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Institutional Quality and the Performance of Manufacturing Small and Medium Enterprises in Uganda: the mediating role of Competitive Advantage

Hajira Birungi[1], Cathy Ikiror Mbidde[2], Ahmed Kitunzi Mutunzi[3], Yusuf Kiwala[4]
[1,2,3,4] Makerere University, College of Business and Management Science

Corresponding Author: Hajira Birungi

ABSTRACT: The purpose of this study was to establish the mediating role of competitive advantage in the relationship between institutional quality and the performance of manufacturing Small and Medium Enterprises (SMEs) in Uganda. We used a quantitative cross-sectional survey design and data were collected from 274 owners and managers of manufacturing SMEs using a self-administered questionnaire. We employed proportionate stratified and simple random sampling techniques to select final respondents following their homogeneity in the nature of businesses. Data were analysed using SPSS and smart-PLS to establish the direct and indirect relationships between study variables.The findings show that there is no significant relationship between institutional quality and performance of manufacturing SMEs. However, competitive advantage fully mediates the relationship between the study variables. This implies that institution quality can only foster improved performance of manufacturing SMEs if it unlocks the competitive advantage of businesses that acts as a conduit for better performance.

KEY WORDS: Institutional Quality, Performance, Competitive advantage

1. INTRODUCTION

Small and Medium-sized firms (SMEs) are acknowledged as key engines to job creation, innovation, and economic growth across the globe (Balzano et al., 2024; Guliev & Mehari, 2023). Besides, their performance not only demonstrates strength and flexibility of local economies, but also unlocks the country's potential to socio-economic transformation (Miles, 2024; Moyo & Jeke, 2019; Sendawula et al., 2023). In an era of rapid change and fierce competition, it is more critical than ever to understand and improve the performance of small and medium-sized firms (SMEs) in order to achieve long-term growth and prosperity for all emerging economies (NPA, 2025).

For Uganda in particular, the SMEs in the manufacturing sector are seen as a strategic pathway in achieving the country's Vision 2040, National Planning Authority (NPA, 2020). However, despite their potential to transform the economy, businesses in the sector are mainly engaged in producing low value-added goods yet sold at expensive prices (Bakashaba et al., 2024; Dewi, 2023; Kouassi, 2024; NPA: 2020). Among the goods produced include; Foods and beverages, textiles, clothing and foot wear, sawmilling, paper and printing, chemicals, paint, soap and foam products, bricks and cement, metal products as well as packaging and labelling products (Birungi et al., 2024). This resonates well with Sserwanja et al. (2024) who noted that most products manufactured by Ugandan SMEs are rejected in international markets because of failure to meet the international standards. This has resulted into stagnation of their sales (Nuwagaba et al., 2021) arising from the insufficient demand (Sserunjogi et al., 2021). Thus creating a low competitive index of 3.7 (Goobi, 2021).

A review of extant literature shows that numerous scholars (see; Abedin et al., 2022; Banalieva et al., 2018; Chang, 2023; Duran et al., 2019; Eldomiaty et al., 2023; Lazzarini et al., 2021; Oliveira et al., 2024; Melianda et al., 2025) believe that the quality of institutions is undeniably critical in determining the competitive edge and subsequent performance of firms particularly in emerging economies. Besides, North (1991) also asserted that firm performance can be significantly affected by the quality of institutions in a given context. Relatedly, Erastus et al. (2014) and Kafourus et al. (2023) argued that the design and implementation of supportive institutions foster economic transactions at a lower cost which can enable SMEs access critical resources needed to manufacture cheaply that consequently lowers their manufacturing costs and enables them achieve a competitive advantage.

Therefore, the foregoing conversation demonstrated the relevance of institutional quality in fostering the performance of SMEs. Nonetheless, it is evident that less attention is given to the mediating role of competitive advantage in the relationship between institutional quality and SME performance in a developing context like Uganda. Yet Porter (1985) noted that much as institutional quality matters in determining performance, it alone is not a sufficient condition to promote the performance of SMEs most

especially in low-income countries. Following North's institutional theory (1990), the concept of promoting SMEs performance goes beyond the establishment of institutions and provision of incentive packages to SMEs as the nature of institutions can help or harm SME performance in a given context. To him, institutions that enable SMEs gain a competitive advantage are what matters most. Because they can reduce transaction costs and make economic activities more predictable. Thus, enabling SMEs offer superior value to customers which could be in form of lowering prices and providing unique products to customers that cannot be easily imitated by their rivals (Dinh & Ngo et al., 2021). Which necessitated the current study to be undertaken to examine the association between institutional quality and the performance of manufacturing SMEs mediated by competitive advantage.

Further still, most of existing studies have measured performance using both financial measures which involve measuring enterprise value in monetary terms like; Return on investment, profitability, market share (Kurtulmus et al., 2020) and non-financial measures which relates to enterprise performance that cannot be expressed in money value like customer acquisition and retention (Abaho et al., 2016), learning and growth (Sendawula et al., 2023), assets and personal wealth measures (kiyabo & Isaga). Hence, creating a gap of measuring performance in terms of sales growth, output growth and employment growth yet Calabrese et al. (2019) argued that the best way to measure performance of manufacturing SMEs is to use measures like output growth, employment growth and sales growth a gap which the current study sought to fill. This study is structured in seven sections for instance; 1. Introduction, 2. Literature review, 3. Methods, 4. Analyses, 5. Study results 6. Discussion, 7. Conclusion, Implications and areas for further research.

2.1 Theoretical foundation

This study is grounded in the institutional theory by North, (1990) in order to determine how institutional quality shapes the behavior and actions of manufacturing SMEs in a highly risky and uncertain business environment as they strive to boost their performance. North (1990) categorized institutions into formal and informal institutions. Whereby formal institutions are written policies, laws and regulations, including political rules, economic rules and contracts (Sahasranamam & Nandakumar, 2020). These formal institutions exhibit a hierarchy: from constitutions to statute and common laws, to specific bylaws and finally to individual contracts (Kafouros et al., 2022). On the other hand, informal institutions are codes of conduct, norms of behaviour and conventions emanating from a society's culture (Mondolo, 2019). These informal institutions coordinate repeated human interaction and more specifically consisting of: extensions, elaborations, and modifications of formal rules, socially sanctioned norms of behaviour, and internally enforced standards of conduct (Erastus et al., 2014). They play a significant role when formal rules are vague, fail to work or are completely absent.

