# Innovation capabilities and export performance of SMEs: does managers' risk-taking propensity matter?

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## Abstract

**Purpose** – This paper aims to examine the relationship between innovation capabilities (INVC) and export performance (EXPERF) of manufacturing small and medium enterprises (SMEs). Moreover, the paper aims to investigate the moderating effect of risk-taking propensity (RSTP) in the relationship between INVC and the SMEs' EXPERF.

**Design/methodology/approach** – A cross-sectional survey design was used and data were collected through structured questionnaires from 250 manufacturing exporting SMEs in Tanzania. Confirmatory factor analysis was used to test the measurement model. The hypotheses were empirically tested using PROCESS macro test.

**Findings** – The findings affirm that INVC is a significant predictor of EXPERF. Additionally, RSTP was found to be a significant moderator of the relationship between INVC and EXPERF.

**Research limitations/implications** – Although the study was able to accomplish its overall objective, it is limited in terms of the context under which the study was conducted. This study covered only manufacturing SMEs in a single country, Tanzania. Hence, the findings should be interpreted with caution since each country has specific institutional environments that support innovation.

**Originality/value** – The findings of this study expand the application of the resource-based view (RBV) theory in exporting context. The study revealed how INVC as an intangible resource can lead to successful performance. Hence, the findings of this study broaden the applicability of RBV theory. Also, this study contributes to the debate about the innovation-export performance relationship by revealing a moderating role of RSTP in the relationship between INVC and EXPERF.

**Keywords** Innovation capabilities, Export performance, Risk-taking propensity, Tanzania, SMEs

**Paper type** Research paper

## 1. Introduction

The growth and competitiveness of small and medium enterprises (SMEs) have received attention from both developed and developing nations (Ali *et al.*, 2020; Prasanna *et al.*, 2019; Ringo *et al.*, 2022). This is due to the fact that SMEs are regarded as the backbone of economic growth in all countries, notably due to their impact on the creation of jobs, wealth, improved

livelihoods and the eradication of absolute poverty (Ismail, 2022; Muriithi, 2017). They also contribute significantly to the GDP (Edeh *et al.*, 2020). Similarly, exporting has been considered one of the major factors for SMEs' growth and competitiveness. Exporting is the most affordable and easiest mode of firm internationalization especially for SMEs (Gupta and Chauhan, 2021), because it requires fewer resources and is less risky (Chen *et al.*, 2016). In addition, exporting is essential for SMEs that desire to develop and advance to the next level (Quaye *et al.*, 2017). However, SMEs are in unfavorable positions regarding export success, due to the dynamic nature and uncertainty of the export markets (Gupta and Chauhan, 2021). In order to succeed in such a market, SMEs must possess the unique capability that would enable them to manage the export market's turbulence, competition and dynamism.

On the other hand, innovation capabilities provide a means of thriving in extremely competitive and dynamic markets (Bagheri *et al.*, 2019) such as export markets. In addition, Blyde *et al.* (2018) opined that innovation helps firms expand their business operations through exporting. Similarly, according to the resource-based view (RBV) theory by Penrose (1959), specific firm resources and capabilities can be a source of competitive advantage and performance. Innovation is considered to be a source of value creation for firms (Ortigueira-Sánchez *et al.*, 2022), as a result, it creates firm competitiveness, performance enhancement and growth (Bhat and Momaya, 2020). Therefore, we argue that for SMEs to flourish in export markets innovation capabilities are essential. In a similar vein, several empirical research investigated the influence of innovation capabilities on export performance (Azar and Ciabuschi, 2017; Azari *et al.*, 2017; Bhat and Momaya, 2020; D'Angelo, 2012; Edeh *et al.*, 2020; Filipescu *et al.*, 2013; Ortigueira-Sánchez *et al.*, 2022; Oura *et al.*, 2016; Rodil *et al.*, 2016). However, the studies produce contradicting results (Bıçakcıoğlu *et al.*, 2020; Love and Roper, 2015). While some studies have demonstrated that innovation capabilities have a significant positive effect on export performance (Costa *et al.*, 2015; Fernandez-Mesa and Alegre, 2015; Ledesma-Chaves and Gaitán, 2022; Ortigueira-Sánchez *et al.*, 2022), others found negative effect (Boehe and Cruz, 2010; Ganotakis and Love, 2011) and others non-significant effect (Silva *et al.*, 2017).

