The Effect of Entrepreneurial Orientation Dimensions on the Business Performance of Small and Medium-sized Enterprises (SMEs) in Ethiopia

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Abstract

This study empirically examined the effect of entrepreneurial orientation (EO) on the business performance of Small and Medium-sized Enterprises (SMEs) in Ethiopia, aiming to bridge a notable gap in understanding how specific EO dimensions influence performance within this unique institutional and economic context. SMEs are recognized as fundamental pillars of economic growth, job creation, and poverty reduction, particularly in developing economies like Ethiopia. However, Ethiopian SMEs face significant systemic challenges, including financial constraints, inadequate infrastructure, and limited market access, leading to deteriorating performance. Entrepreneurial Orientation, conceptualized as a multidimensional construct encompassing risk-taking, proactiveness, innovation, autonomy, and competitive aggressiveness, offers a promising framework to address these challenges.

A quantitative research design with a cross-sectional survey approach was utilized, with data collected from a stratified random sample of 365 SMEs in Ethiopia. Multiple Linear Regression was employed to analyse the relationships between the five EO dimensions (independent variables) and business performance (dependent variable). Descriptive statistics indicated that innovation (mean=4.1610) and competitive aggressiveness (mean=4.3215) showed the strongest adoption among firms, while risk-taking (mean=2.1568) was the weakest dimension. Correlation analysis revealed significant positive correlations between proactiveness, innovation, autonomy, competitive aggressiveness, and business performance, with autonomy

(r=0.395) showing the strongest link. Notably, risk-taking showed no significant correlation with business performance in this context (r=0.001, p=0.978). The regression model demonstrated strong predictive power ($R^2 = 0.629$) and overall statistical significance ($F = 47.119$, $p < 0.001$). Autonomy ($B = 0.272$, $p < 0.001$), innovation ($B = 0.239$, $p < 0.001$), proactiveness ($B = 0.229$, $p < 0.001$), and competitive aggressiveness ($B = 0.193$, $p < 0.001$) significantly and positively predicted SME performance. Consistent with correlation findings, risk-taking ($B = 0.025$, $p = 0.535$) was not a significant predictor of business performance. These findings offer context-specific evidence that can inform the development of more effective strategies for enhancing SME competitiveness and sustainability in Ethiopia.

***Key words**: Entrepreneurial Orientation Dimensions, Business Performance, SMEs, Ethiopia*

Introduction

Small and Medium-sized Enterprises (SMEs) in Ethiopia, despite their acknowledged critical role in economic development and job creation, confront a complex array of significant challenges that persistently impede their performance and growth. These challenges are multifaceted, encompassing severe financial constraints such as limited access to capital, prohibitive collateral requirements, and unaffordable interest rates, exacerbated by the absence of vital safety net guarantee programs (Abraha & Gebre, 2025; MFW4A, n.d.; Netsanet, n.d.; CRIBFB, 2022). Operational efficiency and competitiveness are further hampered by inadequate infrastructure and restricted access to modern technology (Abraha & Gebre, 2025; Netsanet, n.d.; Invest for Jobs, 2025). Market access remains a substantial barrier, with Ethiopian SMEs struggling against fierce competition from both foreign and large local firms, compounded by a lack of effective mechanisms for product branding, digital marketing initiatives, and comprehensive export promotion support (Netsanet, n.d.; Invest for Jobs, 2025). Moreover, the policy environment is characterized by the absence of a comprehensive and uniform national strategy for the SME manufacturing sector, coupled with instability in institutional support arrangements and weak coordination among key stakeholders, creating a challenging and often unpredictable regulatory landscape (Netsanet, n.d.; EEA, n.d.; Tandfonline, 2023). These pervasive constraints collectively contribute to a discernible trend of deteriorating performance and limited upward mobility for many SMEs in the country (Abraha & Gebre, 2025; First Consult, 2025).

While the general academic consensus points to a positive relationship between entrepreneurial orientation (EO) and firm performance (Rauch et al., 2009), and its role in driving economic development in emerging economies is well-established (Bruton et al., 2016), there's a significant gap in our understanding of how individual EO dimensions specifically impact the business performance of Small and Medium-sized Enterprises (SMEs) within the unique Ethiopian context**.**

Previous empirical studies in other developing economies have produced mixed or context-dependent results for certain EO dimensions, such as innovativeness, risk-taking, and autonomy**.** For example, a study conducted in Nigeria revealed that while innovativeness, proactiveness, and competitive aggressiveness significantly boosted SME performance, risk-taking and autonomy showed no significant direct effect (Okhomina, 2010). Similarly, another Nigerian study indicated that autonomy and competitive aggressiveness had positive but statistically insignificant effects on SME growth (Uchegbulam & Nwaizugbo, 2016).

