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Determinants of SME Growth and Competitiveness in the UK: Key Findings and Implications

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Abstract

This study investigates the determinants of small and medium-sized enterprise (SME) growth and competitiveness in the United Kingdom by examining how firm-level characteristics and capability-related factors influence sales performance and export participation. Using firm-level cross-sectional data from the World Bank Enterprise Survey, the study applies Ordinary Least Squares regression to analyse SME sales performance, measured through the natural logarithm of annual sales, and logistic regression to examine SME competitiveness, measured through direct export participation. The explanatory variables include formal finance, firm age, firm size, managerial experience, innovation, and quality certification. The findings show that SME sales performance and competitiveness are related but empirically distinct outcomes. Firm age has a positive and significant association with both sales' performance and export competitiveness, suggesting that organizational maturity supports business stability and market development. Firm size is the strongest predictor of sales performance; however, it is negatively associated with export participation once sales performance is controlled. Quality certification emerges as a consistently significant factor, positively influencing both sales and competitiveness, highlighting the importance of standards, credibility, and market readiness. Formal finance is not significant for sales performance but positively predicts export participation, indicating its relevance for internationalization. Innovation shows a negative association with sales and no significant effect on competitiveness, suggesting that innovation may involve short-term costs or delayed returns. Overall, the study concludes that SME growth and competitiveness require different strategic priorities, with domestic performance relying more on firm structure, while export competitiveness depends more on finance, certification, and capability development.

Keywords: SMEs, sales performance, competitiveness, export participation, formal finance, quality certification, United Kingdom.

1 Introduction

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Small and medium-sized enterprises (SMEs) are recognized as a key sector of the UK economy, as they drive jobs growth, innovation, local entrepreneurship, and broader economic resilience (OECD, 2024). The short proposal for this research also identifies SMEs as a key driver of economic growth and competitiveness, and that the success of SMEs is influenced by the evolving business environment, not just the efforts of the firm itself (OECD, 2024; World Bank, 2025).

Over the past few years, the environment for SMEs has been more challenging. Financing continues to be a structural issue in SME markets as smaller firms are often faced with information asymmetries, credit restrictions and limited access to external finance (Fouejieu et al., 2020; Kraemer-Eis et al., 2023). Meanwhile, digitization is changing trade, market integration and competition. OECD digital trade reports demonstrate that digital trade rules and connectivity increasingly affect trade costs, export engagement and openness (López González & Ferencz, 2018; López González et al., 2023). There is also an increasing push for sustainability, as SMEs are increasingly subject to reporting, supply-chain management and finance and trade standards (UNCTAD, 2025).

These developments mean that SME performance can no longer be measured simply in broad terms. In the current study, the outcomes of interest are sales performance and competitiveness. In the analysis, we use log annual sales as a measure of sales performance and direct export participation as a measure of competitiveness. This approach is valuable because it can distinguish between internal and external performance, and it will be possible to see whether the same factors affect both types of performance (World Bank Enterprise Survey data as used in the analysis file).

Background and Importance of the Problem Statement

The existing literature and reports reviewed for this project demonstrate that SME growth and competitiveness are affected by internal and external factors. The brief proposal highlighted innovation, human capital, firm resources and digital transformation as key internal factors, and finance, competition, policy frameworks, and the economic environment as key external factors (Yahaya & Nadarajah, 2023; Owen et al., 2023; Prasannath et al., 2024). It also noted that the UK SMEs are in a challenging environment because of post-Brexit trading issues, digital transformation and sustainability (OECD, 2024; World Bank, 2025).

In particular, access to finance is critical. The SME finance reports you provided indicate that access to finance is an issue because smaller firms often can't easily access enough external finance from the normal credit markets, despite having good ideas (Fouejieu et al., 2020; Kraemer-Eis et al., 2023). This is important because finance is required for growth, upgrading, quality enhancement, technology development, and exporting.

The digital transformation also makes it more important to consider SME competitiveness. OECD evidence indicates that digital trade is growing faster than non-digital trade and that enhanced digital connectivity can help support trade (local and overseas) (López González et al., 2023). Similarly, previous OECD research suggests that digitalization has transformed the nature of trade and that businesses now increasingly need to interact with digital connectivity, logistics, e-payments and services linkages in order to be competitive (López González & Ferencz, 2018).

Meanwhile, sustainability-related issues are increasingly evident in finance, reporting and supply chains. UNCTAD (2025) states that SMEs are increasingly expected to enhance sustainability performance and reporting because large corporations, financial and regulatory institutions are extending sustainability performance and reporting through supply and investment chains. This means that certification, standards, and disclosure are becoming mainstreamed into market access and competitiveness.

Problem Statement

While SMEs play a central role in the UK economy, there remains a need for more quantitative evidence on the measurable firm-level determinants most strongly associated with SME growth and competitiveness in the UK (OECD, 2024; World Bank, 2025). This was clearly identified in the short proposal, which noted that while there is a lot of discussion internationally, there is a need for more specific evidence for the modern UK context.

