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Entrepreneurial orientation and performance of family-owned hardware SMEs in Dodoma City, Tanzania: A multi-dimensional analysis

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ABSTRACT

Family-owned small and medium enterprises are important to employment and economic activity, yet evidence on how entrepreneurial orientation relates to their multidimensional performance remains mixed. This study examined the association between five entrepreneurial orientation dimensions and perceived overall Balanced Scorecard-based performance among family-owned small and medium hardware enterprises in eight wards of the Dodoma City Council. Using criterion-based purposive sampling, 385 eligible owners were selected and quantitative data were collected through a structured questionnaire; interviews with eight City Trade Officers provided contextual explanations. Ordinary least-squares regression explained 51.6% of the variance in performance (adjusted $R^2 = 0.508$). Innovativeness ($B = 0.20404$, $p < .0001$), risk-taking ($B = 0.117$, $p = .0022$), and proactiveness ($B = 0.07992$, $p = .0004$) were positively associated with overall BSC-based performance, whereas autonomy and competitive aggressiveness were not significantly associated with overall BSCbased performance. The study concludes that entrepreneurial orientation dimensions are not equally associated with performance, with innovativeness, risk-taking, and proactiveness emerging as the dimensions most strongly associated with higher overall Balanced Scorecard-based performance among the studied enterprises.

Introduction

Family-owned small and medium enterprises (FOSMEs) constitute up to 98% of all enterprises in the world economy and contribute more than 75% of the global labour force (Kiwia, 2021; Mburu et al., 2021). Although they have vital economic and functional roles, FOSMEs continue to struggle to sustain competitiveness, performance, and generational succession, as three out of five FOSMEs fail within the first three years of trading (Chundu et al., 2021; Denanyoh and Owusu, 2025; Kiwia et al., 2019; Mburu et al., 2021). According to the Resource-Based View (RBV), firm performance is determined and shaped by internal capabilities (including both tangible and intangible resources) and market forces such as competition (Penrose, 1959; Pitelis, 2009). One of the important intangible assets is a firm's strategic posture, often referred to as Entrepreneurial Orientation (EO). EO refers to "the process, practices and decision-making activities that lead to new entry; including the ability to innovate, take risks and act proactively" (Lumpkin and Dess, 1996, p. 3).

Initially, EO was measured by three primary dimensions: proactiveness, innovativeness, and risk-taking, where a firm was considered entrepreneurial if it scored high on all three (Miller, 1983). Following that, Lumpkin and Dess (1996) expanded upon Miller's three foundational dimensions by introducing two additional dimensions, which are autonomy and competitive aggressiveness. When combined, these five dimensions offer a strong framework of firm strategic posture (Lumpkin and Dess, 1996; Miller, 1983). Empirical studies have reported varied and inconclusive views on the relationship between EO and organisational performance. For example, Bakashaba and Bindeeba (2025), Manigandan and Raghuram (2024), Yaqub et al. (2024), Khan et al. (2024), and Meekaewkunchorn et al. (2021) reported a positive influence of EO on performance. While Sinha et al. (2023), through a meta-analysis, revealed that EO alone is not enough to attain improved performance; rather, improved performance is achieved when EO is complemented with high learning orientation. Occasionally, under a business environment characterised by strong government intervention, EO may negatively affect business growth and survival due to institutional tensions (Liu et al., 2024).

In contrast, other studies have reported no apparent effect of EO on performance unless mediated by differentiation advantage and innovation capability (Ngo, 2023) or customer participation (Morgan and

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Anokhin, 2023). In African countries, the EO-performance relationship is critical to take advantage of emerging entrepreneurial ecosystems and overcome performance challenges such as resource constraints and institutional voids, in order to be able to sustain business performance (Bakashaba and Bindeeba, 2025). Even within the area, limited empirical evidence contradicts this; for example, Pulka et al. (2021) show a positive link between EO and performance in Nigeria, while in Kenya, Sigey et al. (2023) reported no significant influence of EO on performance. Occasionally, the effect of EO on business outcomes is further reported to be contingent on business networking, opportunity discovery, and institutional support (Donbesuur et al., 2020).

In Tanzania, Ringo et al. (2022) revealed that only risk-taking and innovativeness positively influence performance, while proactiveness negatively affects performance; on the contrary, George (2025) showed that proactiveness and risk-taking strongly influence performance, but autonomy showed no significant effect. Furthermore, Nyello and Kalufya (2021) reported that EO significantly improved the financial performance of micro businesses, particularly with proactiveness and risk-taking behaviour. However, Kiyabo and Isaga (2020) found that EO positively influences the performance of SMEs, and the relationship is strengthened by competitive advantages. These varied findings suggest that the manifestation and translation of the five dimensions of EO across sectors and contexts deserve further investigation.

Notably, the evidence available on the relationship between EO and organisational performance remains mixed and inconclusive. Moreover, previous research has largely relied on financial indicators, which limits the comprehensive understanding of organisational performance. Consequently, the empirical evidence on the association between EO and overall Balanced Scorecard (BSC)-based performance is limited, especially for FOSMEs in developing economies. In response to the inadequate performance measurement, the BSC was used in the current study as a holistic performance measurement framework that captures both the financial and non-financial aspects of performance. BSC facilitates performance evaluation in four perspectives: financial, customer, internal processes, and learning and growth (Kaplan and Norton, 2005). The BSC has been widely applied in previous studies to provide a comprehensive assessment of performance among family and non-family SMEs (Gorondutse et al., 2021; Herlinawati et al., 2019; Mwansa and Serumaga-Zake, 2023). Accordingly, this study examined the association between EO and overall BSC-based performance of Family-Owned Hardware SMEs (FOHSMEs) in Dodoma City. Specifically, the study sought to: (i) examine the relationship between proactiveness and the overall BSC-based performance of FOHSMEs; (ii) evaluate the relationship between innovativeness and the overall BSC-based performance of FOHSMEs; (iii) assess the relationship between risk-taking and the overall BSC-based performance of FOHSMEs; (iv) evaluate the relationship between autonomy and the overall BSC-based performance of FOHSMEs; and (v) determine the relationship between competitive aggressiveness and the overall BSC-based performance of FOHSMEs.

The hardware sector is a critical component of the construction value chain in Tanzania. It supports urbanisation, construction, and infrastructure development, especially in rapidly growing areas like Dodoma. This capital-intensive sector is highly competitive, with frequent price fluctuations and resource constraints, which makes firm survival and performance highly dependent on internal managerial and strategic capabilities rather than external support. However, despite its rapid growth and economic significance, the hardware sector is still largely underexplored in existing literature, compared to other sectors like manufacturing and service sectors, pointing to the need for a unique, industry-specific investigation and interventions to inform targeted managerial and policy interventions.

The study, therefore, contributes to the existing body of knowledge in several ways; first, unlike many other previous studies that focused on general SMEs, the current study focused on FOSMEs, which is a relatively underexplored area, especially in developing economies such as Tanzania. The study also integrated the Resource-Based View and Socioemotional Wealth theory, which indicated both economic and family-centred explanations, demonstrating how EO is associated with performance in FOSMEs. It also examined EO dimensions individually rather than as a single aggregate construct and therefore provides a clearer understanding of how individual dimensions are uniquely associated with overall BSC-based performance within FOHSMEs. The current study also contributes methodologically by adopting an overall BSC-based performance measurement which integrates financial and non-financial performance dimensions into a single composite score of FOHSMEs' performance. Therefore, the findings are interpreted as evidence of the association between EO dimensions and overall BSC-based performance. The study is also in line with important global and national aspirations such as Sustainable Development Goal (SDGs) 1, 8 and 11, whose aspirations target poverty eradication and economic growth, development of communities through inclusive business models; it also aligns with Tanzania's third National Five-Year Development Plan under the Vision 2025 and Vision 2050 that prioritizes growth and competitiveness of SMEs (URT, 2021, 2025). And hence contribute knowledge to the achievement of the global and national development agenda.