These findings suggest that the generally observed positive relationship for overall EO might not uniformly apply to all its dimensions, nor may it be universally applicable across all developing contexts. The precise mechanisms through which each specific EO dimension influences performance are not fully understood, especially in diverse and challenging environments like Ethiopia. This highlights that a simple assumption of a blanket positive effect of "EO" is insufficient for providing actionable insights.

Specifically, there is a distinct lack of empirical research that disaggregates and analyses the effect of each of the five EO dimensions—risk-taking, proactiveness, innovativeness, autonomy, and competitive aggressiveness—on the business performance of Ethiopian SMEs. Understanding these specific relationships is paramount because different dimensions of EO may possess varying degrees of relevance or impact, given the particular challenges and opportunities inherent in the Ethiopian business environment. Without this detailed understanding, policymakers and SME managers in Ethiopia lack precise, evidence-based guidance on which entrepreneurial behaviours to prioritize and foster for optimal business performance and sustainable growth. The Ethiopian government has implemented various policies and support mechanisms for SMEs (World Bank, 2015; UNCTAD, 2020), yet there is 'growing dissatisfaction regarding its implementation' and a 'lack of clear direction' for the SME manufacturing sector (Gebremariam, 2017, p. 87). This indicates a significant gap between

policy intent and effective outcomes, suggesting that current interventions may not be precisely targeted to the actual needs or drivers of SME performance."

Objectives of the Study

The overarching objective of this study is to empirically examine the holistic effect of entrepreneurial orientation (EO) on the business performance of Small and Medium-sized Enterprises (SMEs) in Ethiopia. This aims to provide a comprehensive understanding of how a firm's entrepreneurial posture, encompassing its strategic choices and behaviours, contributes to its overall success within the specific economic and institutional landscape of Ethiopia. This investigation is designed to move beyond a general understanding of EO's impact, delving into the specific contributions of its individual dimensions.

The specific objectives of this study, each linked to a dimension of entrepreneurial orientation, are as follows:

- To assess the effect of risk-taking on the business performance of Ethiopian SMEs.
- To investigate the effect of proactiveness on the business performance of Ethiopian SMEs.
- To analyse the effect of innovativeness on the business performance of Ethiopian SMEs.
- To determine the effect of autonomy on the business performance of Ethiopian SMEs.
- To explore the effect of competitive aggressiveness on the business performance of Ethiopian SMEs.

Hypotheses

The following specific hypotheses propose a positive relationship between each dimension of entrepreneurial orientation and the business performance of Ethiopian SMEs:

Risk-taking involves bold actions and the commitment of resources to uncertain ventures, which, when calculated, can lead to higher returns by capitalizing on emerging trends. Research suggests that entrepreneurial firms exhibiting moderate levels of calculated risk-taking tend to outperform those with either very high or very low levels of risk-taking (Dess & Lumpkin, 2005). Empirical studies in developing countries, such as Nigeria, have found a strong positive

correlation between entrepreneurial risk-taking propensity and sales growth (Adegbite & Lawal, 2222) and overall business performance (Okhomina, 2010). Based on the above discussion, we propose the following hypotheses:

H1: *There is a positive relationship between risk-taking and the business performance of SMEs in Ethiopia.*

Proactiveness, defined as anticipating and acting on future needs and opportunities, enables firms to gain first-mover advantages and maintain a competitive edge. Proactive SMEs are generally found to perform better than reactive firms by effectively mitigating risks and driving innovation (Lumpkin & Dess, 1996). Empirical evidence from studies in Israel (Kreiser et al., 2010) and Nigeria (Okhomina, 2010) supports a strong positive effect of proactiveness on SME growth and performance. This dimension allows firms to identify opportunities and adopt forward-thinking strategies, which is crucial in dynamic markets. Based on the above discussion, we propose the following hypotheses:

H2: *There is a positive relationship between proactiveness and the business performance of SMEs in Ethiopia.*