However, the majority of these studies focused on large firms and were carried out in developed economies. In particular, the findings of the prior studies can be differentiated with regard to the context in which the studies were focused and carried out. For instance, there are differences in institutional environments between developed and developing countries (Fernández-Sastre and Montalvo-Quizhpi, 2019). In developed economies, institutions play a vital role in influencing firms' innovation performance, but this is less likely in most developing economies (Edeh *et al.*, 2020). In developed economies, SMEs are well supported by strong legal systems, minimal bureaucracy and access to financial services (Lee *et al.*, 2015). Many developing economies, however, have less effective institutions that are defined by political uncertainty, corruption, inadequate infrastructure and governance (Lee *et al.*, 2015; Quartey *et al.*, 2017). Due to these subpar institutional frameworks, SMEs in developing economies struggle to successfully meet their objectives for innovation (Medase and Barasa, 2019). Also, innovation by its nature is a risky and expensive investment (Simpson *et al.*, 2006), and since the majority of SMEs have resource limitations in contrast to large firms (Wadho and Chaudhry, 2018), SMEs find it difficult to actualize their innovation objectives. As a result, findings from developed countries and those which centered on large firms might not be very useful for the assessment of SMEs in the majority of developing economies. In the context of developing economies, there is a dearth of empirical evidence on the innovation–export performance relationship (Castillo *et al.*, 2022; Ortigueira-Sánchez *et al.*, 2022). Thus, this study investigates the effect of innovation capabilities on SMEs' export performance in a developing country context, Tanzania.

In addition, the success of internationalization is dependent upon the entrepreneurial behavior of the firm owners'/managers' willingness to take the risk (Jafari-Sadeghi, 2021). Because exporting is considered riskier than domestic operations (Leko-Šimić and Horvat, 2006), a significant level of risk-taking propensity is required. Similar to this, it needs a

risk-taking attitude to invest in innovation (Ahimbisibwe and Abaho, 2013), because innovation is an inherently risky and costly investment. Risk-taking propensity entails the readiness of the owner/manager to commit significant resources when implementing strategies and opportunities associated with uncertain expected results (Lumpkin and Dess, 1996). Therefore, in this study, we contend that innovation capabilities would perform magnificently in the presence of a significant risk-taking attitude. As such, it can also be urged that the inconsistent findings from the prior studies may be due to the varying levels of the management's risk-taking propensity. Based on this, the current study adds to the body of literature by examining the interaction effect of risk-taking propensity on the relationship between innovation capabilities and export performance in the context of Tanzanian SMEs. By so doing, this study contributes to the ongoing debate on the innovation–export performance relationship and further broadens the relationship by investigating the moderating effect of risk-taking propensity in the context of manufacturing SMEs.

## 2. Literature review and hypotheses development

### 2.1 The resource-based view (RBV) theory

The RBV theory by Penrose (1959) contends that the firm is a collection of productive resources that may be combined in various ways to produce products for sale, and it is this combination of resources that makes the firm unique. The RBV theory provides a theoretical basis for the significance of different types of resources to a firm's overall performance and competitiveness (Roxas and Chadee, 2011). RBV suggests that firms can achieve and maintain competitive advantage if they have valuable, rare, inimitable and non-substitutable tangible and/or intangible resources (Barney, 1991). In addition, RBV claims that resource endowment heterogeneity among firms results in performance differences (Peteraf, 1993). Intangible resources have been postulated to be strategic assets for developing competitive advantage because they possess unique factors (Locket *et al.*, 2009). Similar to this, intangible resources are required to effectively utilize the tangible resources available and create a competitive advantage (Racela and Thoumrungroje, 2020).

Innovation is considered to be a strategic intangible asset that creates a competitive advantage (Gupta and Chauhan, 2021) because it possesses unique characteristics of valuable, rare, inimitable and non-substitutable (Barney, 1991). Based on this, innovation capabilities can lead to successful export performance. However, investing in innovation is more expensive and risker, hence a considerable level of risk-taking attitude is emphasized (Simpson *et al.*, 2006). Similar to this, firms with managers who dare to take risks out-performs the risk-averse ones (Okpara, 2009). Therefore, based on the RBV theory, managers' risk-taking capability is a strategic resource because it explains performance differences among firms. As such, based on this, SMEs that have managers with a greater propensity to take risks are more likely to achieve the desired performance outcomes.

### 2.2 Innovation capabilities and export performance

The extant literature emphasizes that innovation is a key driver for firms' ability to survive in dynamic and intensely competitive environments (Bagheri *et al.*, 2019; Castillo *et al.*, 2022) and it creates firm-specific advantages (Oura *et al.*, 2016). Despite the fact that a stream of literature recognizes the importance of innovation capabilities in enhancing export performance (Ledesma-Chaves and Gaitán, 2022; Ortigueira-Sánchez *et al.*, 2022; Ribau *et al.*, 2017), findings on this relationship are not conclusive (Bıçakcıoğlu *et al.*, 2020; Castillo *et al.*, 2022). Also, empirical based-evidence on the relationship in developing economies is scarce (Ortigueira-Sánchez *et al.*, 2022). Based on this, the present study investigates the relationship in the context of the developing economy context, Tanzania and contributes to the existing debate.