North (1990) further posits that institutional quality encompasses the fundamental political, social and legal ground rules that establish the basis for production and distribution that organizations must conform to if they are to receive support and legitimacy from the government. So, it is believed that the viability and performance of SMEs typically depends on the quality of existing institutional matrix (Oliveira et al., 2024; Melianda et al., 2025). Following North's assertion, high quality institutions like reduced bureaucracy in attaining the necessary permits and licenses, low tax rates, flexible manufacturing regulations, enforcement of rule of law and ensuring transparency while manufacturing SMEs acquire the necessary resources needed for their manufacturing activities helps reduce the costs incurred during production and thus they are able to produce quality goods at low costs which are vital ingredients in achieving competitive advantage and subsequent firm performance (Ricardianto et al 2023). Gathungu and Bitange (2021) noted that competitive advantage is an organization's ability to develop or acquire a set of attributes (or execute actions) that allow it to outperform its competitors. And extant literature shows that it is a crucial determinant of superior firm performance (Bakashaba et al., 2024; Kiyabu & Isaga, 2020). This can be attained using various strategies like; cost leadership that allows a firm to charge lower prices than its competitors or differentiation that allows firms to offer product types and benefits that competitors cannot match (Porter, 10985).

Although some firms pursue a single strategy so as to attain a competitive edge over their rivals, in today's volatile and highly dynamic business environment, firms that pursue a combination of strategies achieve a better performance than those that pursue a single strategy (Gathungu & Bitange, 2021). By offering unique products, manufacturing SMEs will charge premium prices and also benefit from a non-imitation advantage whereas benefits accruing from cost advantage enables these firm to charge either a lower price or the same price with competitors for similar products yet earning more. Thus, such firms can achieve a competitive advantage by delivering value to consumers based on both product features and price. Therefore, high-quality institutions can facilitate better and less costly access to markets, resources including technology and talent that help firms in emerging economies manufacture innovative product that capture customer's attention (Wang et al., 2020).

2.2 Institutional quality and performance of manufacturing SMEs

Different scholars have defined institutional quality differently. For example: Eldomiaty et al. (2023) referred institutional quality to the effectiveness and efficiency of institutions for instance: governance structures, legal systems and regulatory frameworks in promoting economic growth and development in a given context. It can also mean a collection of regulations that are necessary to

establish a levelled and equitable business environment for all participants in an economy (Chew, 2021). However, in this case institutional quality is reflected in the way stakeholders including the government and its agencies, provide financial, non-financial and technical support to manufacturing SMEs to effectively carry out their activities (Urbano et al., 2019). For example, the nature of formal institutional like: the nature of written laws, the quality of government regulation, the existence of property rights, judicial independence and effectiveness, the efficacy of the legal system and execution of undue influence by government officials (Kafouros et al., 2022; North, 1991). According to Escandon-Barbosa and Salas-Paramo (2023), both formal and informal institutions determine the success and profitability of a firm. As a result, support from the government and its agencies allow firms to interpret policies and programmes correctly, thereby decreasing business environmental uncertainty.

Extant literature presents mixed findings on institutional quality and performance of SMEs. For example, Duran et al. (2019) established that performance of SMEs is contingent on the quality of local institutional conditions and that it is high when formal constraining institutions are less developed and suitable when informal enabling institutions are present. In the same vein, Marlon et al. (2019) confirmed that high quality formal institutions have a positive influences on internationalization because they provide learning, networking and intelligence about foreign markets while reducing costs. Yet, Audrestch et al. (2021) discovered that entrepreneurship can only develop in an environment where regulations and practices allow for a variety of choices and where a country's social, political and economic processes and procedures are not rigid. This flexibility creates a conducive environment for the SMEs to develop innovative products and attain their full growth potential. Similarly, scholars: (Chew et al., 2021; Pereira & More, 2016) posit that policy initiatives should focus on eliminating bottlenecks, reducing taxes for local manufacturing SMEs, flexing manufacturing regulations and ensuring transparency and accountability among public officials responsible for SMEs if they are to realise improved performance.

Nonetheless, the persistent stagnation of SMEs in many low-developed countries is linked to weak institutions support (Duran et al., 2019). This is in agreement with Bykova and Coates's (2020) investigation that established that the greater the economic freedom of a region, the higher the performance of their firms, proving that the firms performed better in the regions with high quality institutions. Therefore, enhanced institutional quality is beneficial not only in improving the efficiency of resource allocation but also in reducing the degree of corruption and bureaucracy. Hence, from a macroeconomic perspective, enhanced institutional quality boosts firm performance.

On a contrally, scholars like; (Banalieva et al., 2015; Chari & Banalieva, 2015) indicate that the quality of institutions has no profound effect on firm performance as efficient market mechanisms increase competition which leads to the redistribution of income rather than increasing income. In fact, Kafouros and Aliyev (2016) argue that, the association between institutional quality and performance is not uniform across countries. To them, improvements in institutions are not necessarily positively associated with firm performance as they can put some firms in a disadvantageous position. They further noted that high-quality institutions may reduce barriers to entry and oligopolistic practices thus decreasing the competitive advantage of some firms which greatly affects their performance. Therefore, existing literature widely acknowledges that institutional quality determines whether firms can access resources and knowledge to develop and realize their full growth potential or not (Marlon et al., 2019; Aliyev & Kafouros, 2023). Nevertheless, the debate on institutional quality and performance of SMEs is still on going, which created room for the current study to be conducted to validate existing findings using evidence from manufacturing SMEs in a Ugandan context where empirical studies are largely scanty.

Thus, we hypothesise that:

H1: Institutional quality positively affects performance of manufacturing SMEs in Uganda.

H2: Institutional quality positively affects competitive advantage of manufacturing SMEs in Uganda.