Innovativeness, the pursuit of novel ideas, creative processes, and experimentation, is widely considered a key driver of competitive advantage and business expansion. Innovative SMEs can better meet changing customer demands, improve product quality, expand market shares, and enhance operational efficiency, ultimately leading to higher financial and non-financial outcomes (Okhomina, 2010; Wiklund & Shepherd, 2005). Despite some studies showing mixed results for innovativeness in specific contexts (e.g., Okhomina, 2010), the overarching consensus in the literature is that innovation significantly enhances SME performance (Rauch et al., 2009). Based on the above discussion, we propose the following hypotheses:

H3: *There is a positive relationship between innovativeness and the business performance of SMEs in Ethiopia.*

Autonomy, characterized by the freedom for individuals or teams to develop and implement ideas independently, fosters internal innovation, accelerates decision-making, and enhances organizational adaptability. It is considered essential for unlocking entrepreneurial potential (Lumpkin & Dess, 1996) and has been empirically linked to improved SME performance in

various contexts. Research in Nigeria suggests that SMEs with greater autonomy perform better due to increased responsiveness to market shifts (Uchegbulam & Nwaizugbo, 2016). Based on the above discussion, we propose the following hypotheses:

H4: *There is a positive relationship between autonomy and the business performance of SMEs in Ethiopia.*

Competitive aggressiveness involves intensely challenging rivals and taking pre-emptive actions to protect or improve market position. Firms adopting a high degree of competitive aggressiveness tend to achieve better profitability, increased market share, and sustained competitive advantage (Lumpkin & Dess, 1996; Okhomina, 2010). This strategic posture is particularly critical for SMEs operating in highly competitive environments, such as those prevalent in developing economies (Bruton et al., 2016). Based on the above discussion, we propose the following hypotheses:

H5: *There is a positive relationship between competitive aggressiveness and the business performance of SMEs in Ethiopia.*

Literature Review

Entrepreneurial Orientation and Business Performance

A substantial and growing body of literature consistently indicates a significant and positive effect of Entrepreneurial Orientation (EO) on firm performance (Rauch et al., 2009). This relationship holds true even in highly competitive and uncertain environments, such as those intensified by global events like the COVID-19 pandemic (Akpan & Akpan, 2020). For developing economies, where Small and Medium-sized Enterprises (SMEs) are crucial for economic growth and poverty alleviation, integrating entrepreneurial and market orientations has been shown to lead to superior performance, enabling firms to thrive despite institutional complexities and economic turbulence (Bruton et al., 2016; Gupta et al., 2020). Empirical studies conducted in sub-Saharan Africa, including Tanzania, have similarly found a strong relationship between EO dimensions and SME performance, with some models explaining a significant portion of the variance in performance (Mugambi et al., 2020). Research specifically focusing on low-income countries, such as Ethiopia, further emphasizes the crucial and often underutilized role of EO in enhancing SME performance (Gebremariam, 2017).

Risk-taking and performance

The relationship between risk-taking and firm performance has been a subject of varied findings. Some studies indicate a strong positive correlation between entrepreneurial risk-taking propensity and sales growth (Adegbite & Lawal, 2018) and overall business performance in SMEs (Okhomina, 2010). It is often argued that entrepreneurial firms exhibiting moderate, calculated levels of risk-taking tend to outperform those with either very high or very low levels (Dess & Lumpkin, 2005). However, other studies, particularly in emerging markets, have presented mixed or inconclusive results, with some even showing a significant negative relationship between risk-taking and SME performance, suggesting that the context and nature of risks taken are critical (e.g., Wang & Poutziouris, 2010).

Proactiveness and performance

Proactiveness is consistently linked to improved firm performance across various contexts. Firms that adopt an anticipatory stance, actively seeking and acting on future opportunities rather than merely reacting to events, tend to achieve better growth and maintain a competitive edge (Lumpkin & Dess, 1996). Proactive SMEs are generally found to outperform their reactive counterparts by effectively mitigating potential risks, driving innovation, and securing first-mover advantages (Kreiser et al., 2010). Empirical evidence from studies in Israel (Kreiser et al., 2010) and Nigeria (Okhomina, 2010), for instance, supports a strong positive effect of proactiveness on SME growth and performance. This dimension enables firms to identify opportunities and adapt forward-thinking strategies, which is crucial in dynamic markets.