The final analysis shows this is indeed the case. We find that the factors that influence SME sales performance and SME competitiveness are not identical. Age is positively related to both outcomes. Quality certification is positive for both sales performance and competitiveness. Formal finance is not significant in the sales model but is significant and positive in the competitiveness model. Innovation is positively significant in the sales model but is insignificant in the competitiveness model and firm size is very positive for sales performance but it is negative for export participation when current performance (sales) is controlled for. These results demonstrate that the determinants of internal business performance are not precisely the same as the determinants of export competitiveness.

As such, the problem that this study attempts to solve is the lack of information on the relationships between formal finance, firm age, firm size, manager experience, innovation and quality schemes on SME sales performance and SME competitiveness in the UK. In the absence of such evidence, policy and managerial strategies can be too general and too non-specific to address the issues at hand.

1.3 Study Significance

The study is important academically, practically and for policy. Academically, it adds to the body of SME literature by exploring two separate outcomes in a single UK empirical study (rather than lumping together growth and competitiveness). Pragmatically, it provides guidance for owners and managers of SMEs about which factors seem to be more associated with positive business outcomes. From a policy perspective, it highlights the potential value of financing, standards and training as policy tools.

The value of the study is enhanced by the preliminary results. The results indicate the general value of quality standards for both performance and competitiveness, and the value of formal finance for competitiveness. This finding is consistent with the broader reports you shared, which indicate that finance and standards have a growing impact on SME opportunities, particularly where they are seeking to grow, export or adapt to new sustainability and market challenges and risks (Kraemer-Eis et al., 2023; UNCTAD, 2025).

1.4 Research Aim

This study seeks to understand the factors that affect the growth and competitiveness of SMEs in the United Kingdom, through the impacts of formal finance, firm age, firm size, managerial experience, innovation and quality certification on sales performance and direct participation in export markets.

1.5 Research Objectives

The objectives of the study are:

To examine the relationship between formal finance, firm age, firm size, manager experience, innovation, and quality certification and SME sales performance in the UK.

To examine the relationship between formal finance, firm age, firm size, manager experience, innovation, and quality certification and competitiveness of SME in UK.

To compare the determinants of SME sales performance and SME competitiveness in order to identify how the two outcomes differ.

1.6 Research Questions

How do formal finance, firm age, firm size, manager experience, innovation, and quality certification influence SME sales performance in the UK?

How do formal finance, firm age, firm size, manager experience, innovation, and quality certification influence SME competitiveness in the UK?

Do the determinants of SME sales performance differ from the determinants of SME competitiveness in the UK?

2. Literature Analysis and Key Terms of Reference

2.1 Introduction

This chapter considers the literature on the determinants of SME growth and competitiveness in the UK. It is composed according to the proposal's focus, the variables in the methodology and the analysis. The analysis does not consider growth and competitiveness as equivalent. Rather, it distinguishes between sales on one hand and competitiveness on the other, with competitiveness being defined as engagement in exports. This is a critical consideration because we see that some factors are more significantly related to sales, while others are more directly related to export competitiveness.

The literature tells us that SMEs' outcomes are typically determined by both firm characteristics and macro conditions. The research proposal identified some key internal and external factors such as finance, firm size, firm age, innovation, managerial capability, policy & regulatory environment, market environment, and digital transformation (Yahaya & Nadarajah, 2023; Owen et al., 2023; OECD, 2024). The research design and empirical analysis then refined these conversations into determinants: formal finance, firm age, firm size, manager experience, innovation and quality certification. Hence, the literature review below is presented in terms of these factors so that this chapter is completely in line with the study design.

2.2 SME Growth and Competitiveness

In the SME literature, we commonly understand growth to be the growth of a business over a period of time by means of sales, employment, output, or market share, while competitiveness is defined as the effective performance of a firm in relation to its competitors that enables the firm to remain in the market. The proposal highlighted that SME growth can be measured in terms of the increase in income, employment and market share, and competitiveness is a firm's ability to compete effectively against its rivals (Garcia-Martinez et al., 2023; Taçoğlu et al., 2019).

This distinction is important for the current study because the analysis conducted shows that the factors affecting sales performance and competitiveness are not the same. The empirical model uses log annual sales to measure sales performance, and whether a firm export is used to measure competitiveness. This is in line with the view that export participation can be an observable proxy for external competitiveness because exporting firms are typically subject to more intense quality, efficiency and market capability constraints than firms that only operate in the domestic market. The findings also support the idea that we should consider the two outcomes separately, as formal finance and quality certification are more clearly relevant for competitiveness, whereas firm size is particularly significant for sales performance.

2.3 SMEs and Access to Finance

Financing is a much-discussed component of SME performance. Access to finance can be more challenging for small firms due to lower collateral, a shorter credit history and higher risk. The IMF working paper you provided suggests that SME financial inclusion is not only determined by

the presence of banks, but also by governance, credit information, legal, competition and the business environment (Fouejieu et al., 2020). It also finds that good institutions, stronger enforcement of contracts and credit infrastructure are crucial for SME credit access.

The European Small Business Finance Outlook also reinforces the view that finance is a critical issue facing SMEs. It identifies increasing interest rates, stricter lending standards and ongoing access to finance problems, particularly in a volatile economic environment (Kraemer-Eis et al., 2023). This translates to the fact that firms with formal finance may be in a position to expand, stay afloat, improve their quality management system and compete in markets with higher quality standards.

