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Social Capital, Firm Performance, Operating Business Environment

Cover Page Footnote

I thank my co-authors for their collaboration and guidance whose outcome is this manuscript

Social Capital, Operating Business Environment and Performance of Manufacturing MSME's in Nairobi City County, Kenya

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Abstract: Globally the manufacturing sector is recognized as a key driver of economic development. Kenya's manufacturing sector is no exception with a contribution of 10% to gross domestic product from 2008 to 2014. In the 2017-2019 time period, however, the contribution deteriorated to 8.4%, 7.7% and 7.54% respectively, suggesting a possible premature de-industrialization. If this trend persists, Kenya's goal of achieving a robust manufacturing sector through the Big Four Agenda may not be achieved. While the government has implemented strategies and interventions to boost the sector, these do not seem to reverse the trend. Against this backdrop, we explore how social capital as a readily available resource can be tapped to enhance performance among the micro, small and medium manufacturing enterprises. The study employs relevant theories namely social capital theory, resource-based view, and dynamic capability, among others. The sample includes 384 ventures from a population of 61,931 licensed manufacturing businesses operating within Nairobi City County. Findings indicate that social capital positively and significantly predicted the performance of micro, small and medium manufacturing enterprises. No moderating effect was found in the link between social capital, operating environment and performance. The study recommends that management and policy interventions harness more and diverse networks to enable firms better manage changes within the operating environment without adverse impact on performance.

Keywords: Social Capital, Firm Performance, Operating Business Environment

1. Introduction

The Organization for Economic Co-operation and Development (OECD), 2017 affirms that the progression of Micro, Small and Medium Enterprises (MSMEs) is directly linked to the economic growth and development of countries. According to Ayyagari, Demirgüç-Kunt and Maksimovic (2011), over 95% of the businesses worldwide are MSMEs. In countries such as the United States of America (USA), India, China, Malaysia and Taiwan among others, MSMEs account for 60-70% of employment openings, with a significant contribution above 50% to the GDP (OECD, 2017).

Among developing economies, MSMEs contribute up to 45% of employment, with a critical 33% input to the countries' GDP (OECD, 2017a). The contribution to GDP of Ghana and Nigeria's MSMEs is 49% and 48% respectively (UNIDO, 2018; PriceWaterhouseCoopers, PWC, 2020). Kenyan MSMEs employ 6.4million people (84% of the workforce), and contribute 34% to Kenya's GDP (Boit & Maru, 2013, in Mosonik, Maru & Komen, 2021). This is corroborated by the Micro and Small Enterprise Authority (MSEA); MSMEs account for 85% of Kenya's workforce (MSEA, 2018). It is thus evident that the performance of MSME sector is critical to economic expansion (United Nations Development Program (UNDP), 2018; OECD, 2017).

Despite this critical role coupled with various stakeholder interventions, however, MSMEs continually face a myriad of challenges, leading to mass closures. In Africa, as in other continents, MSMEs have been recording poor performance. In Congo, the highest number of MSMEs became bankrupt due to the looting in 1993 and 1996. In Equatorial Guinea, Chad and Gabon, the supremacy of oil slackened the performance of non-oil businesses. A sum of 2.21 million Kenyan MSMEs wound up between 2011 and 2016 (Kenya National Bureau of Statistics, KNBS, 2018), with Kenya ranked position 56 on ease of running a business (Ease of Doing Business 2020).

To address the challenge of failure, MSMEs that exploit social capital to achieve organizational innovation would remain competitive. Bhagavatula, Elfring, Van Tilburg, and Van De Bunt (2010) proposed that MSMEs leverage on social capital to access resources that would catalyze management of the firm's uncertainties. Competitive advantage achieved through social capital then becomes a firm stronghold towards performance improvement (Bhagavatula *et al.*, 2010).

1.1 Manufacturing MSMEs in Nairobi City County, Kenya

Informal businesses are a major source of employment and livelihood for poor households (Afande, 2015). The Kenyan Government acknowledges the critical role of MSMEs to the economy (Mutuku, 2016); more so owing to the number of jobs they have created post independence, subsequently catalyzing poverty reduction. In addition,

MSMEs are a key source of invention of services and goods, as well as entrepreneurial skills (Swezey & McConaghy, 2011).