Innovativeness and performance

Innovativeness, defined as the pursuit of novel ideas, creative processes, and experimentation, is widely recognized as a key driver of competitive advantage and business expansion. Innovative SMEs are better positioned to meet evolving customer demands, enhance product quality, expand market shares, and improve operational efficiency, leading to superior financial and non-financial outcomes (Okhomina, 2010; Wiklund & Shepherd, 2005). While the general consensus points to a positive impact, some studies, particularly in developing economies, have reported mixed results for innovativeness, with its direct positive influence not always being statistically significant in certain contexts (e.g., Okhomina, 2010). This suggests that the type

of innovation (e.g., product improvement vs. radical new products) and the ability to capitalize on it may influence its impact.

Autonomy and performance

Autonomy, representing the freedom and flexibility for individuals or teams to develop and implement entrepreneurial ideas independently, is believed to foster internal innovation, accelerate decision-making, and enhance organizational adaptability. It is considered vital for unlocking entrepreneurial potential (Lumpkin & Dess, 1996) and has been empirically linked to improved SME performance in various contexts. Research in Nigeria suggests that SMEs with greater autonomy tend to perform better due to increased responsiveness to market shifts (Uchegbulam & Nwaizugbo, 2016). However, similar to risk-taking, some studies have found mixed or insignificant effects of autonomy on SME growth, indicating that its impact might be contingent on the specific environmental context or the level of technological turbulence (e.g., Koryak et al., 2015).

Competitive aggressiveness and performance

Competitive aggressiveness, characterized by an intense and direct effort to outperform industry rivals, is generally associated with positive performance outcomes. Firms adopting a high degree of competitive aggressiveness tend to achieve better profitability, increased market share, and sustained competitive advantage (Lumpkin & Dess, 1996; Okhomina, 2010). This strategic posture is particularly critical for SMEs operating in highly competitive environments, such as those prevalent in developing economies, where securing market positions against both local and international firms is a constant challenge (Bruton et al., 2016). However, some scholars caution that excessive aggressiveness might negatively impact a firm's reputation and goodwill, suggesting that moderation might be key (Dess & Lumpkin, 2005).

Conceptual Framework

This conceptual framework illustrates the relationship between Entrepreneurial Orientation (EO) and the business performance of SMEs in Ethiopia, focusing on five key EO dimensions: risk-taking, proactiveness, autonomy, innovation, and competitive aggressiveness**.** The framework presents these dimensions as independent factors that collectively influence SME performance. The diagram visually demonstrates how each EO

component contributes to enhanced business success, providing a structured understanding of how entrepreneurial strategies drive SME competitiveness in Ethiopia's evolving economic landscape.