Literature review and hypothesis development

Resource-based view

The resource-based view (RBV), as formulated by Penrose (1959) and extended by Pitelis (2009), proposes that differences in competitive advantage and firm performance may be associated with variation in a firm's internal characteristics, capabilities, tangible and intangible resources, including knowledge and skills, among others. According to the RBV theory, firms possess heterogeneous resources that are valuable, rare, inimitable, and non-substitutable (Barney, 1991). When such resources are effectively organised, they may be associated with stronger competitive advantages and improved performance outcomes. In the present study, the EO dimensions, including innovative capability, proactiveness, risk-taking, competitive aggressiveness, and autonomy in decision-making, are considered as strategic resources and capabilities. These resources may be associated with a firm's ability to identify market opportunities, respond to changes in the external environment and address competitive pressure. Furthermore, they may also be associated with firms' ability to recognise and capture market opportunities, respond to changes in the external environment, and address competitive threats, which, when considered together, have a measurable association with performance. While RBV has been criticised for ignoring the external environment, Lockett et al. (2009) argue that it is supported empirically as a potential explanation for differential performance due to the configuration, development, or orchestration of unique firm-specific capabilities. While RBV explains that the relationship between internal capabilities and resources can be mobilised to create competitiveness and improve performance, it pays limited attention to the non-economic motives that influence strategic decision-making in FOSMEs (Berrone et al., 2012; Dou et al., 2022; Gómez-Mejía et al., 2007; Hernández-Perlines et al., 2023). In this regard, Socioemotional Wealth (SEW) theory complements RBV by explaining how family-centred non-economic goals such as preservation of family identity, control, legacy, and long-term orientation shape strategic behaviour and resource utilisation.

Socioemotional wealth theory

Socioemotional Wealth (SEW) theory, developed by Gómez-Mejía et al. (2007), explains the distinct behaviour of family firms, underscoring the importance placed by the owning family on non-financial objectives known as Family-Centred Goals (FCG), collectively known as Socioemotional Wealth (SEW). At the core of this perspective is the

narrative that family firms are not only driven by profit-maximising priorities but rather by preservation of socioemotional endowments, which consistently determine and shape management of human resources, business strategic decisions, and eventually overall business performance. SEW is inherently multidimensional and prominently captured through the FIBER framework, which categorises SEW into 5 dimensions comprising Family control and influence, Identification of family with the firm, Binding socio ties, Emotional attachment, and Renewal of family bonds through succession (Berrone et al., 2012). This theory complements RBV by explaining how FOSMEs make strategic decisions, such as entrepreneurial activities, based not only on financial gains but also on family-centred non-economic priorities. This shapes how entrepreneurial behaviours are adopted and why their relationship with performance differs in FOSMEs.

Entrepreneurial orientation dimensions and business performance

EO is a multidimensional yet integrated construct that captures the degree to which an organisation behaves entrepreneurially by identifying opportunity, taking calculated risks, responding creatively to changes, allowing autonomy to make independent decisions, and working hard at improving its competitive positioning and outpacing rivals (Covin and Miller, 2014; Miller, 1983). Organisations that show a higher EO tend to be more flexible, innovative, adaptive, and hence more competitive (Anwar et al., 2022; Islam et al., 2024). Studies across different contexts have examined the association between individual EO dimensions and organisational performance, with findings showing positive, negative, and insignificant relationships. For example, proactiveness reflects the ability to foresee market needs, along with possible changes and challenges, to introduce products and processes ahead of competitors. According to RBV, proactiveness represents a strategic capability that enables a business to utilize effectively and timely its internal resources to exploit market opportunities, gain first-mover advantage, and improve operational responsiveness and efficiency, which ultimately improves overall business performance. In family-owned firms, this relationship is further shaped by SEW considerations, where decision-making is influenced not only by economic goals but also by the desire to preserve family control, identity, and long-term legacy. In this regard, proactive behaviour may be encouraged when it is perceived to strengthen the family firm's survival and reputation in the market and vice versa. Empirically, the studies of Bakashaba and Bindeeba (2025), George (2025), and Islam et al. (2024) demonstrated that proactive behaviour positively influences general organisational performance through operational responsiveness and quick opportunity recognition. Although the study of Ringo et al. (2022) found a negative relationship between proactiveness and performance, possibly as a result of sector- and market-specific circumstances, overall the theoretical arguments and prevailing empirical evidence support a positive relationship. Therefore, it is hypothesised that:-

H1. *Proactiveness is positively associated with the overall BSC-based performance of FOHSMEs.*

Risk-taking refers to the firm's willingness to commit a large amount of resources to uncertain and potentially high-return opportunities (Miller, 1983). Conceptualised as a strategic capability by RBV, risk-taking enables businesses to deploy and reconfigure internal resources in pursuit of revenue growth, profitability, and overall business performance. However, in FOSMEs, the relationship is strongly influenced by SEW concerns, where decision-making is strongly driven by the desire to preserve family control, reputation, and long-term legacy. Consequently, FOSMEs often exhibit risk-averse behaviour, preferring the preservation of existing wealth and stability over uncertain ventures that may threaten family control or socioemotional endowments. The inherent risk aversion may constrain the extent to which risk-taking is associated with performance improvements. Studies have demonstrated that risk-taking provides access to new markets, opportunity to gain higher returns, and competitive differentiation, all of which lead to revenue growth, increased profitability, and overall performance (Bakashaba and Bindeeba, 2025; George, 2025; Kapaya et al., 2018; Ringo et al., 2022). However, occasionally risk-taking showed insignificant or no relationship with performance (Isichei et al., 2020; Mbama et al., 2025; Nyello and Kalufya, 2021). Probably, the link between risk-taking and business outcomes is influenced by managers' ability to factor, appraise, and mitigate risks along with the degree of family risk aversion. Despite mixed findings, RBV perspectives together with the majority of studies support a positive relationship. Therefore, it is hypothesised that:-

H2. *There is a positive association between Risk-taking and the overall BSC-based performance of FOHSMEs.*

Furthermore, innovation reflects a business's commitment and support in generating new ideas and novel approaches across technology, administrative, and product–market domains (Dess and Lumpkin, 2005). RBV considers innovativeness as a critical dynamic capability that enables businesses to reorganise and deploy internal resources in unique ways, leading to differentiation, improved operational efficiency, and enhanced overall BSC-based performance. However, in FOSMEs, the relationship is also shaped by non-economic objectives such as the desire to preserve family control, continuity, and identity. Consequently, innovation is more likely to be pursued when it is perceived to strengthen long-term sustainability, which limits radical changes in favour of continuity. Through innovation, businesses differentiate themselves, satisfy customer needs, adapt to change, and therefore improve operational efficiency, which leads to revenue growth and general high performance (George, 2025; Kapaya et al., 2018; Ringo et al., 2022). However, Mbama et al. (2025) did not identify any statistically significant relationship between innovativeness and performance, indicating that there might be resource constraints, contextual or measurement-related issues. Despite mixed findings, the theoretical foundation of RBV supports the positive relationship, and therefore the study hypothesised that:-

H3. *Innovativeness has a significant positive association with the overall BSC-based performance of FOHSMEs.*

