, the strategized business model plays a great organizational culture that motivates and increases working. The business model is a fundamental factor that accelerates the functioning of an organization since it serves as an art of motivating people toward achieving the organization's goals. However, leaders need to set direction through skills that guide people in the right way (Jayakrishnan, Mohamad, and Yusof 2021). The strategized business model study spans a variety of perspectives and approaches since ancient times when many organizations and researchers have studied and dealt with business model behavior that practically increases effectiveness. For instance, the role of a business model is to map out the direction of an organization and view the dynamic of its management skills to the right goal. In general, a business model perspective focuses on meeting the strategy of an organization that inspires ideas and engages them to act toward them (Pedersen, Clausen, & Jørgensen 2023). The strategized business model is also linked to the organizational performance that highlights visionary thinking and transforms the management process to higher achievement (Malik et al. 2024). Entrepreneurs with a good, strategized business model set the plan for organizing the resources and understanding what is going on within the business or organization. The basic concept of the strategized business model indicates the direction, situation, communication, and leader (the entrepreneur). These factors affect each other differently when deciding a direction of action and the course of the business operation in a particular mission or task.

The BI approach from the entrepreneurship perspective focuses on transforming business growth into a new digitized environment. Furthermore, technology in entrepreneurship builds a competitive advantage that creates a knowledge-intensive (Kastelli, Siokas, and Tsakanikas 2023). Knowledge-intensive can be classified as applying technology to a specific problem that generates solutions and approaches to overcome it (Jayakrishnan, Mohamad, and Yusof 2020). The technology change and growing demand emphasis

on the business encourage entrepreneurs towards technology adoption that creates unique value. Therefore, BI approaches need to be considered as a tool for the entrepreneur's success in implementing innovation, strategy, and competitive edge. Yet, an entrepreneur needs to become a technology adopter who can advance in the ideas and decision-making process while gaining relevant information on their business opportunities (Hamdan, 2019). Besides, technology is evolving and entrepreneurs need to understand the BI approaches that can be adopted in their business environment. Adopting Transformational Leadership Theory as fundamental for organizational change and gaining insight into new knowledge perspectives about technology (Bass & Avolio, 1993) and Theory of Planned Behaviours as the driver towards technology behavior within the organization that increases their performance and future context (Ajzen 1985), this research extracted the Theory of Planned Behaviours and Transformational Leadership Theory components that indicated their significance. The theoretical and conceptualization analysis from the previous research was used to refine the study's conceptual model. The Transformational Leadership Theory will be linked with this conceptual model perspective and pre-assessed and Theory of Planned Behaviors as the strategized business model and successful technopreneur for SME Malaysia case study, as presented in Fig. 3.

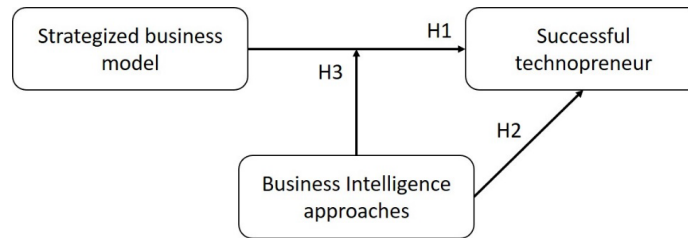


Fig. 3. Conceptual model of strategized business model and successful technopreneur for SME Malaysia.

Based on Fig. 3, the conceptual model of the strategized business model will create a successful technopreneur through a knowledge economy emphasis on information to create economic advantages, a value chain emphasis on higher-value products or services, and a high technology emphasis on cutting-edge technology for decision-making. Thus, the following is the hypothesis for a successful technopreneur:

H₁: *Strategize business model has a positive, significant relationship with the success of technopreneurs.*

A favorable atmosphere for the technopreneur in conceiving the organization's perception and promoting it for the future depends on the strategic business model (Soelaiman, Keni Keni, & Puspitowati 2024). Sudarma and Budiastuti (2024) stated that with the ability to influence and achieve the goal of the organization, technopreneurs need a business model that focuses on the leadership factor to motivate and guide them. Understanding adequacy leadership factors were significant for hypothetical and functional reasons because Malaysian SME technopreneurs were the people who needed to lead the business in the present creative and dynamic market in Malaysia.