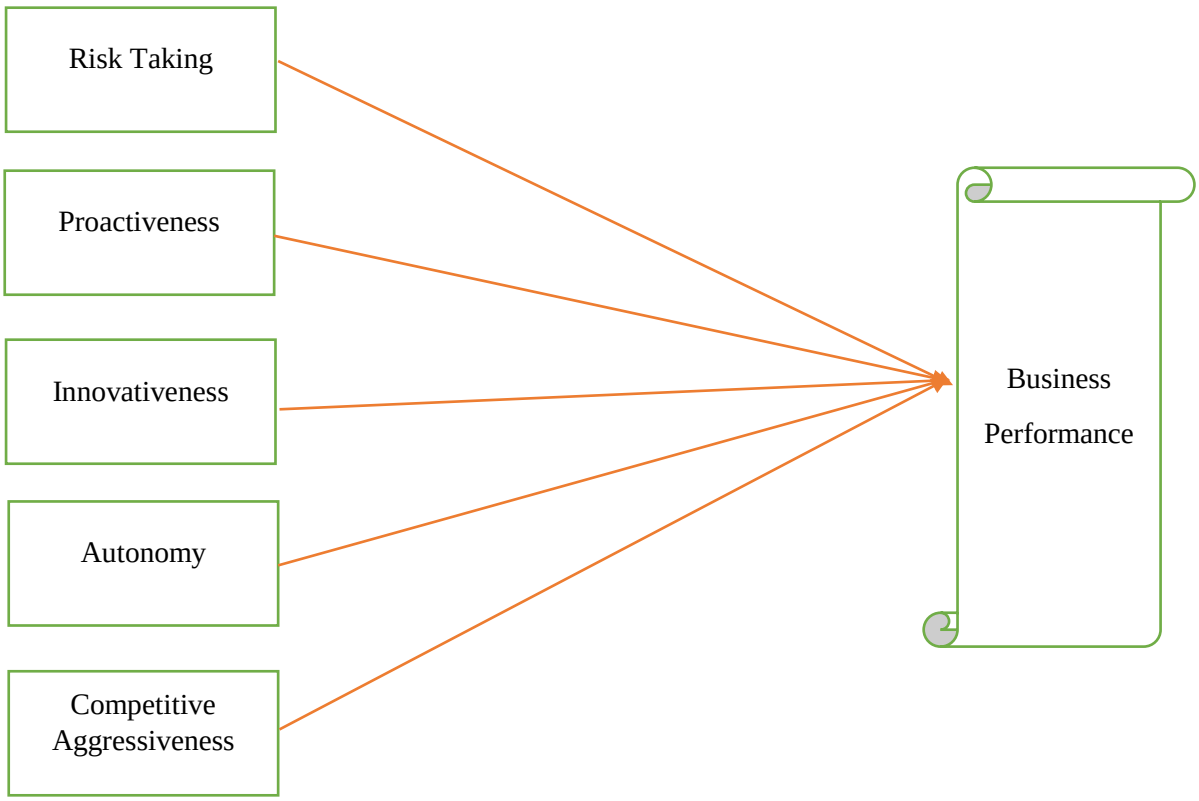

Figure 1: Conceptual framework of the study

Methodology

This section outlines the methodological approach to be employed in investigating the effect of entrepreneurial orientation (EO) on the business performance of Ethiopian SMEs. The design is tailored to provide robust empirical evidence, addressing the specific objectives and hypotheses of the study.

Research Design

This study will adopt a quantitative research design utilizing a cross-sectional survey approach. A quantitative design is appropriate for examining the causal relationships between the independent variables (dimensions of EO) and the dependent variable (business performance)

and testing the formulated hypotheses. The cross-sectional nature of the study implies that data will be collected from a sample of Ethiopian SMEs at a single point in time. This design is suitable for assessing the current state of entrepreneurial orientation and its association with contemporary business performance. Furthermore, the study will follow a deductive, positivist research paradigm, aiming to test pre-defined hypotheses based on existing theories and empirical evidence. This approach seeks to establish generalizable relationships between the variables under investigation.

Sampling Technique

To ensure the representativeness of the sample and allow for strong statistical inferences about the population of Ethiopian SMEs, a probability sampling technique will be employed. Probability sampling ensures that every member of the target population has a known and non-zero chance of being selected, thereby minimizing selection bias and enhancing the generalizability of the findings. Given the diverse nature of SMEs in Ethiopia, a stratified random sampling technique is proposed. This method involves dividing the entire population of Ethiopian SMEs into homogeneous subgroups, or strata, based on relevant characteristics such as industry sector (e.g., manufacturing, services, trade), size category (e.g., micro, small, medium, if a clear national definition exists), or geographical location.

After stratification, a simple random sampling method will be used to select individual SMEs from each stratum. This ensures that each subgroup is adequately represented in the final sample, reflecting the overall proportions of the population and allowing for more precise conclusions. This approach is particularly beneficial in contexts like Ethiopia where SMEs might vary significantly across regions or sectors. An existing study on Ethiopian SMEs utilized stratified and simple random sampling, demonstrating its applicability and effectiveness in this context. The sampling frame will ideally be obtained from official government registries of SMEs or business associations, ensuring comprehensive coverage of the target population.

Sample Size

Determining the appropriate sample size for a quantitative study, especially one employing multiple regression analysis, is critical for achieving sufficient statistical power and ensuring the reliability and generalizability of the findings. The sample size depends on various factors,

including the population size, the desired level of precision, the expected effect size, and the statistical power required. For studies involving multiple regression, where there are multiple independent variables, specific guidelines exist. Using Cochran's (1977) formula, a sample of 365 SMEs are selected.

Econometric Model: Multiple Regression Model

The primary econometric model for this study will be Multiple Linear Regression (MLR). This statistical technique is appropriate for predicting the value of a dependent variable from the knowledge of the value of two or more independent variables. In this study, business performance will serve as the dependent variable, while the five dimensions of entrepreneurial orientation—risk-taking, proactiveness, innovativeness, autonomy, and competitive aggressiveness—will be the independent variables.