Moreover, autonomy indicates independence granted to individuals to make decisions such as initiating actions and pursuing opportunities without excessive organisational constraints. From the RBV perspective, autonomy is considered an organisational capability that enhances effective human resources by allowing quick decision-making, creativity, and responsiveness to market opportunities and hence improves adaptability, innovation, and overall business performance. SEW considerations shape this relationship in family firms by concentrating decision-making authority within the family to preserve control and centralised family leadership. High autonomy enables employees to act quickly and exercise creativity, effective opportunity exploitation, and overall performance (Islam et al., 2024). However, other studies have reported no statistically significant effect of Autonomy on performance (Adelowo and Henrico, 2025; George, 2025). Whereas Kapaya et al. (2018) documented a negative effect of Autonomy on performance, signalling coordination problems or misfit with organisational control systems. Despite mixed findings, RBV arguments suggest that autonomy, when effectively exercised, can contribute to improved performance. Therefore, the study anticipated that:-

H4. *Autonomy is positively associated with the overall BSC–based performance of FOHSMEs.*

Finally, competitive aggressiveness, a direct and vigorous attempt to challenge and push competitors to obtain new entry, enhance market position, and even surpass rivals, is reported to lead to market expansion, revenue growth, and overall performance improvements. RBV considers competitive aggressiveness as a capability that enables businesses to effectively deploy internal resources in response to competitive

pressure, enhance market share, revenue growth, and overall performance. According to SEW, family firms' competitive actions are carefully evaluated to ensure that they do not threaten family reputation, long-term survival, or relational stability within the market. As a result, family firms may engage in competitive aggressiveness when it aligns with preserving or strengthening their long-term socioemotional goals. Empirical evidence on this relationship is mixed. For example, George (2025) reported a moderate influence of competitive aggressiveness on performance. Islam et al. (2024) and Amarteifio and Agbeblewu (2020) found that competitive aggressiveness positively affects business performance. In contrast, Adelowo and Henrico (2025) reported no statistical significance of Competitive aggressiveness on performance. The mixed findings suggest that contextual factors such as business size and industry characteristics determine the impact of competitive aggressiveness on performance; however, RBV suggests that when well managed, competitive aggressiveness can contribute to improved performance. Therefore, it was anticipated that:

H5. *Competitive Aggressiveness is significantly and positively associated with the overall BSC-based performance of FOHSMEs.*

Conceptual framework

This study investigated the association between EO dimensions and the overall BSC-based performance of FOHSMEs. This study comprehensively measured performance using the Balanced Scorecard framework (BSC), which facilitated performance evaluation across four perspectives: financial, customer, internal processes, and learning and growth (Kaplan and Norton, 2005). Guided by Resource-Based Theory and Socioemotional Wealth Theory, this study examined the association between EO dimensions as independent variables and overall BSC-based performance of FOHSMEs as the dependent variable. Fig. 1 shows the Conceptual Framework of the study.

Research methodology

The study adopted a mixed-method approach, integrating both quantitative and qualitative methods. An analytical cross-sectional design was employed to assess the association between EO dimensions and overall BSC-based performance of FOHSMEs. A cross-sectional design was appropriate because it allows researchers to obtain a current snapshot of a population and examine relationships among variables at a specific point in time without following respondents over an extended period (Setia, 2016; Wang and Cheng, 2020). The design was also suitable because the study focused on existing family-business practices and perceived FOHSMEs performance during the data-collection period. Moreover, a cross-sectional design is practical for collecting data from a large number of respondents within limited time and financial resources (Wang and Cheng, 2020). Most importantly, the design was consistent with the study's objective of examining statistical associations between the study variables rather than establishing causal effects over time. Lastly, this design improves the likelihood of participation while also enabling inferential statistical analysis (Cohen et al., 2018). Furthermore, this design is widely used in previous studies examining the performance of both FOSMEs and non-family SMEs (Elias and Mwakujonga, 2019; Lubawa and Kapaya, 2025; Park and Jung, 2025).

Dodoma region was purposively selected first because it is one of the five regions in Tanzania with a high number of family businesses (Rambeka and Odollo, 2023). Secondly, Dodoma is currently experiencing rapid growth following the declaration of Dodoma as the capital city of the United Republic of Tanzania (URT, 2018). Therefore, it offers a growing entrepreneur ecosystem where unique emerging regional dynamics capture both urban and semi-urban business environments, not featured by studies focused on larger cities like Dar es Salaam and Mwanza. Furthermore, active public and private construction projects drive high demand for hardware products while also attracting construction-related businesses (URT, 2022). Therefore, FOHSMEs in this region may be experiencing unique performance challenges and

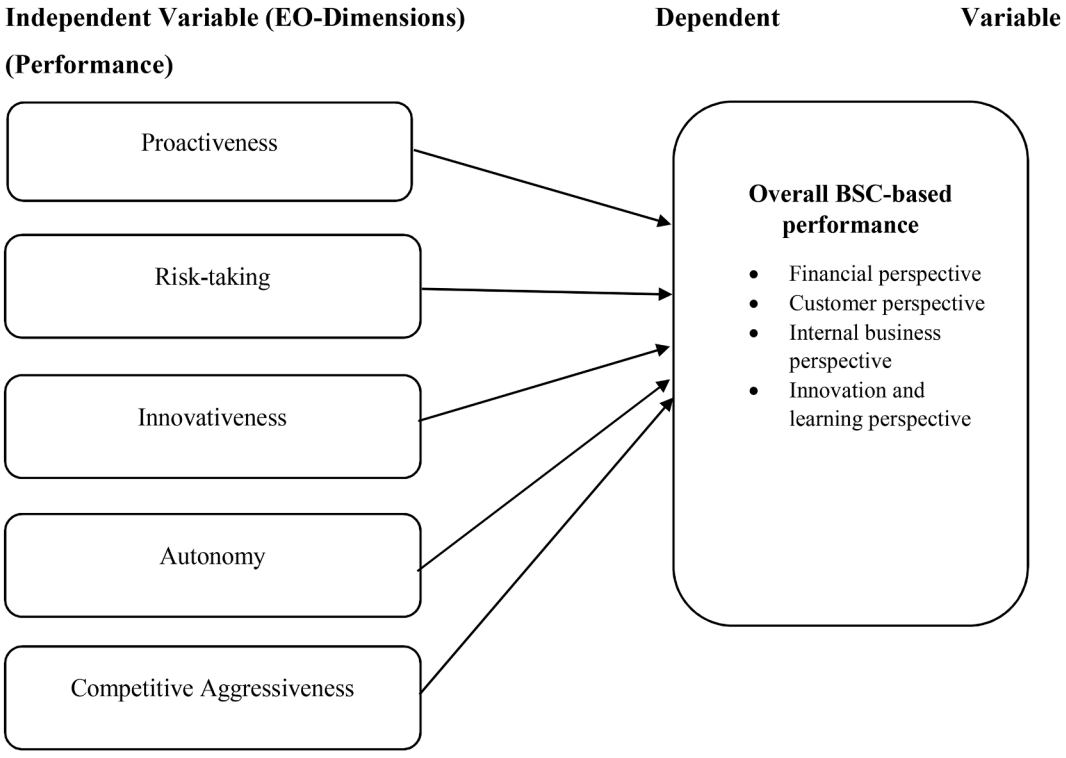


Fig. 1. Conceptual Framework.
Source: Author's own construction based on literature (2025).

opportunities associated with heightened demand, thereby providing a more accurate reflection of hardware industry dynamics in Tanzania. The target population comprised FOHSMEs operating in eight selected wards within Dodoma City Council, namely Uhuru, Majengo, Ipagala, Mtumba, Iyumbu, Ihumwa, Dodoma Makulu, and Nzuguni. These wards were selected because of their high concentration of hardware businesses (Head of Business Unit, Dodoma City Council, personal communication, October 1, 2024). Moreover, FOHSMEs were the unit of analysis in this study.