H₂: *Business Intelligence (BI) approaches have a positive, significant relationship with the success of technopreneurs.*

The BI approach focuses on the innovation and technology advancement of a business towards accomplishing its performance and vision through the period of organizational ventures that usher toward progress (Eboigbe et al. 2023). Yousf et al. (2024) stated that by applying technology into business the entrepreneur is venturing into a technopreneur that creates new value for the organization through the digital economy. Therefore, successful technopreneurs who plan their business performance and carry out their action plans have a favorable and substantial association with BI techniques.

H₃: *Business Intelligence (BI) approaches have a positive, significant relationship moderate between strategized business model and the success of technopreneur.*

The BI approaches indicate the technology growth that needs to be the focus of a business in the global conditions and influence it (Al-Okaily, Teoh, & Al-Okaily 2023). The strategized business model needs to be embedded into the BI approaches to implementing digitalization to increase business performance and achieve the vision for a better outcome (Wang et al., 2023). Therefore, the BI approach has a positive, significant relationship moderate between strategized business model and successful technopreneur that opens possibilities to change the business environment and increase its digital value.

3. Methodology

By collecting data from respondents, the study operationalized a quantitative method through a survey. The quantitative study is described as organized research of phenomena by collecting quantifiable knowledge and doing mathematical, statistical, or computational techniques (Mbanaso, Abrahams, & Okafor 2023). A questionnaire is an appliance about the survey approach for this study via gathering data for the relationship between strategic business models and successful technopreneurs for SME Malaysia.

The study obtained 313 respondents among entrepreneurs from SMEs in Malaysia. The sample size, the specific population, and the sample were to be determined. The study utilized simple random sampling in which data were collected from the entrepreneurs from the SMEs in Malaysia which are available and accessible to the researcher. (Kothari, Kumar, & Uusitalo 2014) have proposed a three-step approach to executing simple random sampling. The accompanying advances clarify how the sample was attracted in this research dependent on Kothari's method. First, defining the population of the study, where the entrepreneurs were located from the SME in Malaysia. Second, deciding on the sample size, where the determination of the sample was done through the sampling procedure proposed by (Sekaran and Bougie 2016). Lastly, randomly selecting the sample of entrepreneurs who are available and accessible to the researcher. Following the suggestion of (Hisrich & Kearney, 2013) for entrepreneurship studies that concentrate on individual-level, such as technology motivation, attitude, and behavior, they could begin from any population of people, and any sample of people might be pertinent. He further concluded that it is empirical to determine the sample to people who are showing a specific level of entrepreneurship, like owner-managers of independent businesses. Hisrich and Kearney (2013) have shown that in any individual-level entrepreneurship research, it is not important to recognize the entrepreneurs and technopreneurs. As this study concentrated on individuals' perceptions and technology aims, it could certainly follow Hisrich's suggestion.

Analysis of survey data is a crucial and stimulating stride within the survey mechanism. Data analysis is the procedure of methodically employing logical and statistical approaches to illustrate and describe, recap and evaluate, and condense data (Sekaran and Bougie 2016). One of the many essential things estimated by researchers while analyzing data is to remain unbiased and stay neutral towards unexpected patterns, expressions, and results (Bhandari, Borovička, and Ho 2024). Every construct in this study was subjected to reliability testing. The dependability of the measurement scale influences its consistency. (Sekaran 2016) stated that Cronbach Alpha is a reliability coefficient that specifies how strongly the elements within a set are positively correlated to one another. Cronbach Alpha yields a rate between 0 and 1 broad, with greater values implying higher reliability. In quantitative research, validity is important as it measures the elements that need to be measured. Therefore, after developing the conceptual model, validation is a must if not the research will be meaningless (Lambert & Newman 2023). Moreover, the study used simple random sampling involving entrepreneurs who use digital technology to enhance their businesses. To generalize the findings, the study plans to look into the successful technopreneur's experience. Due to their high level of expertise and use of digital technology to improve their business, they are recognized as respondents with sufficient knowledge to complete the questionnaire based on their behavior and experience. It merits clarifying that this research was not reviewed research on entrepreneurship, but a study on BI approaches of present entrepreneurs to act on becoming successful technopreneurs. In this way, involving entrepreneurs from SMEs in Malaysia as the sample was viable. The current study intended to analyze the relationship between strategized business models and successful technopreneurs. The investigation was regulated empirically by applying a quantitative approach.