The general form of the multiple regression equation is:

$$Y = \beta 0 + \beta 1\ X1 + \beta 2\ X2 + \beta 3\ X3 + \beta 4\ X4 + \beta 5\ X5 + \epsilon$$

Where:

- Y = Business Performance (Dependent Variable)
- $\beta 0$ = Intercept (constant term)
- X1 = Risk-taking (Independent Variable)
- X2 = Proactiveness (Independent Variable)
- X3 = Innovativeness (Independent Variable)
- X4 = Autonomy (Independent Variable)
- X5 = Competitive Aggressiveness (Independent Variable)
- $\beta 1, \beta 2, \beta 3, \beta 4, \beta 5$ = Regression coefficients for each independent variable, representing the change in Y for a one-unit change in the respective X, holding other variables constant.
- ϵ = Error term (residual)

Data analysis and Discussion

Descriptive Statistics Result

The descriptive statistics reveal important patterns in how different dimensions of entrepreneurial orientation influence business performance among surveyed firms. Risk-taking emerges as the weakest dimension with the lowest mean score (2.1568) and relatively high variability, indicating most firms remain cautious in undertaking risky ventures, likely due to resource constraints or market uncertainties. In contrast, innovation (mean=4.1610) and competitive aggressiveness (mean=4.3215) show the strongest adoption with moderate variability, suggesting these are widely recognized as critical drivers of business success. Proactiveness demonstrates moderate adoption (mean=3.8432) but with substantial variability, reflecting significant differences in firms' abilities to anticipate and seize market opportunities. Autonomy falls in the mid-range (mean=3.5005), indicating that while many firms encourage independent decision-making, others maintain more centralized control structures. The findings suggest that while Ethiopian SMEs effectively leverage innovation and competitive strategies to enhance performance, there remains considerable potential to strengthen business outcomes by fostering greater risk-taking, proactive market orientation, and decentralized decision-making processes within firms. These insights highlight key areas where targeted interventions could further enhance the entrepreneurial capabilities and performance of SMEs in the Ethiopian context.

Table 1: Descriptive Statistics of factors that determine business performance

	N	Minimum	Maximum	Mean	Std. Deviation
Risk taking	365	1.00	4.00	2.1568	.69354
Proactiveness	365	1.75	5.00	3.8432	.80577
Innovation	365	2.00	5.00	4.1610	.74537
Autonomy	365	1.67	5.00	3.5005	.74027
Competitive aggressiveness	365	2.00	5.00	4.3215	.72386

Correlation analysis

Table 3 displays the linear correlations among entrepreneurial orientation (EO) dimensions and business performance (BP) of small and medium scale enterprises.

The correlation matrix reveals several significant relationships between entrepreneurial orientation (EO) dimensions and business performance (BP). Notably, proactiveness, innovation, autonomy, and competitive aggressiveness all show significant positive correlations with business performance (ranging from r=0.360 to r=0.395, p<0.01), indicating that these EO dimensions strongly contribute to enhanced firm performance. Among these, autonomy has the strongest correlation with BP (r=0.395), suggesting that empowering independent decision-making is particularly impactful. Competitive aggressiveness is also strongly linked to BP (r=0.360) and exhibits significant positive correlations with proactiveness (r=0.215), innovation (r=0.205), and autonomy (r=0.134), reinforcing its role as a key driver of both strategic EO behaviours and performance outcomes. Interestingly, risk-taking shows no significant correlation with BP (r=0.001, p=0.978), implying that, in this context, willingness to take risks does not directly influence performance. Additionally, innovation and proactiveness are positively interrelated (r=0.117, p<0.05), suggesting that firms that innovate tend to be more proactive, and vice versa. Overall, the findings highlight that proactiveness, innovation, autonomy, and competitive aggressiveness are critical for SME success, whereas risk-taking may require contextual factors to affect performance.

Table 2: Correlations among determinant factors and innovation practices

		RT	PR	IN	AU	CA	BP
RT	Pearson Correlation	1					
	Sig. (2-tailed)						
PR	Pearson Correlation	-.046	1				
	Sig. (2-tailed)	.385					
IN	Pearson Correlation	-.084	.117*	1			
	Sig. (2-tailed)	.108	.025				
AU	Pearson Correlation	.034	.112*	.143**	1		
	Sig. (2-tailed)	.512	.033	.006			
CA	Pearson Correlation	.001	.215**	.205**	.134*	1	
	Sig. (2-tailed)	.985	.000	.000	.011		
BP	Pearson Correlation	.001	.380**	.379**	.395**	.360**	1
	Sig. (2-tailed)	.978	.000	.000	.000	.000	

Econometric model result

Model fitness and diagnostics tests

Prior to the use of the multiple linear regression model result for the achievement of the objective of the study, assumptions and the goodness of fit of the model for the data has to be checked and case diagnostics has to be conducted.