2.3 Competitive advantage and performance of manufacturing SMEs

Scholars view competitive advantage differently. For example, Kiyabo and Isaga (2020) describe it as an advantage one firm has over a competitor or group of competitors in a given market, strategic group, or industry. Whereas: Saputra et al. (2023) stated that competitive advantage enables a firm to operate in a more efficient or otherwise higher-quality manner in comparison to its rivals. Still, Javid (2023) refers competitive advantage to anything that distinguishes an organization or what it produces or markets from its contemporaries. Nevertheless, this study adapted Porter's (1985) conceptualization of competitive advantage that involves implementing strategies that are currently not being used by other firms in the same industry serving the same market that facilitates cost reduction and offer high quality products than that of competitors. Which enable SMEs to create a defensible position over their competitors. An implication that provision of superior products and continuous revamping of customer value propositions enhances customer satisfaction (Yaskun, 2023). This resonates well with Novitasari and Agustina (2022) assertion that competitive advantage has a positive effect on firm growth using evidence from Indonesian registered Companies. Despite the growing literature on competitive advantage and performance of SMEs, less is documented about manufacturing SMEs from a developing context like Uganda where empirical studies are largely unavailable. Therefore, we hypothesize that:

H3: Competitive advantage is significantly affects performance of manufacturing SMEs in Uganda.

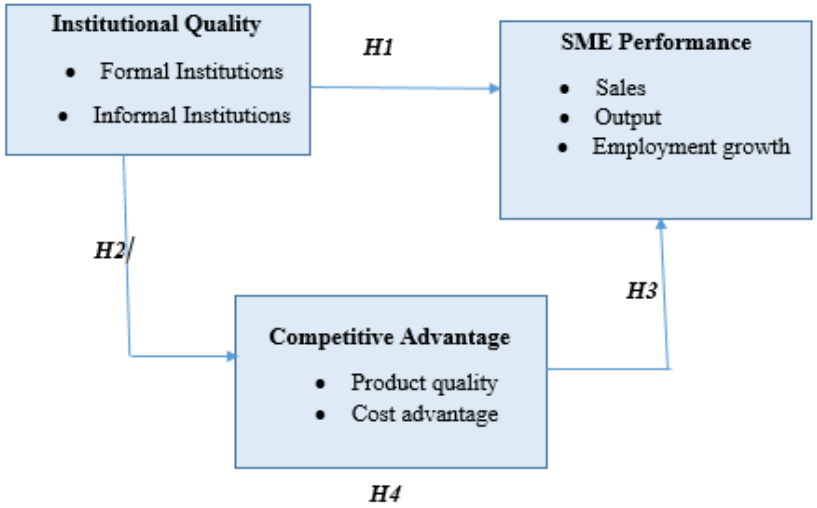
2.4 Mediating effect of competitive advantage

A review of existing literature shows that a number of scholars have interrogated the mediating effect of competitive advantage. For instance, Insee and Suttipun (2023) reported that competitive advantage positively mediates the relationship between research and development spending and private firms' performance in Thailand. Similarly, a study by Ricardianto et al. (2023) also revealed that competitive advantage mediates the relationship between enterprise risk management and business strategy on business performance of shipping companies in Indonesia. In addition, a study by Dewi (2023) established that competitive advantage positively mediates the relationship between CEO characteristics and brand image on the performance of food and beverage SMEs in Indonesia. Besides, Kiyabo and Isaga (2020) investigation revealed that competitive advantage partially mediates the relationship between entrepreneurial orientation and performance of SMEs in Tanzania.

Despite the foregoing debate that presents competitive advantage as a significant mediator, other scholars reported contradicting findings. In particular, Setyawati et al. (2017) reported that competitive advantage doesn't mediate the relationship between innovation and the performance of SMEs in Indonesia. This disagreement presents a need for further studies to examine the mediating effect of competitive advantage. A gap which the current study sought to fill by examining the mediating effect of competitive advantage in the relationship between institutional quality and the performance of manufacturing SMEs using evidence from Uganda as presented in figure 1. Though the debate is inconclusive, we hypothesize that;

H4: Competitive advantage positively mediates the relationship between institutional quality and performance of manufacturing SMEs in Uganda.

Figure 1: Conceptual model



Source: ***Adapted North (1990)***

3. Methods and design

3.1. Design, population and sample

The study is cross-sectional in nature and we used a quantitative research design for our investigation (Creswell & Creswell, 2018). The study population was 1,300 manufacturing SMEs from the membership of the Uganda Manufacturers' Association (UMA, 2023). From which a sample size of 330 was drawn using Cohen (2007). Out of the 330 self-administered questionnaires, a total of 274 questionnaires were received without errors, presenting a response rate of 83 percent and that was sufficient to address the research hypotheses.

3.2 Sampling procedure

In this study, proportionate stratified sampling technique was used to select the final respondents. Manufacturing SMEs were put into smaller groups known as strata based on shared features and characteristics. Whereby we grouped the strata according to their homogeneity in the nature of business that is; Food and beverages, Textiles, clothing and foot wear, Sawmilling, paper and printing, Chemicals, paint, soap and foam products, Bricks and cement, Metal products, Packaging and Branding (UMA, 2023). Afterwards, we applied simple random sampling to each stratum to select the final respondents (Saunders et al., 2019). Here, SMEs in each stratum were assigned unique numerical identifier codes. Then, generated random numbers electronically. After which, we selected the owners and managers of SMEs whose assigned numbers matched the generated random numbers as the final respondents for

our study. This helped us to ensure that every SME in a stratum stood an equal chance of being selected to participate (Crewell & Creswell, 2018).

3.3 Measurement and operationalization of the study variables

Performance of manufacturing SMEs is the dependent variable measured using; sales, output and employment growth (Calabrese et al., 2019). Institutional quality on the other hand is the independent variable measured using formal and informal institutions (WEF, 2013). As such, formal institutions captured data on business licensing and permits, tax administration, tax rates, corruption, manufacturing regulations and labour regulations while informal institutions captured society's perceptions of entrepreneurship, social norms, entrepreneurship culture and trust. Then, competitive advantage is the mediating variable measured using cost advantage and product quality (Porter, 1985).