Although FOHSMEs were formally operating, the registration records did not classify businesses according to whether they were family-owned or non-family-owned. Therefore, there was no complete sampling frame of all FOHSMEs from which a strict simple random sample could be drawn. Therefore, a total sample size of 385 was obtained by Cochran's (1977) method for an unknown population, because the exact population of FOHSMEs was unknown. Cochran's formula was used only to determine the minimum sample size; however, the actual selection of respondents was based on criterion-based purposive sampling, a non-probability sampling technique. Therefore, eligible businesses were identified and selected based on predefined inclusion criteria, which required each business to be formally operating as a hardware SME and to meet the study's definition of family-owned businesses as follows: (i) formally operating, to ensure that it was legally recognised and traceable as an SME, (ii) wholly owned and controlled by members of the same family. In this study, family members were defined as close relatives connected by blood, marriage, or adoption, including spouses, parents, children, siblings, and other relatives who were part of the same owning family. (iii) at least two members from the same family are actively involved in the daily management of the business and making key decisions. (iv) the business must have been operating for between two and five years.

Given that prior evidence suggests that FOSMEs' failure rates may reach 70% within the first three to five years of operation justified to focus on young businesses rather than mature firms. However, firms below two years were excluded because they may lack sufficient operating history for comparing current performance with previous performance. Therefore, two to five years range was selected as a balanced option, which ensured that FOHSMEs had enough operating history while capturing firms still exposed to early survival challenges, along with ensuring enough experience for meaningful performance assessment. A structured questionnaire was used to collect quantitative data from FOHSMEs' owners. The questions aligned with the study variables, and these questionnaire items were adapted from previous validated instruments used in previous studies on EO and firm performance. Minor modifications were made to ensure suitability for the context of FOHSMEs.

Before the main data collection, the questionnaire was pre-tested on businesses with characteristics similar to those in the study population. However, these businesses were not included in the final sample to maintain the integrity of the study findings. Content validity was assessed through expert review of the subject matter and methodological aspects, focusing on the relevance, clarity, wording, and adequacy of the items in relation to the study objectives and constructs being measured. The feedback obtained informed necessary refinements to the questionnaire and enhanced the comprehensiveness of the construct measurement. Furthermore, the experts had knowledge in entrepreneurship, strategic management, and research methodology, as well as practitioners familiar with SME operations. These experts were obtained through institutional affiliations and professional networks. Based on their feedback, minor necessary adjustments were made to enhance respondents' understanding and help ensure that the instrument was appropriate for the target population. Subsequently, eligible respondents were invited to participate after giving their informed consent. Where a respondent declined to participate, the researcher moved to another eligible business without relying on referrals from previous respondents. Data collection continued until the required sample size of 385 respondents was achieved. For each FOHSME, data were collected from the owner, who served as the observational unit for this study.

Reliability of measurement scales was measured by Cronbach's alpha (Tavakol and Dennick, 2011). Therefore, an alpha coefficient of 0.7 or higher was considered acceptable as evidence of internal consistency of items (Souza et al., 2017). Table 1 shows the internal consistency for each variable.

Construct validity was further assessed using factorability measures. As shown in Table 2, the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was 0.856, indicating adequate interrelationships among items in Table 2 below.

Assessment of common method bias

Common method bias was assessed using Harman's single-factor test. The results are presented in Table 2.

All 37 retained EO and the overall BSC-based performance items were entered together in a single unrotated exploratory factor analysis to assess common method bias. One autonomy item was excluded from the original 38-item set because it exhibited a complex factor-loading pattern. The Kaiser–Meyer–Olkin measure was 0.856, indicating adequate sampling adequacy, while Bartlett's test of sphericity was statistically significant, $\chi^2(666) = 7805.850$, $p < .001$, confirming that the correlations among the retained items were suitable for factor analysis. The results further showed that the first factor accounted for 25.113% of the total variance, which is below the threshold of 50%, indicating that common method bias is not a serious concern in this study. However, because Harman's test cannot conclusively rule out common method bias, several procedures were undertaken, including ensuring that respondents were assured of confidentiality and informed that there were no right or wrong answers. These measures helped reduce response anxiety and encourage honest responses.

Qualitatively, the study involved eight (8) key informants (KI) who were purposively selected and from whom qualitative data were collected through face-to-face interviews. Purposive sampling was deemed appropriate as it allowed the selection of information-rich participants who could offer deep insights into the phenomenon being explored. The KI served as City Trade Officers with regulatory and administrative responsibilities in the study area, including business registration and licensing, compliance monitoring, record keeping, revenue and market levy collection, and business inspections. Their regulatory roles placed them in close interaction with FOHSMEs, providing them with practical insight into business operations, challenges, ownership structures, and wider market dynamics. In addition, the KI were themselves family business owners or actively involved in family business operations. Therefore, their selection was based on their dual expertise: institutional knowledge of SME operations gained through their regulatory roles and practical experience in owning or actively participating in family businesses, which enabled them to provide deeper contextual explanations of the statistical findings.

Hence, their knowledge enabled them to offer relevant insights into entrepreneurial orientation and the overall BSC-based performance. Their regulatory and supervisory responsibilities also exposed them to a

Table 1
Reliability Analysis of Study Constructs.

Variable	Number of Items	Cronbach's alpha
Autonomy	4	0.742
Innovativeness	3	0.852
Risk-taking	4	0.708
Proactiveness	3	0.801
Competitive Aggressiveness	4	0.710
Financial performance	2	0.801
Customer Perspective	5	0.816
Internal Perspective	7	0.712
Innovation and Learning	6	0.709

Table 2
Harman's Single-Factor Test for Common Method Bias in EO Dimensions and Overall BSC-Based Performance.

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.856
Bartlett's Test of Sphericity	Approx. Chi-Square	7805.850
	df	666
	Sig.	.000

Total Variance Explained						
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	9.292	25.113	25.113	9.292	25.113	25.113
2	2.951	7.977	33.090	2.951	7.977	33.090
3	2.374	6.417	39.507	2.374	6.417	39.507
4	1.641	4.436	43.944	1.641	4.436	43.944
5	1.594	4.307	48.251	1.594	4.307	48.251
6	1.484	4.011	52.262	1.484	4.011	52.262
7	1.414	3.821	56.083	1.414	3.821	56.083
8	1.252	3.384	59.467	1.252	3.384	59.467
9	1.181	3.192	62.660	1.181	3.192	62.660
10	1.047	2.831	65.490	1.047	2.831	65.490
11	.991	2.679	68.169			
12	.934	2.525	70.694			
13	.895	2.419	73.113			
14	.831	2.247	75.360			
15	.756	2.044	77.403			
16	.726	1.963	79.367			
17	.681	1.839	81.206			
18	.650	1.756	82.962			
19	.593	1.602	84.564			
20	.575	1.553	86.116			
21	.570	1.542	87.658			
22	.552	1.491	89.149			
23	.483	1.304	90.454			
24	.464	1.254	91.708			
25	.425	1.150	92.857			
26	.387	1.045	93.902			
27	.371	1.003	94.905			
28	.356	.962	95.867			
29	.324	.876	96.743			
30	.282	.761	97.504			
31	.226	.611	98.115			
32	.201	.543	98.658			
33	.179	.485	99.143			
34	.114	.307	99.451			
35	.112	.302	99.753			
36	.068	.185	99.938			
37	.023	.062	100.000			

wide range of businesses, giving them a broader sector-level perspective beyond the experience of individual FOHSMEs. This enabled them to identify common entrepreneurial practices, performance patterns, and challenges across multiple SMEs. Their cross-business exposure also reduced reliance on the perspective of any single firm and strengthened the contextual interpretation of the quantitative findings. However, their responses were used to supplement and contextualise the quantitative findings rather than replace the views of FOHSMEs owners who participated in the main survey. Moreover, qualitative data were collected using a semi-structured interview guide developed in line with the study objectives and key study variables. The interview guide had open-ended questions to enable the participants to freely express their experiences, perceptions, and views about entrepreneurial orientation practices and the overall BSC-based performance. To facilitate clarity and effective communication, the guide was translated into Kiswahili, which is a language familiar to the participants, to ensure that questions were clearly understood and meaningful responses were provided. The interviews were conducted in person to allow deeper interaction, clarification of responses, and probing of relevant issues whenever necessary.