3.1 *Measure of variables*

The study used structured questionnaires because these questionnaires would ensure minimum variation, increase the response rate, and ease the coding and transcription of the data. Structured questionnaires involve a high number of respondents who answer them and have a low level of crisis about the researcher. The wordings of the questionnaire were modified to suit the study for gathering a broad area of data from respondents. (Uma Sekaran, 2016) stated that multiple-choice questions offer an option of choosing one or more on certain matters, whereas dichotomous questions are structured questions with only two reply options, being yes or no. A seven (7) point Likert-form range was utilized to estimate the reply to the questions because it could apprehend all the requisite data on the approach (Lund 2023) and enhance the comparison of feedback. Furthermore, the Likert scale spans from 1 (Strongly Disagree) to 7 (Strongly Agree).

3.2 *Validity and reliability*

The conceptual model for the current research was examined via Structural Equation Modelling (SEM) procedures utilizing the Partial Least Square (PLS) technique. The SmartPLS software version 3.2.8 was employed as a software tool to deliver SEM data analysis for structural and measurement models in this analysis. The assessment of the measurement model was based on validity and reliability estimates which were measured through indicator loading, convergent validity values, discriminant, and internal consistency. For each latent variable, the Average Variance Extracted (AVE) and Composite Reliability (CR) rates were used to determine convergent validity. Cross-loading rates and Fornell-Larcker criterion set on discriminant validity.

3.2.1 *Internal Consistency*

To determine the reliability of a scale used in an analysis tool, internal consistency was used. Cronbach's alpha is typically used for this purpose to assess internal consistency, which determines a scale's reliability (Hair et al. 2010). A measurement model's internal consistency dependability was shown by rates of 0.9 or 0.8 in the current stage of the research, but rates below 0.6 indicated worse reliability. A higher Composite Reliability (CR) rate indicated that the items were more consistent. According to Table 1, the Composite Reliability (CR) and Cronbach Alpha (CA) values for the current analysis were both more than 0.9 and 0.8. These rates reveal that the items used in the continuing study instrument to convey constructions had more internal consistency, indicating a good point of construct dependability.

Table 1
Internal Consistency Measures

Variables	Cronbach's Alpha (CA)	Composite Reliability (CR)
SBM	0.964	0.967
BI	0.956	0.962
ST	0.943	0.952

¹ Notes: SBM= Strategized Business Model, ST= Successful Technopreneur and BI= Business Intelligence.

3.2.2 Convergent Validity

Hair et al. (2010) stated that convergent validity decides the strength to which an action correlates with an elective proposition of a similar construct. Subsequently, convergent validity guarantees that a unit estimates its predicted construct. Convergent validity was calculated for the current study using the Average Value Extracted (AVE) rate, which was suggested by (Sekaran and Bougie 2016). Defensible convergent validity is revealed by an AVE rate of 0.50 or greater. The rates of AVE for the convergent validity of the models used in the current analysis are constrained in Table 2. The assessment model of the current study demonstrates justifiable convergent validity since all the rates satisfied the lowest threshold rate (0.50) of AVE.

Table 2
Average Variance Extracted (AVE) Values

Variables	Average Variance Extracted
SBM	0.559
BI	0.738
ST	0.688

² Notes: SBM= Strategized Business Model, ST= Successful Technopreneur and BI= Business Intelligence.