Our findings partially confirm this research. Formal finance is not significant for sales, but it is significant and positive for competitiveness, particularly export, when the other covariates are taken into account. This implies finance may be more closely associated with market development and export preparedness than sales. That is, firms with access to formal finance may be better able to pursue opportunities in the external market even though its immediate impact on sales may not be as clear in a cross-section.

2.4 Firm Age, Size and Managerial Experience

Older firms are usually associated with the accumulation of knowledge, experience, connections and routines. More mature firms are likely to have greater market knowledge and are more likely to survive in harsh environments. The proposal also noted that firm age was another important internal factor as older firms may have greater experience and stability.

This is consistent with our findings. Older firms have higher sales performance and competitiveness. This implies firm age is important to internal business performance, as well as the capacity to export. This finding is in line with the general perception that older firms might have stronger relationships with customers, suppliers and financial partners, or more established business processes.

The next key factor in the SME literature is firm size. The size of a firm is a proxy for the number of employees, capacity and resources. These factors can help sustain output and market reach, and increase sales. In the empirical analysis, log firm size is the strongest positive predictor of sales. This finding is in line with the literature as scale of operations often means more production and sales.

But the impact of firm size is nuanced in the competitiveness model. When current sales revenue is accounted for, the size of the firm becomes negatively related to being involved in direct export. This implies that size in terms of employment does not necessarily translate into export competitiveness. Rather, export participation might depend more on particular skills such as finance, certification and readiness to enter the market than size alone. So, the SME literature on size should not be misinterpreted as size being important but with varying effects on different outcomes.

Managerial experience is a type of managerial human capital and industry knowledge. Research on SME performance usually assumes that the experience of the manager contributes to better decision making, problem solving and adaptation. The proposal also mentioned managerial capability and human capital as a strength (Yahaya & Nadarajah, 2023; Sipos et al., 2023). However, the current analysis reveals only a small positive effect of manager experience on sales performance, with no effect on competitiveness. This implies that experience may assist routine operations but is not critical in this study, compared to firm age, size, finance, and certification.

2.5 Innovation and SME Performance

Innovation is generally considered a positive factor in SME competitiveness, as it enables

companies to distinguish their products from the competition, adapt to change and enhance competitive advantage. The proposal identified innovation as one of the key internal factors for growth and competitiveness and the literature also associate innovation with adaptation and long-term advantage (Yahaya & Nadarajah, 2023).

This is also supported by digitalisation reports. OECD reports on digital trade demonstrate that digitalisation is changing trade and opening up new opportunities, while World Bank reports on Digital Progress and Trends show that digital readiness and development of the digital sector can generate value, promote exports and encourage innovation and growth (López González & Ferencz, 2018; López González et al., 2023; World Bank, 2024).

But the evidence in this paper is mixed. Innovation is negative and statistically significant in the sales model, but positive and insignificant in the final competitiveness model. This does not necessarily mean that innovation is bad. Instead, in a cross-sectional study, firms that are innovative may be investing money in (new) products or services that will not lead to immediate sales. This could also mean that innovative activity is not necessarily exported in the short term. So, the literature would suggest innovation should be important, but the current findings indicate that in the short term, it may not have an equal impact.

2.6 Quality Certification and Competitiveness

The variable of quality certification is a key one in this research because it represents a tangible capability that can help internal performance and also market acceptance. The proposal identified quality-related capability as part of the overall organisational capability which can contribute to SME competitiveness. Across many industries, certification can convey conformance, dependability and preparedness to meet customer or market demands.

The analysis provides strong evidence in favour of quality certification. It has a positive impact on sales performance and competitiveness. Descriptively, direct exporters are more likely to be certified than non-exporters. At the regression level, certification is a positive influence in both models. This is a strong finding of our study.

The broader reports you provided also help to clarify why certification is important. UNCTAD (2025) highlights that SMEs are increasingly expected to meet sustainability disclosure and reporting requirements, as well as the World Investment Report (2025) which states that better standards, disclosure requirements and credible regulatory frameworks enhance transparency and investor confidence. While these reports go wider than the current variable, they offer the same general argument: businesses that can show they are of a high quality, compliant and credible are better placed to access capital, investors, supply chains and international markets.

2.7 Wider External Environment: Digitalization, Trade and Policy

While the final empirical model only considers firm-level variables, the broader research indicates that firm-level variables are embedded in an external environment. The succinct proposal already highlighted that UK SMEs need to adapt to post-Brexit trade, digitalization and sustainability. OECD reports on digital trade also demonstrate that digital connectivity and policies on digital trade can lower trade costs and boost domestic as well as international trade. This matters because today's competitiveness depends not only on product quality or firm capabilities, but digital connectedness, trade openness, and capacity to trade with connected markets.

Policy support also matters. The proposal refers to research that indicates that government support, start-up ecosystems and institutional quality can affect SME development (Owen et al, 2023; Prasannath et al, 2024; Onileowo, 2024). Likewise, the IMF finance report demonstrates the impact of contract enforcement, credit information, regulatory quality and governance on SME access to finance. These might not be included in the regression model, but they provide the context

for the chosen firm-level determinants.