During the interview process, the researcher manually noted participants' responses and important statements from the interview. As a result, exact participant wording could not be guaranteed; however, key meanings, themes, and important statements related to the study objectives were carefully captured through detailed note-taking to support the interpretation of the qualitative findings. Accordingly, the qualitative findings were presented as paraphrased illustrative accounts rather than direct verbatim quotations. The qualitative information was organised according to predetermined themes and used to complement and contextualise the quantitative findings. The interview guide was also subjected to expert review before the main data collection to assess the clarity, relevance, and comprehensiveness of the questions, and the feedback obtained informed necessary refinements.

Measurement of variables

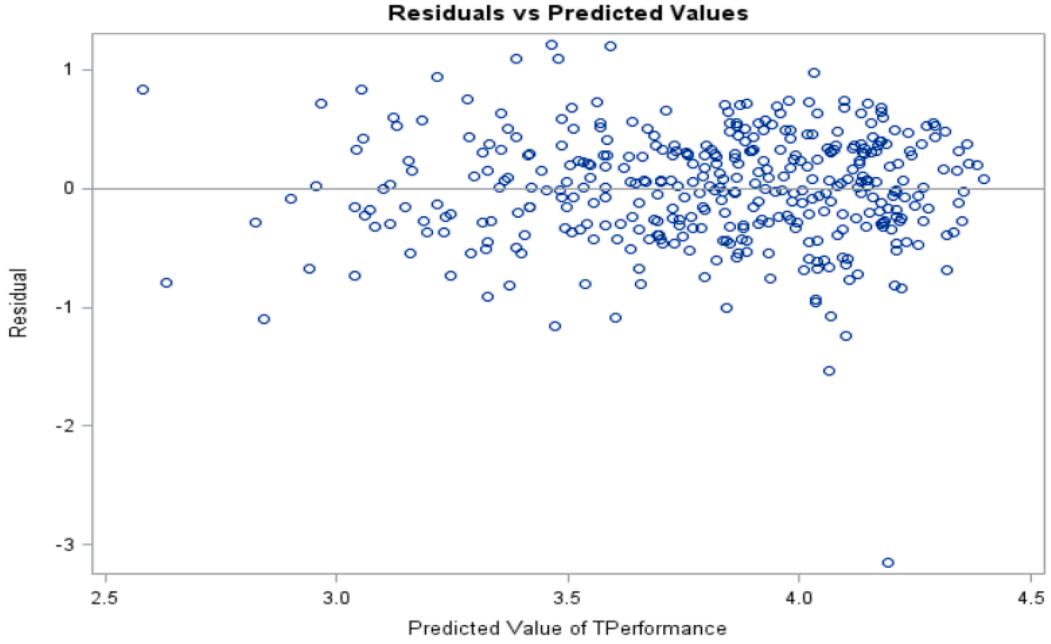
Dependent variable

The dependent variable is the overall BSC-based performance measured by the Balanced Scorecard. It was assessed using 20 items, grouped into four domains: financial perspective, two items; customer perspective, five items; internal processes, seven items; and learning and innovation, six items. These items were borrowed from previous literature (Gorondutse et al., 2021; Herlinawati et al., 2019; Kaplan and Norton, 2005). Based on the agreement level on a 5-point Likert scale ranging from 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, to 5 = Strongly Agree. The mean score for each domain was

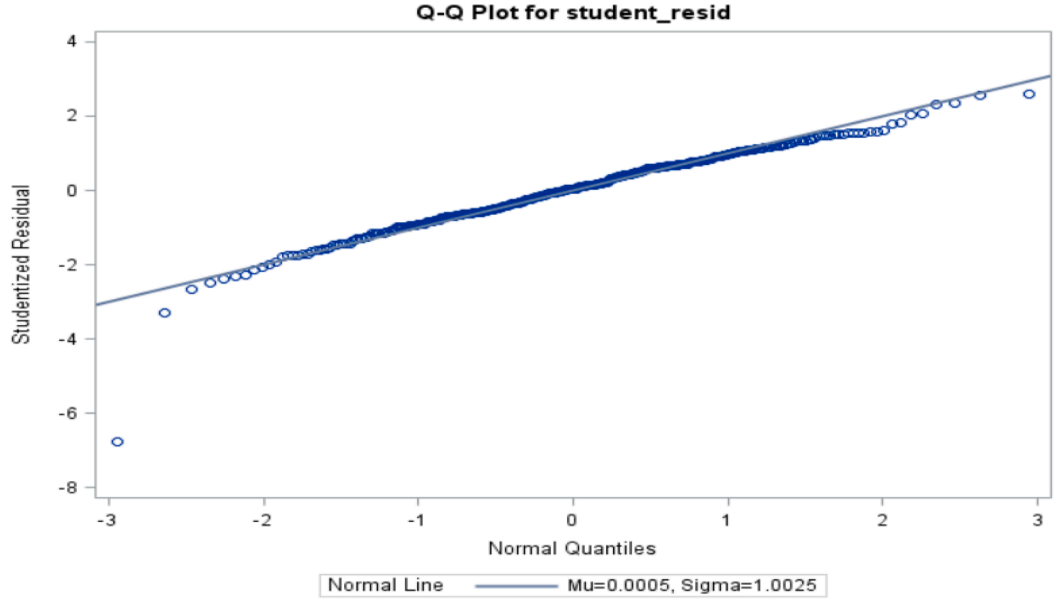
computed, after which the overall BSC-based performance score was obtained by averaging the mean scores of the four domains. The resulting composite score ranged from 1 to 5, with higher scores indicating higher perceived BSC-based performance. The four BSC dimensions were combined into a single composite measure to reflect the study's focus on overall BSC-based performance of FOHSMEs rather than separate dimension-specific outcomes. Averaging the mean scores of the four domains therefore provided a holistic measure of FOHSMEs' performance. This approach is consistent with the integrated nature of the BSC framework, which conceptualises performance as an integration of four interrelated financial and non-financial perspectives (Kaplan and Norton, 2005). However, due to challenges of informal record keeping among SMEs in developing countries, financial performance measurement is based on the perception of owners or managers of improvements in profit, sales, and assets, among others (Asad et al., 2021; Elias and Mwakujonga, 2019; Majali et al., 2022). Hence, financial performance measured in the study is the perceptual financial performance.

Independent variable

The independent variables in this study are Entrepreneurial Orientation dimensions, namely Autonomy (four items), Innovativeness (three items), Risk-taking (four items), Proactiveness (three items), and



Checking for Linearity and Homoscedasticity



Normal Q-Q Plot of Studentized Residuals

Fig. 2. Model Assumptions Tests.

Competitive aggressiveness (four items). They were measured on a 5-point Likert scale, where the respondents had to indicate their agreement with the given statements, ranging from 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, to 5 = Strongly Agree. For each EO dimension, a composite mean score was calculated by averaging the responses to its respective items, resulting in scores ranging from 1 to 5. Higher scores indicated a higher level of the respective EO dimension.