3.4 Ethical Considerations

Since the study involved human subjects, ethical standards were greatly observed. For example: we obtained ethical clearance from Makerere University, College of Business and Management Science Research Ethics Committee (C0BAMS-REC-2023-5) and Uganda National Council of Science and Technology (UNCST) with research registration number; SS1993Es before embarking on data collection. More to note, we sought consent from both owners and managers of manufacturing SMEs before they could participate in the study by signing a written consent form.

3.5 Common Method Bias

We controlled for common method bias both procedurally and statistically to avoid false internal consistency. Procedurally, we gave clear instructions in the data collection instruments ensuring anonymity of respondents and that there was no wright and wrong answer as long as the response was honest (Podsakoff et al., 2023). Additionally, we avoided complex and ambiguous questions, kept the data collection instrument concise and also allowed the respondents enough time to respond to questionnaire items (Kock, 2021). We also choose owners and managers as our final respondents because they are believed to be knowledgeable about the activities around the enterprise (Podsakoff et al., 2003). This helped us to curb CMB that could arise from low cognitive ability and inexperience of the respondents. However, statistically, we used Harman's single factor test and we established that no single factor accounted for more than 50% of the total variance in all the variables. Hence the study was free from common method bias (Podsakoff et al., 2023).

3.6 Data collection instrument

We used structured Self-Administered Questionnaires (SAQs) to collect data from owners and managers of manufacturing SMEs following Asenahabi's (2019) assertion that a Self-administered questionnaires give respondents adequate time to give well thought out responses. The SAQs were made up of four sections. Section A consisted of items on enterprise characteristics and respondents' background data, Section B consisted of items on the independent Variable (institutional quality), Section C composed of items on the dependent variable (performance) and section D had items on mediating variable (competitive advantage). Furthermore, the questionnaire items on institutional quality were anchored on a 7- point scale where by 1 represents no obstacle, 2–minor obstacle, 3–moderate obstacle, 4–major obstacle, 5–severe obstacle, 6–very severe obstacle, and 7–not applicable, which was adopted from WEF (2013). On competitive advantage and performance were anchored on a 5-point Likert scale ranging from strongly disagree (1), disagree (2), neither agree nor disagree (3), agree (4) and strongly agree (5). The 5-point Likert-scale was adopted as the most appropriate scale for data collection because it helps to measure perceptions and attitudes of the respondents which help to inform the study. In addition, a 5-point Likert scale provides detailed information necessary for decision making, promotes accuracy in terms of reliability, validity and easy to use (Crewell & Creswell, 2018).

3.7 Pilot studies

We piloted the data collection tool on a small group of 20 owners and managers of SMEs with similar characteristics to the final respondents (Saunders et al., 2019). The purpose of the pretesting was to ensure that items in the tool bear the same meaning to all respondents (Creswell & Creswell, 2023). We used the findings from the pilot studies to make minor changes and adjustments in the questionnaire. For example, some questions that appeared vague were clarified, double-barreled questions were avoided and questions that looked similar were eliminated, retaining only those that were relevant and could help address the research objectives. Some of these questions pertained to measures of performance.

3.8 Reliability and Validity

Reliability was determined using Cronbach's Alpha co-efficient, which were above 0.75 for all the constructs and variables an indicator of good internal consistency. For content validity, we engaged experts in the field of entrepreneurship and policymakers

to assess the relevance, wording and correctness of items in the instrument (Cohen et al., 2007). Whereby Content Validity Index (CVI) was computed and was 0.87 rendering the instrument valid (Amin, 2005). Also the composite reliability values were between 0.763 and 0.925 and thus above 0.7 for all the variables. Convergent validity which demonstrates the degree to which a measure correlates with other measures of the same construct was checked for using Average Variance Extracted (AVE) that should be at least 0.50 or higher (Hair et al., 2021). This was achieved for all the constructs of the latent variables, whose AVE values range from 0.508 to 0.726. Multicollinearity was checked for using Variance Inflation Factor. The rule of the thumb is that the VIF values should be below 5.00 for us to say that there are no issues of multicollinearity. For this study, the VIF values for the study variables were: institutional quality (1.271), competitive advantage (1.611) and performance (1.897). Hence, they all meet the recommended threshold therefore there are no issues of multicollinearity (Hair et al., 2019) as presented in table i.

Table I: Reliability and validity

	Cronbach's Alpha	**CR**	**AVE**	**VIF**
Formal Institutions	.798	.831	.711	1.219
Informal Institutions	.792	.763	.726	1.229
Institutional quality	**.775**	**.801**	**.618**	**1.271**
Cost Advantage	.908	.926	.612	1.845
Product Quality	.791	.857	.519	1.376
Competitive Advantage	**.850**	**.892**	**.566**	**1.611**
Employment Growth	.880	.905	.544	1.709
Output Growth	.897	.916	.548	2.036
Sales Growth	.911	.925	.508	1.946
SME Performance	**.896**	**.915**	**.533**	**1.897**

Source: Primary data

3.9 Discriminant validity

Discriminant validity was assessed for using Heterotrait Monotrait (HTMT) ratio to see whether constructs that theoretically should not be related are actually unrelated. HTMT should be less than 0.900 for us to conclude that the items we have are unique to those of other variables (Hair et al., 2021). A close look at table ii, clearly shows that all the constructs for institutional quality, competitive advantage, and performance are unique and distinct from each other.

Table II: Heterotrait Monotrait (HTMT) ratios

Institutional quality	**FI**	**IN**	
Formal Institutions [FI]			
Informal Institutions [IN]	.555		
Competitive Advantage	**CA**	**PQ**	
Cost Advantage [CA]			
Product Quality [PQ]	.723		
SME Performance	**EG**	**OG**	**SG**
Employment Growth [EG]			
Output Growth [OG]	.686		
Sales Growth [SG]	.485	.646	

Source: Primary data.

4.0 DATA ANALYSIS

We entered the collected data in SPSS software Version 23, screened and cleaned for outliers, missing values and out of range values. After which, we used Smart PLS and Structural Equation Modelling to analyse it and determine the relationships between the study variables (Hair et al., 2021).