3. Methodology

3.1 Data and sample

We examine firm-level cross-sectional microdata from the World Bank Enterprise Survey (WBES) of SMEs in the United Kingdom. The data is appropriate for this study because it contains structured data on firm characteristics, financial and innovation activities, management background and performance.

The descriptive statistics are drawn from a sample of 1,003 firms with some variation across variables due to non-responses. In the regression analysis, the sample is reduced to about 992 firms because only firms with information for all the variables included in the models are used (listwise deletion).

The UK-only sample allows for an analysis of firm differences within a common institutional, regulatory and corporate environment. But the results are confined to the UK, and cannot be directly applied in other nations. The data are cross-sectional, so the study shows statistical links between firm attributes and outcomes, but not necessarily causal links.

3.2 Variable definition and measurement

There are two dependent variables and six major explanatory variables. The first two variables are SME sales performance and SME competitiveness.

SME sales performance is defined as the natural log of sales in the previous fiscal year. The natural log is used to reduce skewness, improve the normality of the data for regression analysis, to interpret the variable in proportion, and to avoid the impact of the outlier.

The measure for the SME competitiveness is a dummy variable that takes the value of 1 if the firm is direct exporter and 0 otherwise. Direct exporting is used as an indicator of competitiveness because exporting firms typically require greater efficiency, quality and marketing capabilities compared to domestic-only firms.

The independent variables are formal finance, firm age, log firm size, manager experience, innovation and quality certification. Formal finance is an indicator of whether the firm has a loan or line of credit. Firm age is the number of years the firm has been in operation. Log firm size is the natural logarithm of the number of permanent full-time employees. Manager experience measures years of sector experience of the firm's manager. Innovation includes whether the firm introduced new or improved products or services. Quality certification indicates whether the firm has, or is acquiring, quality certification, signaling quality and readiness to export.

Table 3.1. Definition and Measurement of Variables

Variable	Definition	Measurement / Coding	Type
Outcome variables:			
Firm Growth	Firm sales performance	Natural logarithm of total annual sales in the last fiscal year	Continuous
Competitiveness	SME competitiveness	Binary indicator equal to 1 if the firm participates in direct exports, 0 otherwise	Binary
Covariates:			

Formal finance	Access to formal finance	Binary indicator equal to 1 if the firm has a loan or line of credit from a financial institution, 0 otherwise	Binary
Firm age	Age of the firm	Number of years since the establishment began operations	Continuous
Log firm size	Firm size	Natural logarithm of the number of permanent full-time employees	Continuous
Manager experience	Top manager's sector experience	Number of years the top manager has worked in the sector	Continuous
Innovation	Product or service innovation	Binary indicator equal to 1 if the firm introduced a new or improved product/service, 0 otherwise	Binary
Quality certification	Quality-related capability	Binary indicator equal to 1 if the firm has quality certification or is in process, 0 otherwise	Binary

3.3 Econometric model specification

To examine the determinants of SME sales performance and competitiveness, the study estimates two econometric models suited to the measurement properties of the dependent variables.

3.3.1 OLS model for SME sales performance

The first model explains SME sales performance, measured by log annual sales. Since this dependent variable is continuous, the study employs Ordinary Least Squares (OLS) estimation. The baseline empirical model is written as:

$$\ln(\text{Sales}_i) = \beta_0 + \beta_1(\text{FormalFinance}_i) + \beta_2(\text{FirmAge}_i) + \beta_3 \ln(\text{Size}_i) + \beta_4(\text{ManagerExperience}_i) + \beta_5(\text{Innovation}_i) + \beta_6(\text{QualityCertification}_i) + \varepsilon_i \quad (3.1)$$

where $\ln(\text{Sales}_i)$ is the natural logarithm of annual sales for firm i, β_0 is the intercept, β_1 to β_6 are slope coefficients, and ε_i is the error term. OLS is appropriate in this setting because the dependent variable is continuous and the main interest lies in estimating the average association between firm characteristics and sales performance. The model is straightforward to estimate and interpret, especially when the dependent variable is log-transformed. It also allows the study to examine the incremental contribution of financial, innovative, and quality-related factors after accounting for basic firm characteristics.

3.3.2 Logit model for SME competitiveness

The second model explains SME competitiveness, proxied by direct export participation. Since this variable is binary, OLS is not suitable because it can generate predicted values outside the 0-1 range and does not account for the nonlinear nature of probabilities. Instead, the study uses a logit model, which is designed for dichotomous outcomes and models the probability that a firm is a direct exporter.

The basic logit specification is:

$$Pr(\text{Competitiveness}_i = 1) = F\left(\alpha_0 + \alpha_1(\text{FormalFinance}_i) + \alpha_2(\text{FirmAge}_i) + \alpha_3 \ln(\text{Size}_i) +$$

$\alpha_4(\text{ManagerExperience}_i) + \alpha_5(\text{Innovation}_i) + \alpha_6(\text{QualityCertification}_i))$ (3.2)

where $F(.)$denotes the logistic cumulative distribution function.

beyond this general specification, our empirical approach for competitiveness follows a sequence of model specification steps, where firm performance is included in an intermediate model to determine whether firms that perform better are more likely to be direct exporters. This is in line with the nature of the step-wise model estimation, and enables the study to compare the contribution of "simple" firm-level variables and the contribution of commercial performance, finance and capability-related variables.