3.2.3 Discriminant Validity

According to (Hair et al. 2010), discriminant validity is used to illustrate how different contrives are from one another. Examining the discriminant validity of the criterion, cross-loadings, and constructions of the manufactured elements can be done in two ways (Sekaran and Bougie 2016). When a module's square root of its AVE is higher than its correlation with other forms, the rate is obtained using the first technique (Fornell and Larcker 1981). When compared to other constructs, the second methodology (Cross-Loading) rate shows that the loadings of the items are higher in their respective constructs. These rates demonstrate an evaluation design's discriminant validity. The algorithm activity was carried out in the Smart PLS software to obtain the rates of discriminant validity. The rates assessed using the Fornell-Larcker criterion for determining discriminant validity are shown in the result listed in Table 3.

Table 3
Fornell-Lacker Criterion

Variables	BI	SBM	ST
BI	0.859		
SBM	0.390	0.748	
ST	0.593	0.442	0.829

³ Notes: SBM= Strategized Business Model, ST= Successful Technopreneur and BI= Business Intelligence.

4. Results

The study utilized SmartPLS software version 3.2.8 as a tool for conducting SEM data analysis on both the measurement and structural models. In recent years, the use of the SEM-PLS method in the social sciences has become more advanced and widely accepted, and previous studies have also suggested its utility (Batra 2024; Usakli & Rasoolimanesh, 2023). To summarize the validity and reliability measures, the tests resulted in an analysis of the data set, which showed that the current research's measurement design was reasonable and could be further considered to estimate the structural model's variables. The proposed relationship between the current parameters was investigated using the structural model in SEM. It is fundamental to provide conclusive evidence supporting the conceptual significance of the design displayed by the structural model (Wilson 2023). This section commences with the findings of the data screening, respondent's background, path coefficients, hypotheses testing, and effect size.

4.1 Data screening

A set of 500 questionnaires (sample size) was distributed to entrepreneurs of SMEs in Malaysia to gather data for this study. A response rate of 82.4 percent was obtained from the 412 surveys that were returned. However, 35 of the 412 questionnaires were deemed incomplete and had missing values greater than 10%; as a result, they were not included in the data analysis. Additionally, seven questionnaires with a standard deviation of 0 were identified as unengaged responses. As a result, 323 of the 370

questionnaires were deemed legitimate for statistical data analysis after 47 were eliminated. Since SmartPLS does not need research data to be normally distributed as a prerequisite for statistical analysis, the finished data was not subjected to normality checks (F. Hair Jr et al. 2014).

4.2 Respondent's background

The demographic data of the respondents, including age group, gender, business management, business kind, technology use, and success rate, are included in Table 4. Eighty-one percent of the respondents were classified as male. Young respondents, comprising 26.2% of the sample, were in the 25–34 age range. However, 5 to 10 years of experience running the business comes to the highest group among the respondents with 41.9 percent. Moreover, the types of business engaged in by the respondents show 20.4 percent from construction. The level of technology use in the company of the respondents indicates that (Level 3- 40%-60% use of technology) is 29.1 percent. Regarding the success rate of the business, most of the respondents were between 61%-80% with 24.6 percent.

Table 4
Respondent's Background

	Demographic Variables	Frequency	Valid (%)
What age group do you belong to?	18-24 years	22	7.0
	25-34 years	82	26.2
	35-44 years	63	20.1
	45-54 years	53	16.9
	55-64 years	69	22.0
	65 years or above	24	7.7
	Total	313	100
What is your gender?	Female	58	18.5
	Male	255	81.5
	Total	313	100
How long you have been running your business?	11-20 years	45	14.4
	5-10 years	131	41.9
	Less than 5 years	125	39.9
	More than 20 years	12	3.8
	Total	313	100
What types of business are you engaged in?	Agricultural	48	15.3
	Construction	64	20.4
	Food & Beverage	20	6.4
	Manufacturing	24	7.7
	Medical and Health Care	30	9.6
	Production	29	9.3
	Retail	48	15.3
	Services	28	8.9
	Trading	22	7.0
	Total	313	100
What is the level of technology used in your company?	Level 1- Less than 20% use of technology	24	7.7
	Level 2- 20%-40% use of technology	53	16.9
	Level 3- 40%-60% use of technology	91	29.1
	Level 4- 60%-80% use of technology	63	20.1
	Level 5- More than 80% use of technology	82	26.2
	Total	313	100
What is the success rate of your business?	Between 21%-40%	45	14.4
	Between 41%-60%	45	14.4
	Between 61%-80%	77	24.6
	Between 81%-100%	57	18.2
	Less than 20%	41	13.1
	More than 100%	48	15.3
	Total	313	100