The widely accepted definition of innovation offered by the fourth version of the Oslo Manual (OECD, 2018) defines innovation as "a new or improved product or process (or combination) that differs significantly from the unit's previous products or processes and that has been made available to potential users (product) or brought into use by the unit (process)." Innovation allows firms to expand their business operations through exporting (Saridakis *et al.*, 2019) and highly innovative companies can cope with the liability of foreignness (Li, 2018). In addition, innovation capabilities offer a competitive advantage in international markets by enabling firms to take advantage of economies of scale and scope (Ringo *et al.*, 2023; Silva *et al.*, 2017). Similarly, Guarascio *et al.* (2017) opined that innovation efforts and market competitiveness are the sources of good performance. Therefore, success in global markets is determined by the innovation operations of firms. Thus, it is worth hypothesizing that:

*H1.* Innovation capabilities significantly influence SMEs' export performance.
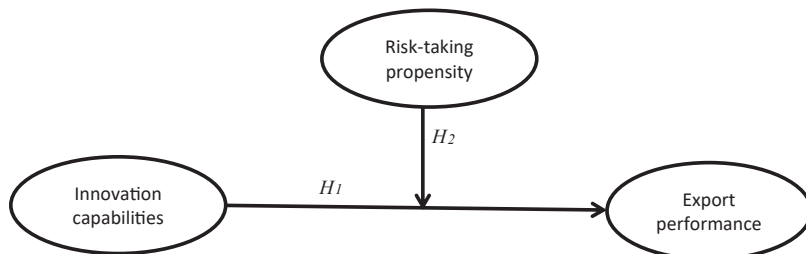
### 2.3 Moderating role of risk-taking propensity

When firms engage in innovation activities, the risk-taking propensity of a manager is typically an integral part of the process. This is because the decision to commit a significant amount of resources in pursuing a certain strategy is rested at the discretion of a manager. For instance, when a firm wants to develop a new product, process or market, a considerable level of management risk-taking capability is required. In this manner, the performance of the firm would improve when managers' risk-taking attitude is high (Alvarez and Lowell, 2001). In addition to that, the propensity to take a relatively high amount of risk helps a firm capture lucrative opportunities amid uncertainty and achieve long-term profitability (Ahimbisibwe and Abaho, 2013). Therefore, the current study investigates the argument that improving export performance can be achieved through SMEs' innovation capabilities provided that managers' risk-taking attitude is properly functioning. Based on this, the study hypothesizes that the relationship between innovation capabilities and export performance may be affected by the managers' risk-taking propensity in terms of their willingness and ability to commit resources to pursue risky strategies associated with export market opportunities. The interaction can occur in such a way that the higher level of risk-taking propensity, the likelihood that, innovation capabilities will have a strong effect on export performance. Thus, the study hypothesizes the following:

*H2.* Risk-taking propensity significantly moderates the relationship between innovation capabilities and SMEs' export performance.

### 2.4 The conceptual framework

The conceptual model of this study is depicted in Figure 1. The model was constructed based on a critical review of the literature. The model postulates that innovation capabilities result



Figure 1.
The conceptual framework

in improved export performance. In addition, the model theorizes that risk-taking propensity moderates the relationship between innovation capabilities and export performance.

## 3. Methodology

### 3.1 Study areas and research design
This study was conducted in Arusha, Dar es Salaam, Dodoma, Mbeya and Mwanza in Tanzania. The regions were selected because they are production potential for manufacturing products and they account for a significant amount of Tanzania's manufactured outputs (Andreoni, 2017). In addition, the selection of these regions is also due to the fact that there is a fairly large number of manufacturing SMEs across these regions (URT, 2012, 2016). In this study, a cross-sectional survey design was employed since data from a target population were only gathered once. The design is considered effective and efficient because it allows the collection of a significant amount of data within a short time period.

### 3.2 Sample and data collection
The target population of this study comprised 958 manufacturing-exporting SMEs in the selected regions and the list was obtained from the National Bureau of Statistics (NBS) supplemented with a registered list from the Small Industries Development Organization (SIDO) in the regions. The target population consisted of manufacturing-exporting SMEs in the food, leather, textiles and wood industries from the chosen regions. The four industries are selected because they account for the majority of exporting SMEs in Tanzania's manufacturing sector (Andreoni, 2017). To obtain sufficient and relevant data to address research hypotheses, this study includes only SMEs that have been consistently involved in exporting operations for at least three years. Also, in this study, Tanzania's definition of SMEs was used in which micro firms are those with a number of employees ranging from 1 to 4, small firms have 5–49 employees and medium-sized firms have 50–99 employees (URT, 2003). In this study, Yamane's (1967) formula was used to determine the sample size with a target population of 958 exporting SMEs, a confidence level of 95% and a 5% margin of error, which resulted in 282 manufacturing-exporting SMEs as a sample size.