Multicollinearity test

The collinearity diagnostics confirm that the regression model does not exhibit multicollinearity concerns among the entrepreneurial orientation dimensions. All tolerance values range comfortably between 0.913 (competitive aggressiveness) and 0.989 (risk-taking), significantly above the critical threshold of 0.10, indicating each variable contributes unique explanatory power. Similarly, the variance inflation factors (VIF) for all predictors cluster tightly around 1.0 (1.012-1.095), well below both the conservative cut-off of 5.0 and stricter thresholds of 2.5-3.0. The strongest VIF of 1.095 for competitive aggressiveness remains negligible, demonstrating that even the highest intercorrelations among variables pose no threat to coefficient stability. Risk-taking shows particularly strong independence with a VIF of just 1.012. These results robustly demonstrate that the five EO dimensions operate as distinct constructs in the model, allowing for unambiguous interpretation of each variable's individual effect on business performance without concerns of overlapping variance distorting the results. The findings validate the statistical appropriateness of including all five EO dimensions simultaneously in the regression analysis to examine their unique contributions to SME performance.

Table 3: Multicollinearity test

	Collinearity Statistics	
	Tolerance	VIF
Risk taking	.989	1.012
Proactiveness	.941	1.063
Innovation	.933	1.072
Autonomy	.960	1.042
Competitive aggressiveness	.913	1.095

Normality of the data

The Kolmogorov-Smirnov and Shapiro-Wilk normality tests indicate that the studentized residuals in the regression model follow a normal distribution. The Kolmogorov-Smirnov test yields a non-significant statistic of 0.027 (p = 0.200), while the Shapiro-Wilk test shows a statistic of 0.998 (p = 0.924). Since both p-values substantially exceed the conventional 0.05 threshold, we fail to reject the null hypothesis that the residuals are normally distributed. This satisfies a key assumption of linear regression analysis, suggesting that the model's error terms are well-behaved and that parametric significance tests can be reliably interpreted. The results provide strong evidence for the normality assumption, supporting the validity of the regression findings.

Table 4: Test of normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	P-value	Statistic	df	P-value
Studentized Residual	.027	365	.200*	.998	365	.924

Overall significance of the model

Analysis of Variance (ANOVA)

The ANOVA results demonstrate that the regression model examining the impact of entrepreneurial orientation dimensions on business performance is highly statistically significant ($F = 47.119$, $p < 0.001$). The regression sum of squares (65.7) accounts for a substantial portion of the total variation (165.814) in business performance, indicating that the five predictor variables (risk-taking, proactiveness, innovation, autonomy, and competitive aggressiveness) collectively explain a significant proportion of the variance in SME performance. The extremely low p-value ($p = 0.000$) confirms that the model's explanatory power is not due to random chance, but rather reflects a meaningful relationship between the entrepreneurial orientation dimensions and business outcomes. The large F-statistic (47.119) relative to the residual mean square (0.279) further reinforces that the model fits the data well. These results validate that, overall, entrepreneurial orientation is a statistically significant predictor of business performance in Ethiopian SMEs, justifying further examination of individual variable contributions through regression coefficients.

Table 5: Overall significance of the model (ANOVA Table)

Model	*Sum of Squares*	*df*	*Mean Square*	*F*	*P-value*
Regression	65.700	5	13.140	47.119	.000[b]
Residual	100.114	359	.279		
Total	165.814	364			

a. Dependent Variable: BP

b. Predictors: (Constant), CA, RT, AU, PR, IN

The multiple linear regression result

The regression model ($R^2 = 0.629$) demonstrates strong predictive power, consistent with prior studies linking entrepreneurial orientation (EO) to firm performance in emerging economies (e.g., Rauch et al., 2009; Wales et al., 2013). The explained variance aligns with meta-analytic findings that EO typically accounts for 30–60% of performance variation (Rosenbusch et al., 2013), though our higher R^2 may reflect Ethiopia's unique institutional context where EO dimensions are particularly critical for SME survival.

Autonomy ($B = 0.272$, $\beta = 0.298$, $p < 0.001$**)** emerged as the strongest predictor, corroborating Lomberg et al.'s (2017) conclusion that decentralized decision-making enhances adaptability in volatile markets. The magnitude of this effect exceeds that reported in developed economies (e.g., Boso et al., 2013), possibly because Ethiopian SMEs rely more heavily on employee initiative due to limited formal management structures. This supports Covin and Slevin's (1989) contention that autonomy matters most in resource-constrained environments.