Data analysis

Quantitative data were analysed using descriptive and inferential statistics. In descriptive statistics, frequencies and percentages were used for categorical variables, while the mean and standard deviation were used for non-categorical variables. The descriptive findings of the study variables are indicated in Appendices A, B, and C. Multiple linear regression, estimated using ordinary least squares (OLS), was used to examine the association between the five EO dimensions and overall BSC-based performance. OLS estimation was appropriate because each of the five EO dimensions was represented by a separate dimension-specific composite mean score derived from its respective questionnaire items, while overall BSC-based performance was represented by a single composite mean score obtained by averaging the mean scores of the four performance domains. These measures were treated as continuous variables, allowing the magnitude and direction of the associations between the EO dimensions and overall BSC-based performance to be estimated simultaneously. Homoscedasticity, linearity, and normality of residuals were assessed and found to be adequately satisfied, as shown in Fig. 2. However, although the Q-Q plot indicated a possible extreme observation, further examination confirmed that it was a valid observation rather than a data-entry error. Therefore, it was retained in the analysis to preserve the natural variation in the responses.

Multicollinearity was assessed using variance inflation factors (VIFs) shown in Table 3. Overall model fit was assessed using the F-statistic. The statistical significance contribution of each predictor on the dependent variable was evaluated using parameter estimates and their corresponding p-values. The coefficient of determination (R^2) was used to indicate the proportion of variance in the dependent variable explained by the predictors. All statistical analyses were conducted using the Statistical Analysis System (SAS) version 9.4, with statistical significance assessed at $\alpha = 0.05$. The general multiple linear regression model is given by:

$$Performance = \beta_0 + \beta_1 Proactiveness + \beta_2 Risk - taking + \beta_3 Innovativeness + \beta_4 Autonomy + \beta_5 Competitive\ aggressiveness + \varepsilon \quad (1)$$

Where:

$\beta_o = Intercept$

$\beta_1, \beta_2, \beta_3, \beta_4, \beta_5$ = Regression coefficients

$\varepsilon = Error\ term$

Qualitative data were analysed using deductive thematic analysis, where the process began with data familiarisation, which involved reviewing the interview notes several times. A coding framework was then developed based on the study objectives, research constructs, and relevant theoretical concepts. Related segments of the qualitative information were systematically coded using predefined codes, which were subsequently grouped into broader themes to facilitate the interpretation of the quantitative findings. The identified themes were then reviewed to ensure consistency and alignment with the data. Finally, the themes were interpreted and integrated with the quantitative results to provide a deeper understanding of the observed statistical associations. Since the qualitative component was based on paraphrased thematic analysis rather than verbatim quotations, the findings were presented as synthesised themes rather than direct participant statements. These themes reflected anticipation of market opportunities, strategic risk-taking, customer-oriented innovation and differentiation, centralised family control, and relationship-oriented competition. They further illustrated how the different EO dimensions were expressed in the day-to-day operations and strategic decisions of FOHSMEs, thereby providing contextual explanations for their varying associations with overall BSC-based performance.

Table 3
Association Between Entrepreneurial Orientation Dimensions and Overall BSC-Based Performance.

Variable	Parameter Estimate	Standard Error	t Value	P-value	Variance Inflation
Intercept	1.97441	0.15198	12.99	<.0001	N/A
Autonomy	0.05089	0.02792	1.82	0.0691	1.0387
Innovative	0.20404	0.03097	6.59	**<.0001**	1.59515
Risk-taking	0.117	0.03796	3.08	**0.0022**	1.47888
Proactiveness	0.07992	0.02257	3.54	**0.0004**	1.50229
Competitive Aggressiveness	0.03825	0.02821	1.36	0.176	1.3077

R square = 0.516 Adjusted R square = 0.508.

Findings and discussion

Respondent and business characteristics

Generally, the majority of respondents (61.8%) were aged between 31 and 50 years, which is a prime working age (NBS, 2022). This finding reveals differences in managerial orientation across age groups, suggesting that respondents were within an economically active and experienced age category, which may support effective entrepreneurial activities and overall business management. Furthermore, the majority of respondents were fairly educated, as 88.6% have primary to diploma-level education. Education provides better analytical and problem-solving skills, with an ability to strategically initiate rather than being passive. Lastly, 58.18% of all businesses are aged between 2 and 3 years, while the remaining 41.82% were aged between 4 and 5 years, consistent with literature indicating that performance challenges may persist beyond the first three years of business operation.

Multiple linear regression results

Table 3 presents the multiple linear regression results. Three dimensions of EO: proactiveness, risk-taking, and innovativeness were significantly associated with the overall BSC-based performance. Moreover, the regression model explained approximately 52% of the variation in FOHSMEs' overall BSC-based performance ($R^2 = 0.516$), indicating a substantial statistical association between the five EO dimensions collectively and overall BSC-based performance.

Table 3 showed that the EO dimensions collectively were significantly associated with overall BSC-based performance, although only innovativeness, risk-taking, and proactiveness showed statistically significant positive associations individually. This overall finding is consistent with Bakashaba and Bindeeba (2025) but differs from Ngo (2023), who reported an insignificant relationship between EO and performance.

Furthermore, results show that a unit increase in proactiveness is positively associated with an increase of 0.07992 units in overall BSC-based performance. These findings are similar to those of Bakashaba and Bindeeba (2025), George (2025), and Nyello and Kalufya (2021), yet they are opposite to the conclusion of Ringo et al. (2022), who found a negative association between proactiveness and performance. Summarised KI responses suggested that FOHSMEs may perform better when they continuously monitor emerging trends in modern construction and anticipate market needs before competitors introduce similar products (Key Informant 1, Dodoma, October 2024). This suggests that anticipating market trends and acting on emerging opportunities ahead of competitors may be associated with better overall BSC-based performance. However, this association may be weaker where proactive

actions exceed the firm's available resources and operational capacity.

A unit increase in owner's risk-taking is positively associated with an increase in overall BSC-based performance by 0.117 units. These findings are similar to the results of Bakashaba and Bindeeba (2025), George (2025), and Ringo et al. (2022); however, contrary to what was established by others (Isichei et al., 2020; Mbama et al., 2025; Nyello and Kalufya, 2021). KI responses further suggested that better-performing FOHSMEs were more willing to stock a broad range of construction materials, from foundation to finishing products, as a one-stop centre despite uncertainty regarding product turnover. (Key Informant 2, Dodoma, October 2024). These results indicate that higher risk-taking was positively associated with overall BSC-based performance. Furthermore, risk-taking may reflect a strategic willingness to allocate resources toward uncertain opportunities that can enhance competitive advantage. However, excessive risk exposure may also be associated with reduced business stability and lower overall BSC-based performance.

Furthermore, a one-unit increase in innovativeness was associated with an approximately 0.204 unit increase in overall BSC-based performance of FOHSMEs**.** The findings are similar to those of George (2025) and Ringo et al. (2022), but differ from others (Mbama et al., 2025). Furthermore, detailed interview notes indicated that continuous innovation through unique products tailored to customer needs was associated with greater customer trust, wider market opportunities, and improved financial outcomes. (Key Informant 4, Dodoma, October 2024). The findings suggest that continuous improvement of existing products and services may help distinguish FOHSMEs from competing alternatives. Innovation was also associated with competitive advantage that may be difficult for competitors to imitate. However, FOHSMEs with limited resources and capabilities may experience weaker associations between innovation and the overall BSC-based performance.

Generally, these significant findings indicate that risk-taking, proactiveness, and innovativeness are significantly associated with the overall BSC-based performance of FOHSMEs. According to RBV, these EO dimensions represent strategic capabilities associated with a firm's effective utilisation of internal resources, competitive advantage, and performance. Proactiveness is associated with early recognition of opportunities and responsiveness to the market; innovativeness is associated with creativity and continuous improvement; and risk-taking is associated with investment in potentially rewarding opportunities. Furthermore, from the SEW perspective, FOHSMEs may support innovativeness, moderate risk-taking behaviour, and proactiveness when such actions are perceived as relevant to long-term business survival and transgenerational continuity. Hence, better overall BSC-based performance of FOHSMEs may be associated with embracing innovation, taking calculated risks, and exploiting opportunities strategically while preserving long-term family interests.