Proportional stratified sampling was employed to have a representative of SMEs from each region as indicated in Table 1. Thereafter, simple random sampling was used to pick up SMEs from the regions and include them in the sample. Data were collected from 250 managers of manufacturing-exporting SMEs through an actual survey conducted from November 2021 to April 2022. Managers were used in this study because they had rich information relevant to the study variables and also they are the ones involved in the strategic decisions of the firms. After administering 282 questionnaires, the valid responses collected were 250, which equates to a response rate of 88.7%. Also, a structured questionnaire was

| Region | No of exporting SMEs | Proportion | Sample size |
|---|---|---|---|
| Arusha | 153 | 153/958*250 | 40 |
| Dar es Salaam | 390 | 390/958*250 | 102 |
| Dodoma | 115 | 115/958*250 | 30 |
| Mbeya | 115 | 115/958*250 | 30 |
| Mwanza | 185 | 185/958*250 | 48 |
| Total | 958 | 958/958*250 | 250 |
| **Source(s):** SPSS output | | | |

Table 1.
Proportional sampling

used to collect data. The questionnaire was used because it covers a wide area and gives a large amount of information in a short period (Saunders *et al.*, 2019). In addition, a structured questionnaire was used since it protects respondents and the researcher from any potential bias (Kim *et al.*, 2016). Before the actual survey took place, the questionnaire was pre-tested by 20 managers of exporting SMEs, and it was then amended based on their feedback, to make sure that the content and design would be simple for the respondents to understand.

### 3.3 Measurements of study variables
The constructs in this study were measured by multi-item scales with five-point Likert scales ranging from 1 "strongly disagree" to 5 "strongly agree." The measurement items were selected because they fit with the conceptual model of the current study (content validity) and they were found to have adequate previous reliabilities. The measurement scale for innovation was adapted from Damanpour (1992) and Lin *et al.* (2010). This scale is used because it is a comprehensive innovation scale covering capabilities in product, process and marketing. Ten items were used to measure innovation capabilities across product, process and marketing. The scale items for risk-taking propensity were adapted from Lumpkin and Dess (1996). Four items were used to measure risk-taking propensity. Also, in this study, export performance (EXPERF) was measured using the EXPERF scale developed by Zou *et al.* (1998). The scale is used in this study since it is a comprehensive scale that integrates both objective and subjective measures, to ensure the validity of the results (Zou *et al.*, 1998). This scale has nine items.

### 3.4 Data analysis
In this study, confirmatory factor analysis (CFA) in the structural equation model was used to determine the model measurements such as model fit indices, reliability and validity of the data and measures. The CFA is considered relevant for evaluating the validity of measured items for latent variables in multivariate analysis (Barati *et al.*, 2019). In addition, Hayes' PROCESS macro was employed to analyze the moderating effect of risk-taking propensity on the effect of innovation capabilities on export performance. The PROCESS macro was used because it is acknowledged as a powerful and modern tool for performing regression analysis with additional variables, such as moderators and mediators (Hayes, 2022).

### 3.5 Results for validity and reliability
Internal consistency reliability was measured using Cronbach's alpha. Table 2 results display the results in which all values of Cronbach's alpha are above 0.7, indicating that the constructs of this study are internally consistent and reliable (Davis *et al.*, 1981). Additionally, Table 2 results show that all study's constructs have values of composite reliability (CR) higher than the threshold value of 0.7 implying that measures are reliable (Hair *et al.*, 2010). Similar to this, item reliability indicates an acceptable level of reliability because all factor loading values are greater than 0.5 (Hair *et al.*, 2010) (see Table 2 and Figure 2). Moreover, the results in Table 2 show that the Average Variance Extracted (AVE) values for all constructs are above the recommended value of 0.5, depicting the achievement of convergent validity (Hair *et al.*, 2010). Furthermore, Table 3 results indicate the attainment of discriminant validity since the square root of AVE for each construct of this study was greater than the values of inter-construct correlations (Fornell and Larcker, 1981).