The logit coefficients are expressed in log-odds, rather than changes in the probability, so the study also reports average marginal effects (AMEs) for the final competitiveness model. Marginal effects are an alternative way of interpreting the results by examining the change in the predicted probability of being a direct exporter for a given change in an explanatory variable while keeping everything else in the model constant. This is particularly important in a thesis because it allows the substantive findings to be more easily explained.

4. Desriptive Statistics and Prelimary Empirical Analysis

4.2 Descriptive Statistics of Study Variables

Table 4.1 shows descriptive statistics for the variables used in this study. The mean of log annual sales is 15.490 with a standard deviation of 1.999, suggesting variation in the sales of SMEs. This justifies using the log transformation for the reason that there is a high variability in the firm sales.

The mean value of competitiveness, measured as direct export, is 0.178, showing that less than one-fifth of the sample SMEs are direct exporters. This confirms that direct export is not a common practice among the UK SMEs and justifies competitiveness as a separate dependent variable.

Looking at the explanatory variables, the mean for formal finance is 0.265, meaning that one quarter of the firms have a loan or line of credit. Innovation has a mean of 0.154, suggesting that product or service innovation is not common. The mean of quality certification is higher at 0.445, which implies that quality is driven by a different set of firms in the sample than formal finance and innovation.

The sample also varies in terms of firm characteristics. The average firm age is 30.980 years, but the large standard deviation indicates that the sample includes both young and old firms. Firm size also varies, with the average log firm size of 0.719, and average experience of the manager 26.399, showing that firms are managed by experienced managers. In summary, the descriptive statistics reveal that the sample of UK SMEs vary in performance, size, age, manager experience, finance, innovation and certification.

Table 4.1. Descriptive Statistics of Study Variables

Variable	Observations	Mean	Std. Dev.	Min	Max
Log annual sales	1,003	15.490	1.999	9.903	23.075
Competitiveness	1,003	0.178	0.383	0	1
Formal finance	993	0.265	0.441	0	1
Firm age	1,003	30.980	30.507	1	224
Log firm size	1,003	3.627	1.620	0	8.294

Manager experience	1,002	26.399	10.684	1	60
Innovation	1,003	0.154	0.361	0	1
Quality certification	1,003	0.445	0.497	0	1

4.3 Correlation analysis

Table 4.2 presents the bivariate associations between SME competitiveness and binary variables. Exporting directly is used as a measure of competitiveness. We find that formal finance and quality certification have a strong association with competitiveness, while innovation has a weak association.

In terms of formal finance, 34.08% of direct exporters have a loan or line of credit, while 24.82% of non-exporters have it. The chi-square value is significant at the 5% level, and indicates that more exporters have access to formal finance.

For quality certification, 54.75% of direct exporters have certification, compared with 42.23% of non-exporters. This is significant at the 1% level, and indicates a strong descriptive relationship between certification and export competitiveness.

Innovation shows a weaker pattern. Some 19.55% of exporters are innovative, while 14.44% of non-exporters innovate. But this is significant at only the 10% level.

These initial results show that exporting SMEs are more likely to have formal finance and quality certification, but less likely to be innovative at the bivariate level.

Table 4.2. Correlation Matrix of Study Variables

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
(1) Log annual sales	1.000							
(2) Firm age	0.255***	1.000						
(3) Log firm size	0.886***	0.228***	1.000					
(4) Manager experience	0.160***	0.227***	0.137***	1.000				
(5) Competitiveness	0.088***	0.119***	0.031	0.023	1.000			
(6) Formal finance	-0.052	0.036	-0.044	0.027	0.081**	1.000		
(7) Innovation	0.036	0.038	0.081**	0.066**	0.054*	0.102***	1.000	
(8) Quality certification	0.400***	0.129***	0.378***	0.056*	0.096***	-0.035	0.053*	1.000

*** p < 0.01, ** p < 0.05, * p < 0.10.

4.4 Regression Analysis

4.4.1 Regression Results for SME Sales Performance

The OLS regression results for SME sales performance are reported in Table 4.3, in four models. Model 1 is the basic model including firm age, log firm size and firm age, and has an R-squared of 0.7888. Age, size, and manager experience have positive and significant effects on annual sales, which means older, larger and managerially experienced firms have higher sales.

When formal finance is included in Model 2, the model fit only marginally improves. Formal finance is significantly negative, suggesting formal finance does not have a significant independent effect on sales after controlling for other firm characteristics.

Model 3 adds innovation. Firm age and firm size continue to be positive and significant, while manager experience is slightly positive. But innovation is negative and significant, implying that firms that are innovative have lower current sales in this cross-sectional data set. This finding

should be interpreted with caution as it demonstrates correlation, not causation.

In model 4, we add quality certification and the fit of the model is the highest (R-squared: 0.7953, Root MSE: 0.9079). Here, firm size is the most significant predictor of sales performance, with quality certification and firm age also important. The positive and highly significant quality certification coefficient means that quality certified firms (or firms seeking quality certification) perform better in sales.