4.1 Respondent characteristics

Our results indicate that most of the respondents were managers (53%) and the directors were (47%). An indicator that most SMEs hire experts to manage their business affairs so as to achieve their business objectives and grow their businesses. The majority of the respondents were males (52%) whereas females were 48%. An indicator that much as the majority of people engaged in business are men, the number of women joining businesses is also steadily increasing as presented in table iii. This resonates well with UBOS statistical Abstract (UBOS, 2023) that shows that the number of men engaged in business is relatively higher than that of women. Further still, it is clearly indicated that the majority of the respondents had attained a University Diploma 33% followed by those with a University degree. This implies that the study respondents were able to understand the questionnaire items and thus gave appropriate responses. This was also supported by Alinda et al. (2023) who established that most Ugandan business owners and have attained a significant level of education as presented in table iii;

Table III: Respondent characteristics

Respondents' title	*Count*	*Percent*
Director	131	47
Manager	143	53
Gender	*Count*	*Percent*
Male	144	52
Female	130	48
Educational level	*Count*	*Percent*
Secondary	50	18
Vocational training	47	17
University Education – Diploma	91	33
University Education – Degree	72	25
Post-graduate – Masters	14	7
		N=274

4.2 Firm Characteristics

When it comes to firm characteristics, small enterprises were more 158 (58%) compared to medium enterprises that were 116 (42%). This is also supported by prior scholars like; Alinda et al. (2023) who noted that most Ugandan business are small. Similarly, UBOS statistical abstract also shows that the majority of Ugandan businesses are small (UBOS, 2023) as presented in table iv;

Table IV: Firm Characteristics, Total N = 274 SMEs

Total Assets	*Count*	*Percent*
Between 10 to 100 millions	158	57.7
Between 100 million to 360 millions	116	42.3

Source: Primary data

5. 0 STUDY RESULTS

5.1 Institutional quality measurement model

We developed measurement models basing on a thorough review of existing literature and theories. As presented in the theoretical and conceptual framework, our independent variable is institutional quality measured using formal institutions and informal institutions (WEF, 2013) as presented in Figure 2 and table v. And it is clearly indicated that all the dimensions have statistically significant estimates. An indicator that they all play a significant role in explaining institutional quality with formal institutions (β=0.606, $p < 0.000$) and informal institutions (β=0.454, $p < 0.000$). Therefore, these two components together explain 80.7% of the variance in institutional quality variable.

In addition, table v provides an additional illustration of bootstrapped estimates for the institutional quality measurement model. However, it is evident that formal institutions account for the greatest share of variance in institutional quality than informal institutions

Figure 2: Bootstrapped Estimates for measurement Model for Institutional quality

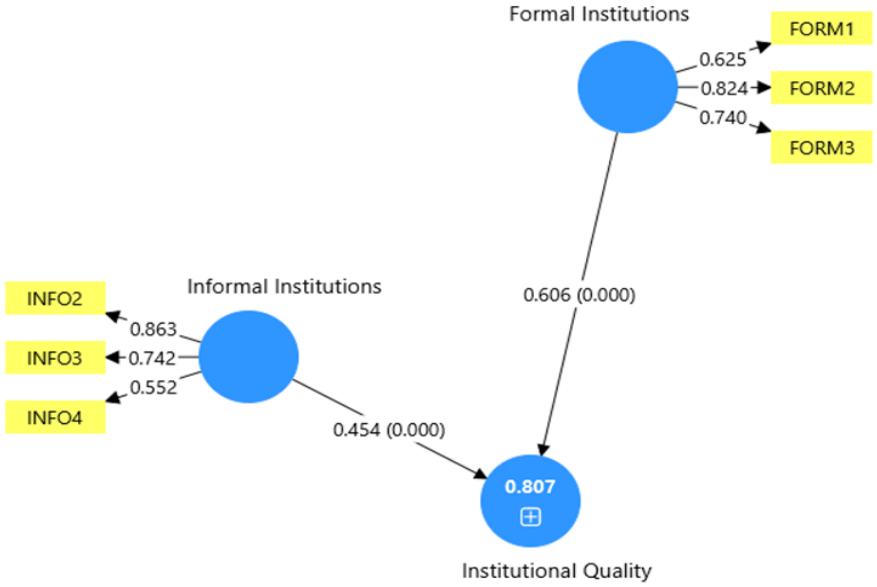


Table V: Bootstrapped Estimates for measurement Model for Institutional quality

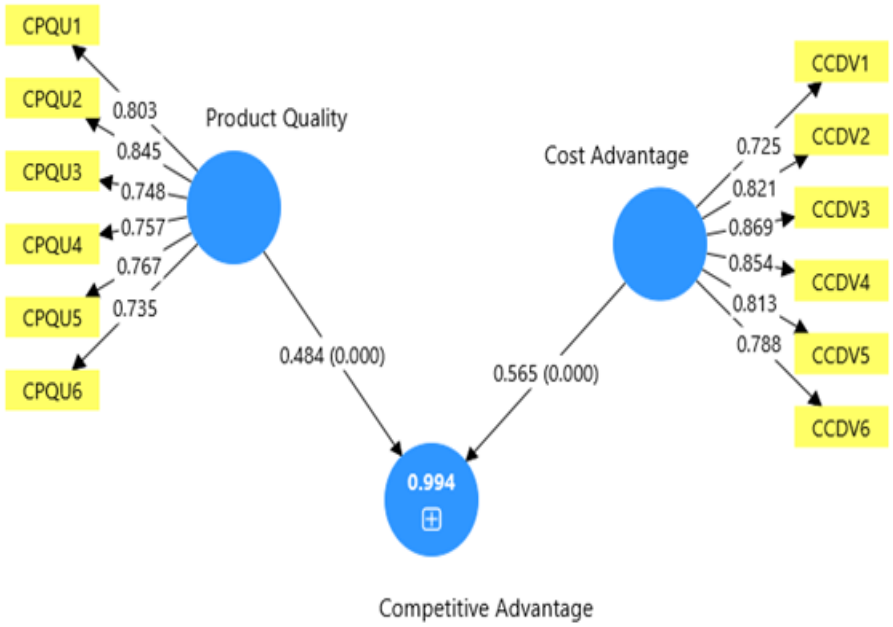
	B	Std. Error	T values	p values
Formal Institutions ▬▶ Institutional quality	.606	.030	20.248	.000
Informal Institutions ▬▶ Institutional quality	.454	.035	13.022	.000

Source: Primary data

5.2 Competitive advantage measurement model

Competitive advantage is the mediating variable measured by product quality and cost advantage (Porter, 1985). Figure 3 and table vi indicate that these two measures have statistically significant estimates and thus all play a significant role in explaining competitive advantage whereby product quality values are (β=0.484, $p < 0.000$) and cost advantage values are (β=0.565, $p < 0.000$). These two components together contribute 0.994 of the variation in competitive advantage. Additionally, table vi provides an additional illustration of bootstrapped estimates for competitive advantage measurement model. It clearly shows that cost advantage account for the greatest share of variance in competitive advantage than product quality.