### 3.6 Common method variance
Common method variance is a "systematic error variance that occurs from using a common or single method to measure the constructs of the study" (Podsakoff *et al.*, 2003). Because in this study data were gathered from a single participant who represents an exporting SME, with

| Construct and items | Code | Loadings | $\alpha$ | CR | AVE |
|---|---|---|---|---|---|
| *Innovation Capabilities (INVC)* | | | 0.953 | 0.955 | 0.680 |
| Launches new products | INV 1 | 0.68 | | | |
| Extends product lines | INV 2 | 0.72 | | | |
| Enlarges new markets with NPD | INV 3 | 0.86 | | | |
| Launches customized products | INV 4 | 0.84 | | | |
| Imports new process technology | INV 5 | 0.66 | | | |
| Obtains process technology patents | INV 6 | 0.94 | | | |
| Imports advanced programmable equipments | INV 7 | 0.81 | | | |
| Leads innovative pricing methods | INV 8 | 0.92 | | | |
| Leads innovative pricing methods | INV 9 | 0.91 | | | |
| Leads innovative promoting methods | INV 10 | 0.83 | | | |
| *Risk-Taking Propensity (RSTP)* | | | 0.889 | 0.889 | 0.668 |
| Invests in higher risk projects | RST 1 | 0.81 | | | |
| Tolerance for high risk projects | RST 2 | 0.85 | | | |
| Taking chances is part of business strategy | RST 3 | 0.81 | | | |
| Takes calculated risks with new ideas | RST 4 | 0.80 | | | |
| *Export Performance (EXPERF)* | | | 0.934 | 0.932 | 0.604 |
| Export has been very profitable | EXP 1 | 0.77 | | | |
| Export has generated a high sales volume | EXP 2 | 0.73 | | | |
| Export has achieved rapid growth | EXP 3 | 0.86 | | | |
| Export improved our global competitiveness | EXP 4 | 0.84 | | | |
| Export has strengthened our strategic position | EXP 5 | 0.76 | | | |
| Export increased our global market share | EXP 6 | 0.80 | | | |
| The export performance has been satisfactory | EXP 7 | 0.79 | | | |
| Our firm export has been successful | EXP 8 | 0.71 | | | |
| Our firm export has fully met our expectation | EXP 9 | 0.72 | | | |

**Note(s):** $\alpha$- Cronbach's alpha; CR- Composite Reliability; AVE- Average Variance Extracted
Model fit indices: $\chi^2$/df = 1.841; GFI = 0.925; NFI = 0.919; RFI = 0.908; TLI = 0.956; IFI = 0.961; CFI = 0.961; RMSEA = 0.058; SRMR = 0.044

**Table 2.**
Confirmatory factor
analysis results

the same response format for all constructs (i.e. Likert scales), and in a single survey, it raised the possibility of a common method bias. Against that, Harman's single-factor test was employed to assess if the data collected exhibited common method bias. The results of the test indicate that a single-factor analysis explains 41.63% of the total variation, which is less than 50%. Therefore, it is concluded that the collected data is free from common method bias (Podsakoff *et al.*, 2003).

## 4. Findings and discussion
### 4.1 The model fit results
CFA was used to check if the model adequately fits the data collected and whether it permitted testing the hypothesized relationships. Model fit indices for GFI, NFI, RFI, TLI, IFI, CFI, RMSEA, SRMR and $\chi^2$/df were assessed and the results are shown in Table 2. Also, the Chi-square ($\chi^2$) value of 410.507, with a degree of freedom (df) 223 at a *p*-value of 0.000 were observed. Therefore, based on the CFA results as depicted in Table 2, all of the model fit indices are within the acceptable values (Hair *et al.*, 2010; Hooper *et al.*, 2008), thus, the model accurately fits the data.