In summary, the OLS findings indicate that SME sales performance is primarily explained by firm characteristics such as firm size, age and quality certification. Access to formal finance is not significant, and innovation is negative and significant after adjusting for other factors in the sales models. These results indicate that SME structural factors, particularly size and age, are important in explaining variability in sales performance, with quality certification also playing a significant role.

Table 4.3 Determinants of SME Sales Performance

Variables	**Model 1**	**Model 2**	**Model 3**	**Model 4**
Firm age	0.0033***	0.0036***	0.0036***	0.0034***
	(0.0013)	(0.0013)	(0.0012)	(0.0012)
Log firm size	1.0746***	1.0740***	1.0779***	1.0453***
	(0.0204)	(0.0207)	(0.0206)	(0.0215)
Manager experience	0.0055**	0.0052*	0.0046*	0.0048*
	(0.0028)	(0.0028)	(0.0028)	(0.0028)
Formal finance		-0.0716	-0.0550	-0.0476
		(0.0664)	(0.0663)	(0.0660)
Innovation			-0.1894**	-0.1977**
			(0.0772)	(0.0766)
Quality certification				0.2905***
				(0.0616)
Constant	11.3437***	11.3659***	11.3901***	11.3811***
	(0.0932)	(0.0985)	(0.0998)	(0.0988)
Observations	1,002	992	992	992
R-squared	0.7888	0.7897	0.7908	0.7953
F-statistic	1001.26***	774.16***	626.78***	532.10***
Root MSE	0.9202	0.9193	0.9172	0.9079

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$. Standard errors in parenthesis.

4.4.2 Regression Results for SME Competitiveness

Table 4.4 shows the logit regression results for the competitiveness of SMEs in four models. In Model 1, firm age is a positive and significant predictor of exporting, but firm size and the experience of the firm manager are not significant, and the model is weak.

In Model 2, the addition of the log of annual sales reveals that it is a strong positive and significant predictor, indicating that more successful firms are more likely to export. Firm age is still positive but firm size becomes negative and significant, meaning that while large firms are less likely to export when controlling for performance.

Once formal finance is included in Model 3, it is positive and significant, indicating that finance leads to greater export activity. Other variables are unchanged. In the last model, innovation and quality certification are added. Firm age, sales, formal finance and quality certification are all positive and significant, while firm size is negative. Innovation and manager experience are not significant. This specification has the best fit.

In general, competitiveness is driven by sales, finance, firm age and quality certification, but is negatively affected by firm size and is not strongly affected by innovation and manager experience. The marginal effects also demonstrate that increased sales, finance and certification increase the odds of exporting while firm size has a negative effect. Older firms have a small positive impact, and innovation is not significant.

Table 4.4. Determinants of SME Competitiveness

Variables	Model 1	Model 2	Model 3	Model 4	AMEs (Model 4)
Firm age	0.0083***	0.0075***	0.0073***	0.0070***	0.0010***
	(0.0024)	(0.0024)	(0.0024)	(0.0023)	(0.0003)
Log firm size	0.0112	-0.3403***	-0.3408***	-0.3782***	-0.0535***
	(0.0493)	(0.1000)	(0.1014)	(0.1022)	(0.0145)
Manager experience	-0.0002	-0.0022	-0.0029	-0.0016	-0.0002
	(0.0080)	(0.0080)	(0.0081)	(0.0080)	(0.0011)
Log annual sales		0.3231***	0.3314***	0.3174***	0.0449***
		(0.0803)	(0.0818)	(0.0835)	(0.0118)
Formal finance			0.4566**	0.4473**	0.0633**
			(0.1817)	(0.1823)	(0.0256)
Innovation				0.3283	0.0465
				(0.2237)	(0.0316)
Quality certification				0.4028**	0.0570**
				(0.1787)	(0.0252)

Constant	-1.8396***	-5.5207***	-5.7425***	-5.6584***	
	(0.2622)	(0.9680)	(0.9943)	(1.0109)	
Observations	1,002	1,002	992	992	992
Log likelihood	-464.116	-457.281	-452.124	-448.606	
Pseudo R-squared	0.0131	0.0276	0.0345	0.0420	
Wald chi-square	13.19***	29.10***	35.67***	43.93***	

*** p < 0.01, ** p < 0.05, * p < 0.10. Standard errors in parenthesis.

4.5 Comparative Discussion of the Two Models

The two models demonstrate that SME sales performance and competitiveness have some common factors, but not the same. Older firms are positively related to both sales performance and competitiveness, which means that firm maturity helps in both internal sales and external market competitiveness.

But other factors are different. Firm size is strongly positively associated with sales performance, but once sales performance is controlled for in the competitiveness model, it turns negative. This demonstrates that firm size and firm performance are different when predicting export participation.

Certification is positive in both models, so it is important for both sales performance and competitiveness. Formal finance has no role in sales, but is positive and significant in competitiveness, meaning that finance is not significant in explaining sales but is significant in explaining export participation. Innovation is significant in sales but not in competitiveness, and it is negative in the former. Experience is not significant in the sales model and is not significant in the competitiveness model.

In sum, the results demonstrate sales performance and competitiveness are distinct but related success factors for SMEs. The sales model has a much higher R-squared value (0.79), while the competitiveness model has lower Pseudo R-squared values (0.0131-0.0420). But the competitiveness model shows interesting insights, particularly when sales performance, formal finance and quality certification are added.