4.3 Path coefficients

Path coefficients were employed to assess the structural model of the study. The path coefficient values ensure that the intensity and importance of the connection between the two variables are disclosed. To get rates for the evaluation of relationships (paths) between dependent and independent variables, SmartPLS used a process known as "bootstrapping." Additionally, the importance

of the pathways that breathe between these variables was examined using t-statistics and p-values. According to (Hair et al. 2010), the coefficient is considered significant at a specified certainty level when the experimentally assessed statistical t-value is higher than the critical rate. At a significance level of 0.05, a t-value of 0.95 was used for the current analysis. Besides, (Hair, J, Black, W., Babin, B., Anderson, R., and Tatham 2007) mentioned that PLS-SEM employs a nonparametric statistical method called bootstrapping to evaluate the significance of analyzing path coefficients. Furthermore, they indicate that the coefficient rates fall between +1 and -1. However, rates of route coefficients virtually to +1 indicated a strong relationship, whereas rates of coefficients practically to -1 indicated a weak one. Table 5 presents the experimentally assessed t-values, path coefficient values, and p-values between variables in the current investigation. The rejection or acceptance of the hypothesis depended on path evaluations. Subsequently, because of the outcomes specified for the current research, all hypotheses were underpinned at an important degree of 0.05.

Table 5
Path Coefficients

Variable Path	Path Coefficient	SE	t-Value	p-Value
SBM → ST	0.232	0.056	4.120	0.000
BI → ST	0.484	0.053	9.158	0.000

⁴ Notes: SBM= Strategized Business Model, ST= Successful Technopreneur and BI= Business Intelligence.

4.4 Hypotheses testing

The results obtained using a structural model, PLS-SEM, were applied to analyze the present study's hypotheses. The rates of t-values, p-values, and path coefficients at a significance degree of 0.05 were evaluated to analyze the hypotheses. Based on these rates, all the hypotheses of the current research were acknowledged. This research proposed three hypotheses to assess the relationships among the proposed parameters.

The first hypothesis: The relationship between SBM and ST

The outcomes indicated that the path coefficient between SBM and ST was 0.232. The t-value of 4.120 was seen as crucial as it was larger than an analytical rate of 1.96 and the p-value of 0.000 was additionally crucial and below the threshold rate of 0.05. As a result, there was compelling support for hypothesis H1, and the present study revealed a noteworthy positive correlation between SBM and ST.

The second hypothesis: The relationship between BI and ST

The data indicates that the computed route coefficient connecting BI and ST was 0.484. The p-value of 0.000 was identified as being lower than the significance level of 0.05, while the t-value of 9.158 exceeded the critical value of 1.96. Consequently, there was sufficient experimental proof created in the outcomes to accept hypothesis H2. The current research set on a significant positive relationship between BI and ST.

The third hypothesis: The moderating impact BI on SBM and ST

The moderating impact of BI on the relation linking SBM and ST was estimated via a two-phase procedure which is utilized to evaluate the persistent moderating impacts in PLS-SEM. (Hair et al. 2010) stated that a consistent moderator variable can influence the resistance of the relation linking two variables and may likewise adjust the regulation of the relation. A general kind of multi-group analysis may be a continuous moderator. This is particularly true when a continuous moderator variable is converted into an unconditional variable by splitting it into two categories, like "Low" and "High," based on the moderator's rates. Hence, the "Low" and "High" categories are depicted in a process that a practical path coefficient might have perceptions with greater rates in the moderator variable, though the rejection path coefficient might have perceptions with low rates. The current study also described the two-phase method utilized in PLS-SEM for the continuous moderator identified as "Low" or "High." It was predicted that the relationship between SBM and ST would be convincingly moderated and supported by the "High" degree of BI. The moderator design and rates of the moderating, dependent, and independent variables as established by a two-phase process using SmartPLS are shown in Figure 4. The practical rate (0.111) of moderating impact suggested that BI definitively underpins the relationship between SBM and ST, implying that an expansion of one-segment standard deviation in BI will underpin the relationship between SBM and ST by 10.6 percent. This is because the rate of moderating impact was estimated to clarify the effect of the moderating variable.