### 4.2 Testing of hypotheses and discussion
In this study, the two hypotheses were tested using Hayes' PROCESS macro. The results in Table 4 show the effect of INVC on EXPERF. Also, it shows the moderating effect of RSTP on
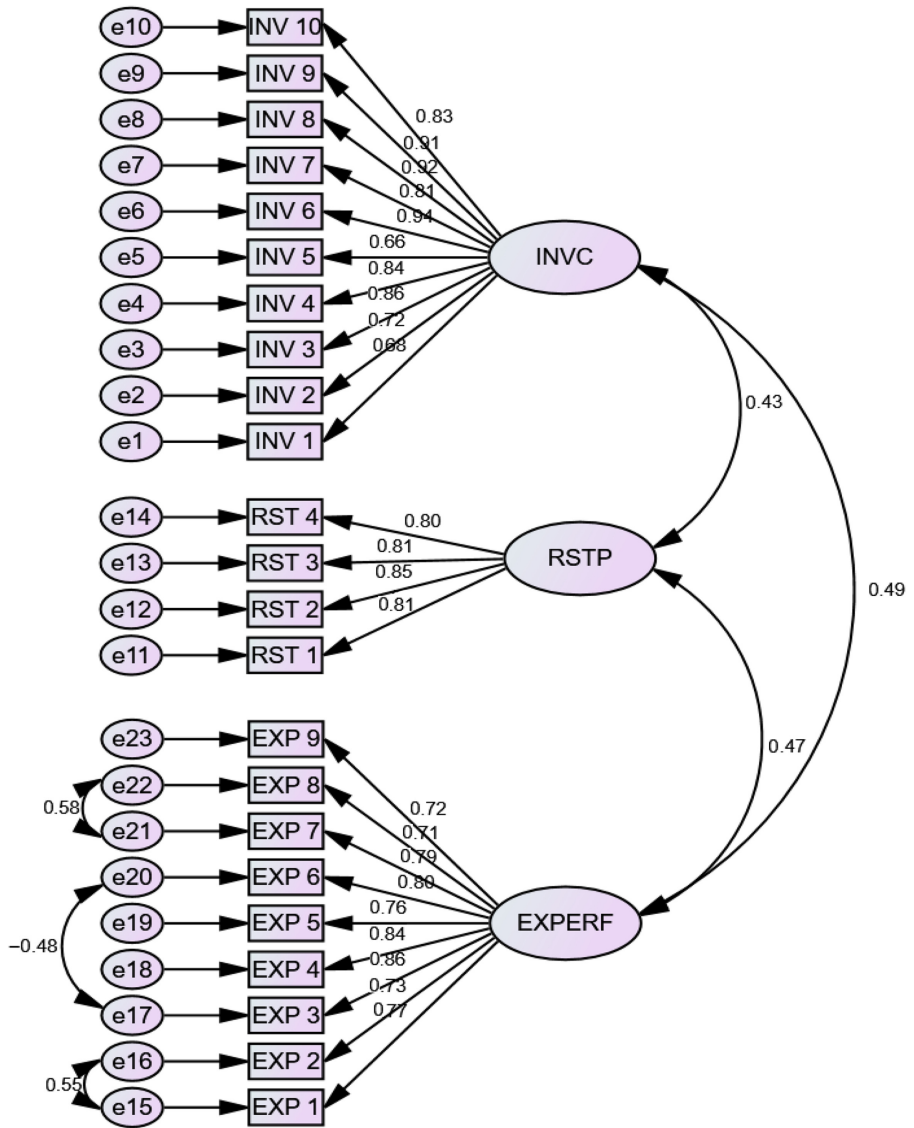
**Figure 2.**
Confirmatory factor
analysis

| Construct | MSV | ASV | INVC | RSTP | EXPERF |
|---|---|---|---|---|---|
| INVC | 0.235 | 0.210 | *0.825* | | |
| RSTP | 0.216 | 0.200 | 0.429 | *0.817* | |
| EXPERF | 0.235 | 0.226 | 0.485 | 0.465 | *0.777* |

**Note(s):** The square roots of AVE are indicated in diagonals (italic), with construct inter-correlations in the lower half of the table. All construct inter-correlations are less than the corresponding square root of AVEs
**Source(s):** SPSS output

**Table 3.**
Discriminant validity
results

the relationship between INVC and EXPERF. The model $r$-square was found to be 0.3159, suggesting that 31.59% of the variation in EXPERF was explained by the INVC. In addition, the model was found to be significant with $p$-value = 0.0000 and $F$ = 37.8588. In H1, the study hypothesized that INVC significantly relates to EXPERF. The results in Table 4 indicate that INVC at the mean of RSTP is significant and positively related to EXPERF ($\beta$ = 0.3860, $p$ < 0.0001). The findings suggest that increased INVC leads to higher EXPERF. Hence, H1 is supported. Also, the results presented in Table 4 show the effect of RSTP at the mean of INVC on EXPERF. The results show that RSTP at the mean of INVC is positively and significantly related to EXPERF ($\beta$ = 0.3359, $p$ < 0.0001).

Also, in H2, the study hypothesized that RSTP significantly moderates the relationship between INV and EXPERF. Based on the results in Table 4, the interaction term (INVC*RSTP) was positive and significant with $\beta$ = 0.2284, $p$ = 0.0010, and confidence intervals between 0.0935 and 0.3634. The obtained confidence interval values have no zero in between, suggesting that RSTP is a significant moderator of the relationship between INVC and EXPERF. Also, the model $r$-square was improved by 3.09%, suggesting that the interaction effect of INVC and RSTP contributes to a significant change (3.09%) in the variance of EXPERF. Additionally, the results in Figure 3 reveal that the effect of INVC on EXPERF is smaller for exporting SMEs with low levels of RSTP (standard deviation −0.74) than for exporting SMEs with high levels of RSTP (standard deviation 0.74). Therefore, the results of this study support H2, and it is concluded that RSTP significantly interacts with the relationship between INVC and EXPERF of manufacturing-exporting SMEs in Tanzania.