On the contrary, autonomy has no significant association with overall BSC-based performance. These findings are similar to the findings of George (2025) and Adelowo and Henrico (2025) but opposite to the previous findings (Islam et al., 2024). Paraphrased interview responses suggested that hardware businesses are capital-intensive and that major suppliers often provide stock on credit after sellers reach certain transactional thresholds. Consequently, owners tend to maintain highly structured and centralised decision-making to protect profits and liquidity and ensure that business obligations are met (Key Informant 6, Dodoma, October 2024). The findings imply that the association between autonomy and the overall BSC-based performance may reflect the contextual and structural characteristics of FOHSMEs, where decision-making authority is often centralised within family members to preserve control and socio-emotional wealth. As a result, non-family employees and lower-level managers may have limited independence in initiating strategic actions, which may weaken the association between autonomy and overall BSC-based performance. The findings also align with SEW arguments that family businesses may prioritise control and continuity over decentralised decision-making. Furthermore, unlike other EO dimensions that are more directly linked to opportunity recognition, adaptability, and resource utilisation, autonomy is more closely related to organisational structure, market conditions and the degree of managerial decentralisation. Therefore, the limited autonomy within FOHSMEs may help explain the weak association observed between autonomy and overall BSC-based performance.

Lastly, competitive aggressiveness showed no statistically significant relationship with overall BSC-based performance. This finding aligns with the study of Adelowo and Henrico (2025) but differs from the findings of Islam et al. (2024) and Amarteifio and Agbeblewu (2020), who reported a significant positive association of competitive aggressiveness with performance. Detailed field notes showed that most FOHSMEs are not actively operating to dominate the market by investing more in advertising, as they believe it will attract unnecessary attention from tax authorities, and they do not believe in hiring highly skilled personnel from rival businesses for fear of a bad reputation. Meanwhile, they operate passively and do not even consider themselves highly competitive (Key Informant 3, Dodoma, October 2024). The statistically insignificant association between competitive aggressiveness and the overall BSC-based performance reflects the nature of the hardware business environment, suggesting that FOHSMEs often rely more on long-term customer relationships and trust rather than aggressive competitive actions. In highly localised SME market settings, excessive competitive aggressiveness may be associated with weaker relational stability and may not necessarily correspond with superior performance. Furthermore, FOHSMEs may not have sufficient resources to sustain aggressive competitive strategies effectively. Therefore, the findings suggest that FOHSMEs prefer collaboration, trust, and a relationship-oriented approach rather than rivalry. Competitive aggressiveness may also be associated with higher operational risks and greater resource strain without corresponding performance benefits. However, the borderline reliability and bimodal response patterns of autonomy and competitive aggressiveness may have contributed to their non-significant associations with the overall BSC-based performance.

Study implications, area for further studies, conclusion, and recommendation

Theoretical implications

To a great extent, the study aligns with the theories. However, RBV assumes that all firm resources, characteristics and capabilities are positively associated with competitive advantages, which in turn explain performance outcomes. The study extends the application of RBV by showing that in FOHSMEs, not all EO-dimensions function equally as strategic capabilities. Rather, only proactiveness, innovativeness, and risk-taking demonstrated significant positive associations with the overall BSC-based performance, consistent with the RBV. The current study also extends Socio-emotional Wealth Theory by showing that FOHSMEs selectively support entrepreneurial behaviours that align with family control and long-term continuity. Additionally, the statistically insignificant associations of competitive aggressiveness and autonomy suggest that the relationship between each EO dimension and overall BSC-based performance may vary according to family ownership dynamics.

Practical implications

The findings suggest that FOHSME owners should prioritise innovativeness, proactive behaviour, and calculated risk-taking because these dimensions were significantly associated with higher overall BSC-based performance. Owners should therefore strengthen market scanning, continuous improvement of business operations, opportunity identification, and carefully considered investment decisions that support competitiveness and adaptability. The statistically insignificant associations of autonomy and competitive aggressiveness suggest that

greater independence in decision-making and more aggressive competitive behaviour may not necessarily be associated with higher overall BSC-based performance in FOHSMEs. Instead, the qualitative findings indicate the practical importance of coordinated decision-making and relationship-oriented business practices.

Policy implications

To improve the long-term performance of FOHSMEs, SME development institutions and policymakers should design entrepreneurship support programs that strengthen risk-management skills, innovation capability, and strategic responsiveness among FOHSMEs.

Limitations of the study and areas for future research

Given that the current study adopted a cross-sectional approach, future studies may employ longitudinal designs to examine how the associations between EO dimensions and the overall BSC-based performance evolve over time. Furthermore, the study focused on FOHSMEs in Dodoma, which may limit the generalisation of the findings to non-family SMEs and firms operating in different geographical settings with different social, economic, cultural, and institutional conditions. The study also included businesses aged between 2 and 5 years; therefore, future studies may include more mature firms to determine whether the EO–BSC-based performance relationship varies across stages of business development. Widening the scope to include other industries could also provide further insight into industry-specific factors associated with the EO–BSC-based performance relationship. Lastly, the current study provides a foundation by examining the direct association between EO dimensions and overall BSC-based performance of FOHSMEs. Building on this, future studies may explore additional factors, such as leadership style and market orientation, among others, to further explain the EO–BSC-based performance relationship.

Conclusion

This study highlights the association between EO dimensions and the overall BSC-based performance of FOHSMEs. The findings show that proactiveness, risk-taking, and innovativeness were positively and significantly associated with overall BSC-based performance, while autonomy and competitive aggressiveness were not significantly associated with the overall BSC-based performance. This suggests that higher levels of proactiveness, innovativeness, and calculated risk-taking are associated with better overall BSC-based performance among FOHSMEs. Overall, the findings demonstrate that the overall performance relevance of EO varies across its individual dimensions within the FOHSMEs context. The qualitative findings further provided contextual insights into how these entrepreneurial behaviours are expressed in the operations and strategic decisions of FOHSMEs.

Recommendations

The study findings underscore the association of EO with the holistic performance of FOHSMEs as measured by the BSC. In view of the findings, FOHSME owners are advised to emphasise proactive market behaviour, continuous innovation, and fostering an organisational culture that supports calculated risk-taking. These three dimensions represent strategic capabilities that were associated with higher overall BSC-based performance and are consistent with the RBV framework. For City Trade Officers, the study recommends strengthening business support initiatives for FOHSMEs through entrepreneurial capacity-building programs and business advisory services, including support for informed and data-driven decision-making to manage business risks. Trade Officers may also strengthen the documentation of key challenges facing FOHSMEs to inform council decisions and appropriate policy interventions.

Declaration of use of AI-assisted technology

During the preparation of this work, on very few occasions, the Author used ChatGPT and Copilot solely to refine wording, sentence structure, and improve clarity, as English is not the Author's first language. After using these tools, the Author revised and edited the content as needed and takes full responsibility for the content of the published article.

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CRediT authorship contribution statement

Esther Phortunatus Mankaga: Writing – review & editing, Writing – original draft, Validation, Methodology, Formal analysis, Data curation, Conceptualization. **Nicodemus Simon Mwakilema:** Writing – review & editing, Supervision. **Richard Ibrahim Msuya:** Writing – review & editing, Supervision.