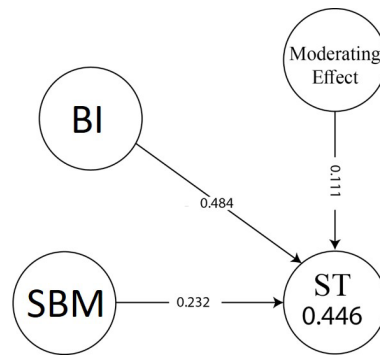


Fig. 4. Moderating effect of BI over SBM and ST

Using SmartPLS's bootstrapping technique, the rate of the moderating impact was also declared significant. At a 0.05 level of confidence, Table 6 shows that the moderating effect is significant (t-value = 2.312 and p-value = 0.021). Since these rates have shown how important the moderating effect of BI is, the current research's hypothesis (H3) was addressed.

Table 6
Importance of the moderating effect of BI over SBM and ST

Path	Path Coefficient	t-Value	p-Value
Moderating Effect	0.111	2.312	0.021
SBM → ST	0.232	4.120	0.000
TE → ST	0.484	9.158	0.000

⁵ Notes: SBM= Strategized Business Model, ST= Successful Technopreneur and BI= Business Intelligence.

Regarding the moderating influence of the Business Intelligence (BI) methodology suggested by H3, this research further proposes that a considerable level of BI will enhance the relationship between SBM and ST positively. As a result, in the Excel Worksheet created by Jeremy Dawson (jeremydawson.co.uk), the duration for two-way communication has been calculated by aligning the unstandardized path coefficient values of both the independent and moderator variables with the interaction rate determined in the prior phase. The slope design in Figure 5 affirmed that when BI is low both SBM and ST are likewise underneath. Yet, when BI progresses from low to high end, both SBM and ST rates likewise escalate. This implies, that with an expansion in the degree of BI, the relation linking SBM and ST additionally improved. In total, these outcomes demonstrated that BI confidently moderated the relation linking SBM and ST. Hence, the result supports the hypothesis (H3) of the present study in which the Business Intelligence (BI) approach moderates the relationship between strategized business model and the success of technopreneurs in SME Malaysia.

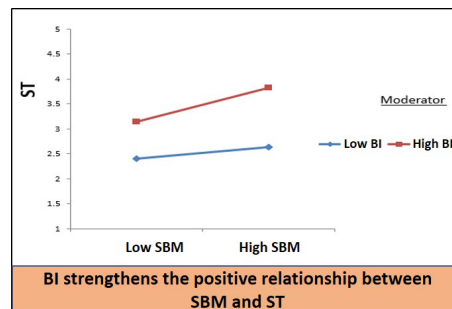


Fig. 5. TWO-WAY Interaction Term.

4.5 Effect size (f^2)

The rate of f^2 , which explains the effect magnitude, was used to assess the strength of the initiative conceptual model of the current analysis. According to (Hair et al. 2010), a growth in R^2 in relation to the percentage of the endogenous variable's divergence that cannot be explained is used to calculate the rate of f^2 . They also make it clear that rates of f^2 between 0.02-0.14 are thought to indicate a modest effect, 0.15-0.34 a moderate effect, and 0.35 and above a large effect. Model strength was assessed using f^2 for the current analysis, and Table 7 lists the rates for each path. Table 7 indicates that only the link connecting successful technopreneurs with the Business Intelligence (BI) approach has a high influence, whereas the other paths have a weak effect.