In this study, both hypotheses were supported by empirical findings. In H1, the study establishes a significant positive effect of INVC on EXPERF. The results in Table 4 show that, when SMEs increase INVC by one unit, EXPERF increases by 0.3860. The findings of this study further imply that Tanzanian manufacturing-exporting SMEs have INVC that enables them to improve EXPERF. The results of this study, concur with the arguments that, INVC gives firms a competitive edge by introducing new products, processes and development of new markets which plays a critical role in the international success of firms (Guarascio *et al.*, 2017). The findings of this study are consistent with Bhat and Momaya (2020) who revealed that employing INVC significantly determines the EXPERF of emerging market multinationals in the context of the Indian pharmaceutical industry. Also, Ledesma-Chaves and Gaitán (2022) concluded that INVCs are essential for entering new markets and they lead to EXPERF improvements in Spanish exporting firms. Similarly, Castillo *et al.* (2022) opined that firms' innovation activities determine their success in international markets. However, the majority of these studies that examined the INVC–EXPERF relationships were carried out in developed economies and centered on large firms. This study examines the effect of INVC on the EXPERF of manufacturing SMEs in Tanzania, a developing economy. The findings of this study extend the knowledge of the relationship in the context of SMEs and in a developing country.

| Variables | Coeff | Se | T | $P$ | LLCI | ULCI |
|---|---|---|---|---|---|---|
| Constant | 3.8411 | 0.0383 | 100.3107 | 0.0000 | 3.7656 | 3.9169 |
| INVC | 0.3860 | 0.0587 | 6.5698 | 0.0000 | 0.2702 | 0.5017 |
| RSTP | 0.3359 | 0.0542 | 6.2014 | 0.0000 | 0.2292 | 0.4426 |
| INVC*RSTP | 0.2284 | 0.0685 | 3.3335 | 0.0010 | 0.0935 | 0.3634 |
| $R^2$ | 0.3159 | | | | | |
| F(sig.) | 37.8588 | | | 0.0000 | | |
| $R^2$ change | 0.0309 | | | | | |
| F(sig.) change | 11.1120 | | | 0.0010 | | |

Table 4.
Regression results
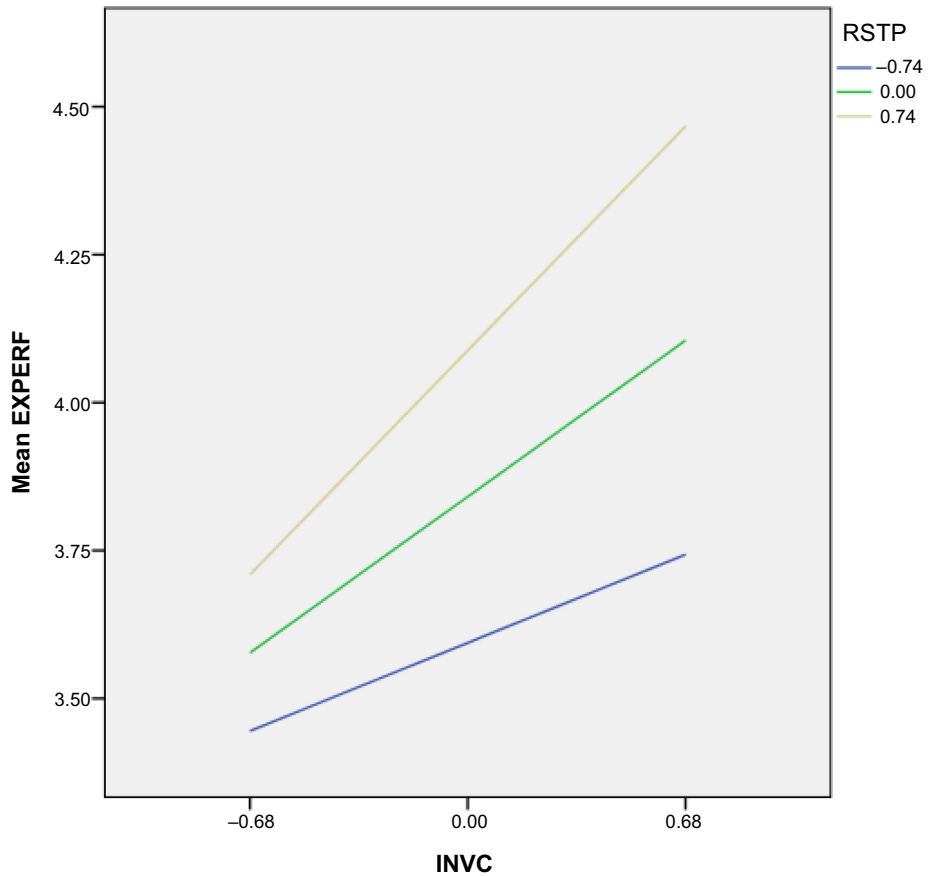
**Figure 3.**
Slope plotting for the
interaction effect
(INVC*RSTP)