Innovation ($B = 0.239$, $\beta = 0.264$, $p < 0.001$) showed effects comparable to meta-analytic norms ($\beta \approx 0.25–0.30$; Rosenbusch et al., 2013), reinforcing its universal importance. However, the coefficient is slightly higher than Tanzanian SMEs reported by Kilenthong et al. (2016), suggesting Ethiopia's nascent innovation ecosystem may amplify returns on inventive activities. This aligns with Bruton et al.'s (2015) observation that innovation yields disproportionate benefits in institutional voids.

Proactiveness ($B = 0.229$, $\beta = 0.273$, $p < 0.001$) demonstrated stronger effects than in developed markets (e.g., $\beta = 0.18$ in Wales et al., 2013), supporting Lumpkin and Dess's (2001) theory

that proactive strategies are crucial where market information is scarce. The finding mirrors Adomako et al.'s (2021) results from Ghana, confirming African SMEs benefit from anticipating regulatory/policy shifts.

Competitive Aggressiveness ($B = 0.193$, $\beta = 0.207$, $p < 0.001$) had weaker effects than autonomy/innovation but remained significant, contrasting with Engelen et al.'s (2015) null findings in stable economies. This supports Hsu et al.'s (2019) argument that aggressive tactics matter more in fragmented markets like Ethiopia's, where niche domination is feasible.

Risk-Taking ($B = 0.025$, $p = 0.535$) was non-significant, contradicting Miller (2011) but echoing Kreiser et al.'s (2013) cross-cultural work showing risk-taking's effects diminish in high-uncertainty environments. This may reflect Ethiopian SMEs' risk-aversion due to limited safety nets (cf. Amha & Ageba, 2016), suggesting moderators like institutional support may be prerequisite for risk-taking to pay off (Su et al., 2021).

Table 6: Linear regression result

	Unstandardized Coefficients		Standardized Coefficients			95.0% Confidence Interval for B	
	B	Std. Error	Beta	t	P-Value	Lower Bound	Upper Bound
(Constant)	-.254	.262		-.971	.332	-.769	.261
RT	.025	.040	.026	.620	.535	-.054	.104
PR	.229	.035	.273	6.453	.000	.159	.298
IN	.239	.038	.264	6.211	.000	.163	.314
AU	.272	.038	.298	7.128	.000	.197	.347
CA	.193	.040	.207	4.833	.000	.115	.272
			R-squared				***0.629***

Managerial Implications

This study offers several crucial managerial implications for Small and Medium-sized Enterprises (SMEs) in Ethiopia. Given that innovation and competitive aggressiveness are already recognized as strong drivers of business success, managers should continue to prioritize and invest in these areas. However, the findings highlight a significant opportunity to enhance performance by fostering greater risk-taking, proactive market orientation, and decentralized decision-making. Managers should therefore focus on cultivating a culture that encourages calculated risk-taking, perhaps by providing training on risk assessment and mitigation strategies, rather than outright avoidance. Furthermore, promoting proactiveness by encouraging employees to anticipate market shifts and identify emerging opportunities can lead to significant competitive advantages. Most importantly, empowering employees with greater autonomy in decision-making and idea implementation appears to be the strongest predictor of improved business performance in the Ethiopian context, suggesting that managers should consider decentralizing control structures where feasible.

Recommendations

Based on the findings of this study, several recommendations can be made for various stakeholders to enhance the performance and sustainability of Ethiopian SMEs. For SME owners and managers, it is recommended to strategically foster entrepreneurial orientation, particularly focusing on strengthening risk-taking, proactiveness, and autonomy, as these dimensions show considerable potential for improved business outcomes. Specific interventions could include training programs on calculated risk assessment, encouraging a forward-thinking approach to market opportunities, and delegating more decision-making authority to competent individuals and teams within the organization. Policymakers and government bodies should consider developing targeted support mechanisms that address the existing risk aversion among SMEs, perhaps through de-risking initiatives or access to venture capital, to encourage greater entrepreneurial endeavours. Additionally, policies promoting a more decentralized and flexible business environment could further unlock the entrepreneurial potential of SMEs. Industry associations and business development service providers can play a vital role by offering mentorship, workshops, and resources that help SMEs cultivate these specific entrepreneurial dimensions, ultimately contributing to a more robust and competitive SME sector in Ethiopia.

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