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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Appendix A

Socio-Demographic and Business Characteristics of Respondents

Variable	Frequency	percentage	Mean ± Std
Age of respondent			**39.57 ± 11.19**
18–30	90	23.38	
31–40	152	39.48	

(*continued on next page*)

(*continued*)

Variable	Frequency	percentage	Mean ± Std
41–50	86	22.34	
51+	57	14.81	
Highest level of education			
Certificate	41	10.65	
Diploma	142	36.88	
Higher education [Bachelor's degree and above]	39	10.13	
No formal education	5	1.30	
Primary education	58	15.06	
Secondary education	100	25.97	
Business capital investment			
Above TZS 200,000,000 up to TZS 800,000,000/=(Medium)	44	11.43	
Above TZS 5000,000 up to TZS 200,000,000/= (Small)	269	69.87	
Up to TZS 5000,000/= (Micro)	72	18.70	
Age of the business			**Mean =3.70 SD 1.43**
2–3	224	58.18	
4–5	161	41.82	

Appendix B

Entrepreneurial Orientation Dimensions (Independent Variable)

Variable	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean ± Std
AUTONOMY						
Our business allows independent decision-making	68(17.66)	6(1.56)	16(4.16)	38(9.87)	257(66.75)	4.06 ± 1.54
Business empowers all to make independent decisions	235(61.04)	17(4.42)	42 (10.91)	38(9.87)	53(13.77)	2.11 ± 1.53
We believe that individuals or work groups operating independently outside the organisational chain of command get the best results	164(42.60)	16(4.16)	64 (16.62)	83 (21.56)	58(15.06)	2.62 ± 1.56
Our business employees are expected to use the existing strategies and standards, operating procedures as a basis for decision-making.	34(8.83)	14(3.64)	35(9.09)	111 (28.83)	191(49.61)	4.07 ± 1.24
INNOVATIVENESS						
We have had many lines of products or services marketed for the past 5 years	15(3.90)	28(7.27)	30(7.79)	146 (37.92)	166(43.12)	4.09 ± 1.07
Our business management favours a strong emphasis on R&D, Technological leadership, and innovations	23(5.97)	38(9.87)	43 (11.17)	157 (40.78)	124(32.21)	3.83 ± 1.16
The changes in our product and service lines have been quite dramatic	19(4.94)	35(9.09)	43 (11.17)	155 (40.26)	133(34.55)	3.90 ± 1.12
RISK-TAKING						
Owing to the nature of the environment, bold, wide-ranging acts are necessary to achieve the firm's objectives	72(18.70)	13(3.38)	54 (14.03)	136 (35.32)	110(28.57)	3.52 ± 1.42
We typically adopt a bold, aggressive posture to maximise the probability of exploiting potential opportunities	8(2.08)	8(2.08)	39 (10.13)	146 (37.92)	184(47.79)	4.27 ± 0.88
We have a strong proclivity for high-risk projects (with chances of very high returns	9(2.34)	8(2.08)	40 (10.39)	155 (40.26)	173(44.94)	4.23 ± 0.89
We encourage risk-taking with new ideas around here	7(1.82)	20(5.19)	33(8.57)	148 (38.44)	177(45.97)	4.22 ± 0.93
PROACTIVENESS						
In our business, we typically initiate actions to which competitors then respond	54(14.03)	33(8.57)	51 (13.25)	98 (25.45)	149(38.70)	3.66 ± 1.42
We often introduce new products/services, administrative techniques, and operating technology rather than merely react	59(15.32)	36(9.35)	46 (11.95)	120 (31.17)	124(32.21)	3.56 ± 1.42
We have a strong tendency to be ahead of other competitors in introducing novel ideas or products	58(15.06)	62(16.10)	48 (12.47)	94 (24.42)	123(31.95)	3.42 ± 1.45
COMPETITIVE AGGRESSIVENESS						
Our business is very aggressive and intensely competitive (commit financial resources to marketing	37(9.61)	64(16.62)	21(5.45)	140 (36.36)	123(31.95)	3.64 ± 1.33
Our business prefers to 'undo the competition posture (not live and let live)	229(59.48)	44(11.43)	0(0.00)	47 (12.21)	65(16.88)	2.16 ± 1.61
Our business can hire the best employees from rival businesses when necessary	136(35.32)	67(17.40)	73 (18.96)	38(9.87)	71(18.44)	2.59 ± 1.50
We have invested considerable time and resources in actively promoting our products	70(18.18)	128 (33.25)	77 (20.00)	49 (12.73)	61(15.84)	2.75 ± 1.33

Appendix C

Performance Balanced Score Card (Dependent Variable)

Variable	Strong disagree	Disagree	Neutral	Agree	Strong agree	Mean ± Std
My business has experienced a high Sales growth rate	11(2.86)	13(3.38)	176 (45.71)	71(18.44)	114 (29.61)	3.69 ± 1.02
The business has experienced high growth in operating profit	11(2.86)	14(3.64)	181 (47.01)	78(20.26)	101 (26.23)	3.63 ± 1.00
CUSTOMER PERSPECTIVE						
The business has a good customer retention rate	3(0.78)	13(3.38)	31(8.05)	80(20.78)	258 (67.01)	4.50 ± 0.84
We have received a high level of customer acquisition/enquiries	5(1.30)	22(5.71)	82(21.30)	107 (27.79)	169 (43.90)	4.07 ± 1.00
We have fewer customer complaints	14(3.64)	35(9.09)	37(9.61)	54(14.03)	245 (63.64)	4.25 ± 1.17
My business considers customer on-time delivery, quality performance services, and cost to pursue success	4(1.04)	1(0.26)	18(4.68)	94(24.42)	268 (69.61)	4.61 ± 0.69
We have an increasing number of new customers over time	4(1.04)	29(7.53)	80(20.78)	110 (28.57)	162 (42.08)	4.03 ± 1.01
INTERNAL PROCESSES						
My business considers the business processes that have the greatest impact on customer satisfaction	3(0.78)	1(0.26)	16(4.16)	145 (37.66)	220 (57.14)	4.50 ± 0.67
Our business operations are highly efficient, e.g., speed of transaction	57(14.81)	59 (15.32)	35(9.09)	50(12.99)	184 (47.79)	3.64 ± 1.55
Information technology systems and application eg cameras, systems, etc.	240(62.34)	8(2.08)	7(1.82)	34(8.83)	96(24.94)	2.32 ± 1.77
Capacity utilisation of machinery (EFD	265(68.83)	30(7.79)	11(2.86)	18(4.68)	61(15.84)	1.91 ± 1.53
Customer service activities, e.g., order management, after-sales support, proactive communication	12(3.12)	13(3.38)	56(14.55)	78(20.26)	226 (58.70)	4.28 ± 1.04
Social activities of the enterprise	6(1.56)	11(2.86)	26(6.75)	102 (26.49)	240 (62.34)	4.45 ± 0.86
We have increased the number of new products and/or new services	8(2.08)	34(8.83)	42(10.91)	151 (39.22)	150 (38.96)	4.04 ± 1.02
INNOVATION AND LEARNING						
My business considers, improves, and learns to increase new markets, revenue, and margin in its bid to promote customers	31(8.05)	19(4.94)	60(15.58)	99(25.71)	176 (45.71)	3.96 ± 1.24
Increase in the level of employees' specific skills	6(1.56)	15(3.90)	37(9.61)	114 (29.61)	213 (55.32)	4.33 ± 0.91
Employees performance growth rate	7(1.82)	16(4.16)	36(9.35)	113 (29.35)	213 (55.32)	4.32 ± 0.94
Strategic alliances and partnerships	232(60.26)	14(3.64)	19(4.94)	29(7.53)	91(23.64)	2.31 ± 1.73
Number of /percentage of trained workers	124(32.21)	23(5.97)	22(5.71)	112 (29.09)	104 (27.01)	3.13 ± 1.65
The number of cases that involving Costly mistakes or violations of the professional ethics of workers	18(4.68)	42 (10.91)	48(12.47)	66(17.14)	211 (54.81)	4.06 ± 1.24

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