In addition, the moderating effect of RSTP on the relationship between INVC and EXPERF was supported. This implies that the effect of INVC on EXPERF significantly increases at the increased level of RSTP. As depicted in Figure 3, RSTP significantly strengthens the positive relationship between NVC and EXPERF. Therefore, manufacturing-exporting SMEs in Tanzania with high RSTP are more likely to enhance EXPERF through INVC. This implies that the effect of INVC on EXPERF is strong for manufacturing-exporting SMEs that have high levels of RSTP. Therefore, in order for SMEs in developing countries to increase the influence of INVC on EXPERF, they must have managers with high levels of risk-taking propensity. This concurs with Okpara (2009) and Leko-Šimić and Horvat (2006) who asserted that firms with risk-takers out-performs those with risk-averse managers. Therefore, managers of exporting SMEs in developing countries should not be afraid to take risky decisions related to the development and introduction of a product, process and market to capitalize on the opportunities available in international markets.

## 5. Conclusion, implications and future studies
### 5.1 Conclusion
The overall objective of this study was to examine the effect of INVC on EXPERF and the moderating effect of RSTP on the effect of INVC on EXPERF of manufacturing SMEs in

Tanzania, a developing economy. To accomplish the objective, the current study employed RBV theory to develop the conceptual model. The conceptual model developed was empirically tested in the context of manufacturing SMEs in Tanzania. The motive to undertake this study was influenced by the dearth of empirical based-evidence of the relationship between INVC and EXPERF in developing economies. Based on the results of this study, it was found that INVC is the factor that determines EXPERF. Also, it was discovered that RSTP significantly moderates the relationship between INVC and EXPERF, and the effect of INVC on EXPERF changes across various levels of RSTP. This means that a higher level of RSTP increases the effects of INVC on EXPERF. Therefore, based on the study findings, it could be suggested that EXPERF of SMEs in developing economies will increase when they have managers daring to take risky decisions regarding innovations and exporting activities.

*5.2 Theoretical implications*
The current study investigated the relationship between INVC and EXPERF in Tanzanian manufacturing SMEs and also the moderating effect of RSTP on the effect of INVC on EXPERF. Thus, the study contributes to the effect of INVC on the EXPERF of manufacturing SMEs in a developing economy context. Therefore, this study offers empirical insights into SMEs in a developing economy context, in contrast to the majority of previous studies that centered on large firms in developed economies. Also, this study adds to the already available stream of empirical evidence of innovation and EXPERF by extending the current thinking on exporting by recognizing the role of RSTP on the relationship between INVC and EXPERF which has not yet been explored by previous studies. In particular, this study adds to the existing literature on the moderating role of RSTP in the relationship between INVC and EXPERF. Furthermore, the findings of this study expand the application of RBV theory in exporting context. The study revealed how INVC as an intangible resource can lead to successful performance. Thus, the findings of this study add to the RBV theory in connection to exporting the process by which INVC result in better performance.

*5.3 Managerial implications*
This study has managerial implications to report. To begin, the study affirms that INVC enhances EXPERF of manufacturing SMEs in Tanzania. Therefore, owners/managers of exporting SMEs should cultivate more innovation activities. This could be accomplished by establishing innovation goals; creating a culture of innovation; recruiting the right personnel; modifying equipment and improving equipment inspections. In addition, RSTP significantly strengthens the effect of INVC on EXPERF, thus, owners/managers of exporting SMEs should develop a positive attitude toward risks and be inclined to take risky decisions for their business operations. Owners/managers must overcome the negativity bias; increase their self-efficacy and should also understand that failure is sometimes a necessary step on the road to success. Also, owners/managers should develop structure, behavior and process that could enhance their risk-taking attitude.

*5.4 Limitations and directions for future studies*
This study was conducted in a single country context, namely, Tanzania, which could raise concerns regarding the generalizability of the findings. The study's findings may not apply to SMEs in other emerging nations; future research should thus reproduce this study in other emerging economies to test the veracity of the results. Also, a cross-sectional design was employed in this study; future studies can use longitudinal designs to look at how the variables used in this study change over time, which could bring different conclusions. In addition, the study adapted unidimensional measures of innovation capabilities; future

studies may include multi-dimensional measures of innovation capabilities to supplement the findings of this study. Moreover, this study includes RSTP as the moderator variable; future studies may test the mediation effect of this variable to see variations in findings and broaden our understanding. Finally, future studies may consider other moderating variables such as competitive aggressiveness and proactiveness to have more empirical insights and broaden the current study's knowledge.

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**Further reading**

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