Figure 3: Competitive advantage measurement model



Source: Primary data

Table VI: Bootstrapped Estimates for measurement Model

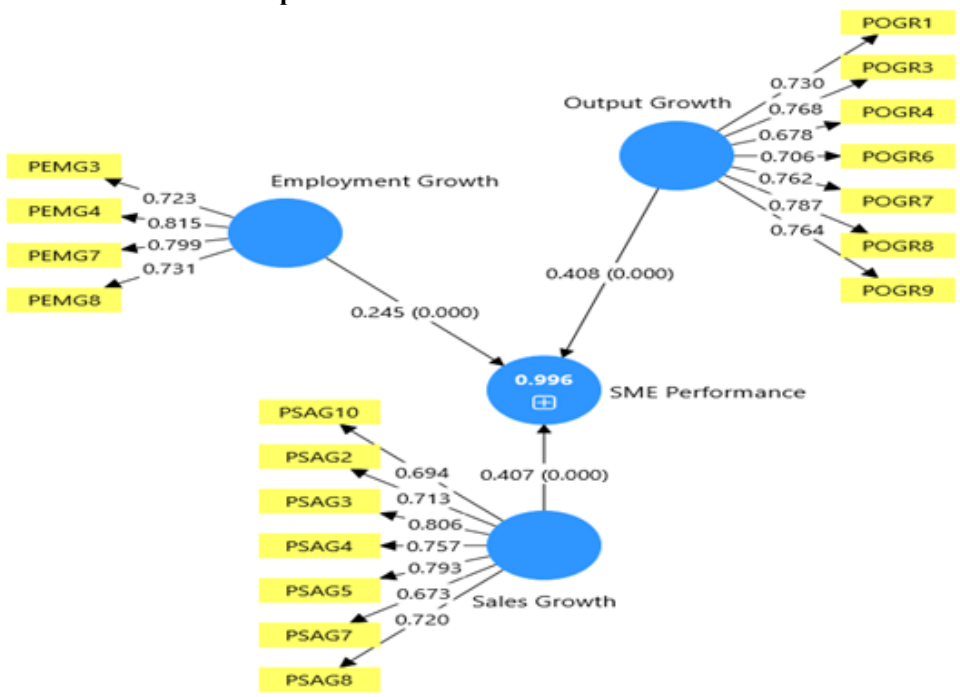
	B	Std. Error	T values	p values
Cost Advantage ⟶ Competitive Advantage	.565	.013	42.974	.000
Product Quality ⟶ Competitive Advantage	.484	.013	36.762	.000

Source: Primary data

5.3: Measurement model for performance of manufacturing SMEs.

Performance of manufacturing SMEs is the dependent variable of this study. Measured using sales growth, output growth and employment growth. The indicators loaded well on their respective dimensions with high factor loadings which were above the recommended threshold of 0,400 (Hair et al., 2019). For example loadings; the four indicators of employment growth range from 0.723 to 0.815, output had seven indicators ranging from 0.706 to 0.787 and the seven indicators of sales range from 0.673 to 0.806 However, among the three dimensions of performance, output has the greatest share of variance in the variable (β=0.408, p < 0.000), followed by sales (β=0.407, p < 0.000) and then employment growth (β=0.245, p < 0.000) as presented in figure 4.

Figure 4: Measurement model for performance



Source: Primary data

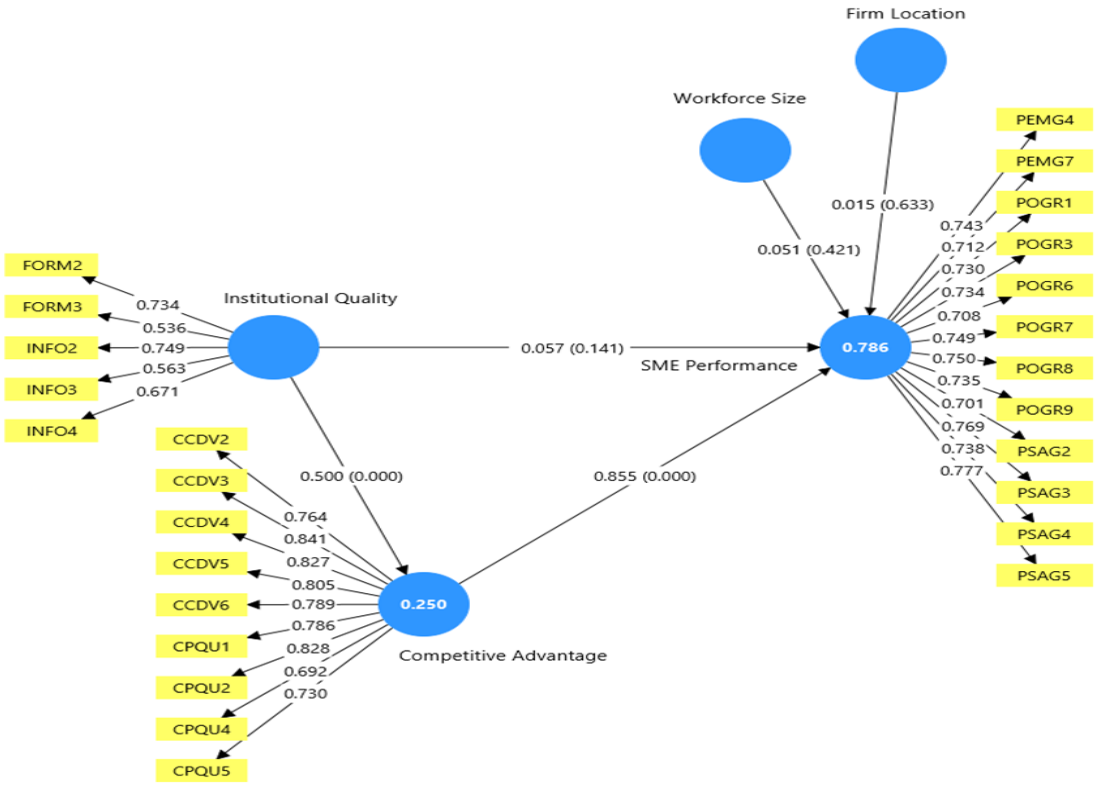
5.4 Hypothesis testing Using structural models