5. Discussion

This research used firm-level data to explore the factors affecting the SME sales' performance and competitiveness in the UK. The results offer valuable insights into the impact of various firm attributes on two different outcomes: firm performance (sales) and competitiveness (exporting). In line with previous studies, the findings validate that SME performance is multi-faceted and cannot be captured by a single measure (Garcia-Martinez et al., 2023; Yahaya & Nadarajah, 2023).

An interesting finding is the persistent role of firm age, which is positively related and statistically significant with the two firm outcomes of sales and competitiveness. This indicates that firm age is associated with higher firm performance as it reflects the firm's learning curve and the development of its business network. Mature firms are likely to benefit from learning curves, reputation, and long-term relationships with customers and suppliers, allowing them to boost their performance and exports. This is in line with other research that stresses the importance of learning and knowledge in the growth of SMEs (Sipos et al., 2023).

The impact of firm size varies in the two models. In the sales model, firm size is the most significant predictor of sales, in line with the notion that larger firms have more resources, greater economies of scale, and more access to markets (Garcia-Martinez et al., 2023). But in the competitiveness model, firm size is negatively related to export participation, conditioned on sales performance. This finding suggests that firm size does not necessarily translate to international competitiveness. Rather, export activity may be a function of particular characteristics such as efficiency, quality and finance. This result provides insight to the existing body of knowledge, by demonstrating that internal structural factors such as size do not necessarily translate to external competitiveness.

One of the key factors in this research is quality certification. It is positively and significantly linked with sales' performance and competitiveness, suggesting that certification is positively linked with better performance and exports. This echoes the view that certification boosts firm legitimacy, product quality, and adherence to market standards, which is critical for domestic and international performance (UNCTAD, 2025). In today's markets, where quality and standards are increasingly important to customers and regulators, certification is a valuable resource that helps firms to distinguish themselves and develop over time.

Our results further demonstrate that formal finance is important for a firm's competitiveness but not for its sales. Although it is not significant in the sales model, it has a positive and significant effect on export participation. This finding might indicate that financing is perhaps more important in the expansion, investment and internationalisation process rather than sales volume. This finding is in line with previous research which shows that financial constraints constrain SME growth and exports (Fouejieu et al., 2020; Kraemer-Eis et al., 2023). Finance allows firms to access technology, marketing, regulatory, and logistics support to engage in exports.

The findings for innovation are less clear. Innovation is negatively and significantly correlated with sales performance, but is not significant in the competitiveness model. This could be because of the short-term expenses incurred by innovation, where firms need to invest in activities that do not immediately boost sales. It could also suggest that not all innovation is successful or export-oriented. Although there is a general consensus about the positive association between innovation and firm performance (Yahaya & Nadarajah, 2023), the current results indicate that this may occur under certain time and measurement perspectives.

Manager experience has a weak or insignificant link with both performance measures. While human capital of managers is often viewed as important for strategy implementation and decision-making (Sipos et al., 2023), the findings suggest that it may not have the same impact as structural and capability factors on observable factors such as sales and export participation.

Overall, the results confirm that sales and competitiveness of SMEs are related but not identical. While sales performance is more strongly related to internal factors such as size and age, competitiveness is more related to capabilities such as finance and certification. This is important because it means that firms can perform well in the domestic market but are not necessarily competitive in the international market.

5.1 Implications

The results of this study have significant implications for SME managers, policymakers and support agencies by suggesting that SME performance and competitiveness are explained by different, albeit related, factors.

For SME managers, the findings highlight the need to focus on firm capability development rather than size and/or experience. Although increasing firm size is highly correlated with sales performance, it is not necessarily related to export competitiveness. Instead, firms seeking to

expand should focus on quality certification, access to finance, and building market capabilities. In particular, quality certification appears to be an important factor enhancing both firm performance and competitiveness, suggesting that conforming to standards and increasing credibility are critical to success (UNCTAD, 2025).

The results also indicate that finance plays an important role in competitiveness. Access to finance increases the likelihood of SMEs engaging in export activities, as it allows the SME managers to invest in technology, certification and market entry. So, SME managers should proactively work to improve their financial position and access to financial services to facilitate growth beyond national markets (Fouejieu et al., 2020; Kraemer-Eis et al., 2023).

The findings also point to the need for nuanced policymaking for SMEs. As the drivers of sales performance and competitiveness are different, policies should consider developing SMEs as a multidimensional goal. For instance, policies designed to enhance sales performance can focus on efficiency, productivity, and size, whereas export promotion policies should address finance, certification and market access. This can enhance the impact of SME policies.

Furthermore, policy makers should aim to improve financial inclusion and mitigate credit constraints faced by SMEs. Enhancing financial systems, credit availability and financing mechanisms can assist SMEs in overcoming the constraints to growth and export (OECD, 2024). Likewise, programs that encourage quality improvement, certification and compliance can boost SME competitiveness by assisting firms to meet international market standards.

This study also has implications for support and institutional bodies, such as business development agencies and trade promotion organisations. These bodies should offer training, guidance, and technical assistance to support the development of SME capabilities in certification, export preparation and financial management.