Table 7
 f^2 Values for Each Path

Path	Effect size	Results
SBM → ST	0.055	Weak
TE → ST	0.361	Strong

⁶ Notes: SBM= Strategized Business Model, ST= Successful Technopreneur and BI= Business Intelligence.

The current research further hypothesized that the relationship linking strategized business models and successful technopreneurs is emphatically moderated by a greater degree of Business Intelligence (BI) approach. A two-phase process that is used to quantify the continuous moderating influences in PLS-SEM was used to estimate the moderating impact of BI on the association between successful technopreneurs and strategized business models. Consequently, business intelligence plays a significant moderating role in the designed business model and the achievements of successful technopreneurs.

5. Discussion

The desire of present entrepreneurs to transition into the environment of technopreneurs has been somewhat clarified by this study. According to the study's findings, every company leader has a significant role to play in persuading others to adopt digital business practices. The utilization of technology is one of the initiatives by the government to optimize innovation and technology. The main purpose is to facilitate successful technopreneurs more intensively concerning the more advanced internet activities application to encourage business results with the emphasis on the strategized business model for business. It is therefore feasible for current entrepreneurs to share their own experiences or success stories with others, as entrepreneurs can only implement digital transition when owner-managers find it beneficial. Furthermore, they can also educate each other on digital transformation through informal knowledge-sharing sessions such as business gatherings or personal appointments. This is because entrepreneurs will only commit to digital practices when they have technology concerns. As the Business Intelligence (BI) approach pressure is considered an influential factor for entrepreneurs to practice digital transformation in business, they must inform each other concerning the benefits of technopreneurship. It is hoped that rapid interactions among business practitioners could encourage voluntary digital engagement in business.

Apart from individual entrepreneurs, business associations or trade associations also play a vital part in cultivating successful technopreneurs. They can act as platforms for entrepreneurs to create networks and share information regarding BI. Therefore, government policymakers might use these research findings as guidance to win the wars to develop technopreneurs using knowledge-intensive technologies, the point is to advance the more prominent use of BI and other innovation skills along the value chain. To make innovative and imaginative human resources, the technopreneur will focus on growing the supply of a knowledgeable, technically skilled, and technology-enabler-prepared workforce. In tandem with the growth of a prosperous technopreneur, the government can actively encourage the application of BI across all industries.

6. Conclusion

This study is important because it addressed a sophisticated digital process as the formation of technology intention, by using moderator analysis. Besides this study scrutinizes the relationship between strategic business models and successful technopreneurs. As a result, this research is unique since it is the first to present an empirical study on the connection between successful technopreneurs and strategized business models. Furthermore, this study computes insight, especially within SME Malaysia. The behavior of the business towards technology should be assessed and action should be made promptly towards certain technology usage. Therefore, changing entrepreneurs' mindsets on the Business Intelligence (BI) approach and equipping them with sufficient digital capabilities could be deemed as an initial step in successful technopreneurship development. According to this study, a technopreneur is a modern-day businessperson who uses technology to create something original to make money or sell it. This business model is the most suitable in a competitive environment as it aids in comprehending the effects on progress, societal transformation, and growth. In this case, the understanding of the BI that influences technopreneurs' success is described inside the planned business model. Furthermore, the necessity for its country to cultivate technopreneurs aligns with the worldwide shift towards an information-based and digital economy propelled by the Industrial Revolution (IR) 4.0. Thus, it successfully showed that different aspects could be brought together to explain the causal process of digital transformation regarding entrepreneurship.

The current research, thus, addresses a significant contribution to understanding the improvement of technopreneurs, influenced by the BI. It adds to the current information on entrepreneurship by ordered builds dispersed across the different studies, to be specific business models and technology usage of BI. Thus, the body of knowledge emphasizes entrepreneurship as the strategized business model that can be enhanced with real-world experience as a practicing entrepreneur, technopreneurship uses technology to its fullest potential to transform the current economic system and innovation as knowledge, skill, and practices that set a baseline for good principles within an organization.

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