We performed path analysis with the assistance of smart PLS and Structural Equation Modelling to ascertain the efffect of institutional quality on Performance of manufacturing SMEs and the effect of competitive advantage on performance of manufacturing SMEs. In addition, we used bootstrapping to determine the mediating role of competitive advantage on the association between institutional quality and the performance of SMEs. Therefore, we used path coefficients and statistics to determine the nature of the relationships between the study variables. H1 predicted that a positive relationship exists between institutional quality and performance of manufacturing SMEs. However, the results show that institutional quality has an insignificant influence on the performance of manufacturing SMEs (β = 0.057, p< 0.141). Therefore, a positive change in institutional quality does not translate into a positive change in the performance of manufacturing SMEs and as such, H1 was not supported. For H2, study results show that institutional quality is positively and significantly associated with competitive advantage of manufacturing SMEs (β = 0.500, p< 0.000). Thus, a positive change in institutional quality is associated with a positive change in competitive advantage of manufacturing SMEs and thus, H2 was supported as presented in table 3.

Regarding **H3,** study results show that competitive advantage has a positive and statistically significant association with the performance of manufacturing SMEs and thus, the hypothesis was supported (β = 0.853, p< 0.000). An indicator that if manufacturing SMEs gain a competitive advantage in form of reduced manufacturing and transactional costs, they will manufacture quality products at reduced prices which translates into improved performance in terms of increased sales, output and creation of more jobs.

H4 tested the mediating effect of competitive advantage in the relationship between institutional quality and performance of manufacturing SMEs in Uganda. The findings indicate that competitive advantage plays a full mediating role on the association between institutional quality and performance of manufacturing SMEs in Uganda. The indirect effects are positive and significant (β = 0.428, p< 0.000) and equally the total effects (β = 0.485, p<.000). This means that developing high quality institutions alone is not a sufficient condition to enhance the performance of manufacturing SMEs in Uganda. Rather, what is required are institutions that enable SMEs to gain a competitive advantage in terms of reduced manufacturing and transaction costs. Which can consequently enable manufacturing SMEs produce quality goods and sell at reduced prices yet still make high profits than their rivals as presented in figure 5 and table 7

Figure 5: Structural Model paths



Source: Primary data

Table 6: Structural Model Estimates

Direct Effects	**B**	**Se**	**T *values***	***p values***	**95% *bcci***
Firm Location ⟶ SME Performance	.015	.032	.477	.633	-0.046,0.078
Workforce Size ⟶ SME Performance	.051	.063	.804	.421	-0.172,0.069
Institutional quality ⟶ Competitive Advantage	.500	.038	13.151	.000	0.418,0.566
Institutional quality ⟶ SME Performance	.057	.039	1.473	.141	-0.130,0.020
Competitive Advantage ⟶ SME Performance	.855	.027	31.394	.000	0.798,0.906
Indirect Effects					
Institutional quality ⟶ Competitive Advantage ⟶ SME Performance	.428	.036	11.881	.000	0.356,0.494
Total Effects					
Institutional quality ⟶ SME Performance	.485	.038	12.748	.000	0.398,0.549

Source: Primary data

6. DISCUSSION

Our study examined the influence of institutional quality on the performance of manufacturing SMEs and also determined the mediating role of competitive advantage on the relationship between the study variables. In line with **H1**, our results indicate that institutional quality is not a statistically significant predictor of performance of manufacturing SMEs. This implies that the quality

of institutions in Uganda do not affect the performance of manufacturing SMEs irrespective of the firm location and workforce experience. These study findings are in line with the findings of prior scholars like: (Aliyev & Kafouros, 2023; Banalieva et al., 2015; Chari & Banalieva, 2015) whose findings indicate that the quality of institutions has no profound effect on firm performance. These scholars argue that efficient market mechanisms increase competition which leads to the redistribution of income rather than increasing income.

Similarly, the study findings are in agreement with findings of scholars like; (Audretsch et al ., 2021; Biru et al ., 2023; Eldomiaty et al., 2023) who posited that development of institutions alone is not a sufficient condition to enhance the performance of SMEs. Indeed the findings are in line with the institutional theory by North (1990) that postulates development of both formal and informal institutions alone cannot enhance firm performance.

Furthermore, H2 revealed that a positive relationship exists between institutional quality and competitive advantage. This implies that putting in place high quality institutions for example: institutions that reduce the bureaucracies in obtaining the permits and licenses required of the manufacturing SMEs will reduce on time wastage and loss of money. In addition, reducing on the high tax rates, curbing the double taxation and fighting corruption as well as increasing transparency in obtaining the necessary resources will make it easy for manufacturing SMEs to access the resources they need to manufacture at reduced prices. This will enable them incur less costs in their manufacturing activities. Making it easy for such firms to innovate and produce unique quality products which cannot be easily imitated by their rivals yet sold at premium prices (Porter, 1985). In addition, manufacturing SMEs can still benefit from the low manufacturing costs and produce similar products like those of the competitors but sell at a lower price than what their competitors charge though still make a higher profit. Doing so will not only enable Uganda's manufacturing SMEs increase their market share by charging lower prices but also increase profitability by offering quality products. This is in agreement with previous scholars: (Carney et al., 2019; Chew, 2021; Wang et al., 2020) who contend that high-quality institutions can facilitate better and less costly access to resources like; technology, power, water, internet and transport costs that consequently lowers manufacturing costs leading to a competitive advantage.