In summary, the findings of this study point to the need for SMEs to develop structural, resource and capability advantages. Managers and policy makers need to understand that success and competitiveness are not the result of one approach, rather a multi-faceted approach.

5.2 Limitations and Future Research

This research offers insights into factors influencing UK SME sales and competitiveness; however, there are a number of limitations that need to be recognised and which open up avenues for further research.

First, the study uses cross-sectional data, which prevents causal inferences. It is possible to establish statistical relationships between variables, but not to infer causality. Longitudinal or panel data should be employed in future studies to consider the dynamics of SME performance and competitiveness over time and to better establish cause and effect.

Second, the study is limited to the UK, so it is possible that the results cannot be directly applied to other countries. Countries vary in their institutional, regulatory, and economic environments, which can affect SMEs. This research can be built upon by future studies that undertake cross-country or comparative studies to gain insights into the role of contextual variables in SME growth and competitiveness.

Third, the study is based on a narrow range of variables. While including the main factors such as finance, firm size, age, innovation and certification, other critical variables - such as digitalization, competition, policy and industry-specific factors - are not explicitly incorporated. With the growing role of digitalization and global trade (OECD, 2024; World Bank, 2024), future studies should include these variables for a more holistic assessment.

Fourth, some variables are represented in a basic form. For instance, innovation is measured as a

dummy variable, which does not take into account the level, nature, or outcomes of innovation activities. Likewise, competitiveness is captured only by the presence of exports, which may not reflect other factors such as productivity, efficiency or market share. Employing different measures of innovation and competitiveness with more nuances will enhance future studies.

Fifth, the study does not consider the effect of industry sector, which may affect SME performance and competitiveness. Different industries may have varying market structures, regulatory frameworks and competition. Subsequent research can develop industry-specific models to account for these differences.

In summary, while this study gives us valuable insights, future studies can build on these insights by using more detailed data, a broader range of variables and comparative approaches to explore the success of SMEs in both domestic and international markets.

5.3 Conclusion

This study has sought to investigate the factors behind SMEs' sales performance and competitiveness in the United Kingdom using micro-level data. The study's focus on internal performance (sales) and external competitiveness (exporting) offers a richer view of SME performance. The results clearly show that these two factors are correlated but distinct, and are determined by different factors.

In particular, the study finds that age is a critical factor consistently associated with higher sales and competitiveness. This shows the influence of organisational age, experience and business longevity on SME performance. Older firms are more likely to have developed networks and deep market understanding, as well as operational efficiencies, which can facilitate sales performance and export orientation (Sipos et al., 2023).

The current research also supports firm size as the most significant predictor of revenue, pointing to the role of scale, capacity and productivity. But size does not equate to competitiveness. After controlling for firm performance, firm size is negatively associated with export participation. This suggests that firm size is not a determinant of international competitiveness, and that export participation is more related to certain capabilities than firm size per se. This adds to the literature by confirming that firm structure and competitiveness should not be conflated (Garcia-Martinez et al., 2023).

Another key contribution of this study is quality certification, which has a positive and significant impact on performance and competitiveness. This suggests that certified firms have a greater chance of performing and being involved in export. Certification is a sign of trustworthiness, meeting standards and demanding quality, which are all important in domestic and international markets (UNCTAD, 2025). Thus, certification is an essential skill for SMEs to promote growth.

The findings also reveal that formal finance is important in terms of competitiveness but not sales performance. This implies that finance is critical for growth and export market entry, but less so for sales. Access to credit or loans allows firms to invest in technology, quality and development of markets that are needed for globalisation (Fouejieu et al., 2020; Kraemer-Eis et al., 2023). This underscores the role of financial inclusion in enhancing SME competitiveness.

The results on innovation are more nuanced and require caution. Innovation is typically expected to improve performance, but the findings reveal a negative effect on sales and no effect on competitiveness. This could be due to short-term costs or time delays in returns on innovation. It may also mean that not all innovation necessarily translates into better outcomes, at least in a cross-sectional study (Yahaya & Nadarajah, 2023).

Experience of the manager also has a limited influence on SME performance. Although human

capital in the form of managerial experience is theoretically important, it seems to have less effect than structural and capability factors in this study. This implies that firm resources and capabilities may be more important in driving tangible performance outcomes.

In general, this research shows that achieving SME success is multidimensional and involves a combination of structure, resources and capabilities. A firm that is successful in domestic markets are not necessarily competitive in global markets, and vice versa, and that different strategies may be needed for success. Sales growth is mainly driven by size and age, while competitiveness is also influenced by access to finance, certification, and readiness to access the market.

More generally, the results confirm the need for capability building among SMEs. In a dynamic business context marked by digitalisation, changes in trade rules and increasing standards, it is no longer sufficient for SMEs to rely solely on growth strategies but to invest in capabilities for sustainable competitiveness (OECD, 2024; World Bank, 2024).

Overall, this research adds to the theoretical and practical knowledge base by showing that SME performance and competitiveness are two related but different aspects of success. It offers empirical insights that can help SME managers, policymakers and academics to better understand what matters most and how it might be used to support the long-term growth and internationalization of SMEs.

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