Regarding **H3,** the study established that competitive advantage in terms of cost advantage and product quality is positively and significantly associated with performance of manufacturing SMEs. This means that when manufacturing SMEs can boost their performance if they improve on the quality of goods produced and charge competitive prices as well. Specifically, the study findings show that owners and managers of manufacturing SMEs need to develop and implement measures that reduce the cost of business operations for instance buying in bulk can help such firms get discounts from suppliers and large scale production can enable manufacturing SMEs enjoy economies of scale that are vital in offering high value to customers at affordable prices. In addition, employing efficient technology during manufacturing cuts the costs incurred while investing in research and development helps manufacturing SMEs make innovative products that differentiate them from competitors. This will help them attract and retain customers which will consequently boost their performance. Our findings are in agreement with; (Dewi, 2023; Novitasari & Agustina, 2022) who content that when SMEs offer high quality products at reasonable prices, they can attract new customers and retain both the old and news as well which boosts performance. The agreement of the findings could be due to the fact that both the current study and prior studies were carried out in emerging economies where by the majority of the people are low income earners therefore, much as they want goods that are relatively of good quality, they consider price as a key factor as well given their nature of income.

Regarding **H4**, the findings confirm that competitive advantage fully mediates the relationship between institutional quality and performance of manufacturing SMEs. This implies that in the absence of competitive advantage, the institutional quality alone is insignificant in providing supportive mechanisms needed to boost the performance of manufacturing SMEs. Certainly, the government needs to put in place rules, regulations and programmes that make it easy for such enterprises to access critical resources needed at low costs for them to produce quality products at reasonable prices which acts as a conduit for improved performance. This is in agreement with Kafouros et al. (2022) assertion that firms that operate under well-developed and supportive institutions incur less costs in manufacturing due to low levels of corruption, less rigid manufacturing regulations and low taxes which reduce on the costs incurred in the production processes. Relatedly, the study findings conquer with Miles (2024) who argued that entrepreneurship can only develop in an environment where regulation and practices permit a variety of choices and where a country's social, political and economic processes and procedures are not rigid. This enables manufacturing SMEs gain a competitive advantage over their counterparts and consequently improve their performance. These findings perhaps agree with Kaforous et al. (2022) because all studies were done in contexts of developing countries with a thin line in their institutional arrangements. As it is believed that most emerging economies are characterised with poor and low quality institutions that keep transitioning (Eldomiaty et al., 2023). The study findings also conquer with institutional theory by North (1990) that postulates that the quality of institutions can only be able to cause a significant improvement in firm performance if such institutions can enable firms achieve a competitive advantage.

7. SUMMARY AND CONCLUSION

The study aim was to establish the direct influence of institutional quality on performance of manufacturing SMEs and, to determine the mediating role of competitive advantage in the relationship between institutional quality and performance of manufacturing SMEs in Uganda. This was achieved through a cross-sectional quantitative research study that revealed that institutional quality alone is not enough to improve the performance of manufacturing SMEs. This implies that the current formal and informal rules, regulations and policies in the country have not created a conducive environment for manufacturing SMEs to register a significant improvement in their performance. It was further established that institutions can only enable manufacturing SMEs realize improved performance if they enable such firms gain a competitive advantage. The government and policy makers therefore, need to reduce the bureaucracies in obtaining the permits and licenses required by the manufacturing SMEs, which will reduce on time wastage and loss of money, reduce on the high tax rates, curb double taxation, fight corruption and implement flexible manufacturing regulations. Putting all that in place will certainly enable manufacturing SMEs obtain all the necessary resources without incurring extra costs. Which will motivate such firms increase their manufacturing output brought about by the increased sale of differentiated quality products that are hard to imitate by the rivals and also sale of products with similar quality like that of competitors either at a lower or same price like the competitors yet make higher profits.

7.2. Theoretical, practical and policy implication

Theoretically, the study contributes to the existing body of knowledge on the direct influence of institutional quality on performance of manufacturing SMEs in Uganda. In addition, the study provides initial empirical evidence on the mediating role of competitive advantage in the relationship between the study variables that had received less attention in extant literature.

Policy makers especially the Ministry of Trade Industries and Cooperatives (MTIC) should design and implement high quality institutions that enable manufacturing SMEs gain a competitive advantage and be able to contribute to the country's development agenda. Specifically, the government should enact policies that are supportive in nature for instance; reduce tax rates, reduce in bureaucracies to attaining necessary manufacturing permits, reduce corruption in accessing critical resources, reduce power tariffs and tighten the laws on product quality and measurement weights. Doing so will enable manufacturing SMEs incur less costs in their manufacturing activities and gain a competitive advantage which will translate into increased performance in terms of increased sales, increased manufacturing output and creation of more jobs.

Managers and owners of manufacturing SMEs should manufacture quality products that; satisfy specific customer needs, are easy to use, versatile, unique and widely accessible. In addition, manufacturing SMEs should use cost effective means of production, exercise tight cost control measures in the production process, employ modern technology in the production processes and produce on large scale with the goal of enjoying economies of scale. This will enable them to offer high value to the customers at affordable prices which will boost performance.

7.3. Limitations and research direction

Despite the significant contribution of this study, it also presents some limitations and opportunities for future researchers. First, the study explored performance of manufacturing SMEs with a focus on output growth, sales and employment growth. As such, future studies can investigate other financial and non-financial performance indicators as well as environmental and social aspects of the SMEs. The study further focused on the contribution of the competitive advantage and institutional quality as global variables in predicting performance of manufacturing SMEs. It is therefore recommended that future studies should investigate how dimensions of the study variables explain the performance of manufacturing SMEs. Moreover, the study employed quantitative research design, future researchers can employ purely qualitative or take on a mixed approach to validate and strengthen the current results. This study was also cross-sectional in nature so future researchers can monitor the effect of institutional quality on performance of manufacturing SMEs over time. Lastly, this study focused on only manufacturing SMEs, future researchers focus on other sectors like trade, commerce or services.

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