Kenya ranks position 56 and scores 73.2 (Ease of Doing Business 2020). The 7.4 million MSMEs within Kenya comprise about 80% of Kenyan enterprises, jointly employ about 14.9 million persons and contribute about a third of Kenya's GDP (Krishnan, Were, & TeVelde, 2019). Of these, over eighty five percent of the MSMEs fall within the informal sector (*Jua Kali*) because they are not licensed. Annually, approximately 400,000 MSMEs flop; with about 90% of start-ups winding up before their second anniversary. Based on these trends, it has emerged that MSMEs in Kenya easily take a downward rather than upward curve from the onset, posing a fundamental development challenge for the MSME sector in this economy.

The entrepreneurial environment in Kenya, as described by Bula (2012) in the article evolution of and theories of entrepreneurship, is a free market economy with highly individualistic citizens. This sector could thus heavily benefit from Schumpeter's approach. Kenya's MSMEs are classified into three, namely the micro enterprises, small enterprises as well as medium enterprises, all of which may be owner-managed or run by employed managers.

The micro enterprise comprises of ventures with 10 or less employees, and the small enterprises comprise of firms having between 10 and 49 workers. Medium enterprises comprise of 50 to 99 workers. Nairobi City County is the third smallest yet the most populous of the 47 counties. For this study, the focus is on the micro, small and medium manufacturing ventures within Nairobi City County.

Nairobi City County is one among 47 counties in Kenya, and is also the Capital City of Kenya. Nairobi City County is the third smallest yet the most populous of the 47 counties. Nairobi City County was founded in 2013 from the former Nairobi province, upon conversion of Kenya's 8 provinces into 47 counties. Nairobi hosts the largest concentration of businesses as compared to the other counties, with most of the ventures being situated within the central business district, and many more around the outskirts (Kenya National Bureau of Statistics (KNBS), 2018).

Enterprises found in Nairobi City County range from very informal to highly formal ventures namely small enterprises, sole proprietorships and partnerships, to highly formal local and multi-national SMEs. In Nairobi City County, most MSMEs are categorized as manufacturing, service provision and construction (Kenya National Bureau of Statistics, 2018). This study focuses on the micro, small and medium manufacturing businesses within Nairobi City County.

The more industrialized manufacturing businesses firms are mainly located in Nairobi's industrial area, Starehe and Kariobangi sub-counties among other locations. Most of the manufacturing MSMEs in Nairobi City County have limited numbers of steady employees, often utilize dense hand tools and involve very manual manufacturing processes. These low end MSMEs are highly flexible, quite pragmatic in their

productions, and swiftly replicate cheaper versions of functional items seen on catalogues of the more established firms both local and international. They are known to respond almost immediately to market needs, in line with emerging trends.

According to Kithusi (2015), there are many similarities between the operations and challenges that face manufacturing MSMEs in Nairobi City County, and those operating in other developing economies such as Tanzania (Mhede, 2012), Ghana (Emmanuel, 2012) and India (Chakravarty & Munagala, 2013). These play a significant role in the economies of the respective economies due to their large numbers and distribution across the capitals. They are known to create competitive pressure in the marketplace, thereby enhancing the value of goods. They further help in poverty eradication, creation of job opportunities and serve as a major source of innovation (Wanjoi, 2012).

2.0 Review of Literature

2.1 Theoretical Review

Theories provide major insights and thus enhance the significance of research (Kawulich, 2009). Resource Based View (RBV), organizational learning theory, and dynamic capabilities theory were found applicable in this research.

2.1.1 Resource Based View Theory

Based on resources and capabilities endowed to firms, it was proposed by Penrose (1959); and thereafter advanced by Wernerfelt (1984) and Hart (1995). Model was later advanced by Barney (1986, 1991 and 1997), Barney (2006), Sanchez (2008) and Robinson (2008), all who emphasized resources and internal capabilities as the basis of competitive advantage among firms. Firms must therefore strive to tap these internal resources to achieve a competitive edge, rather than rely on external factors which are often beyond the firm's control (Starik & Kanashiro, 2013). Particularly, RBV points out social capital (referred to as interpersonal resource and capabilities in the theory) as a contributor to organizational competitive advantage.

2.1.2 Dynamic Capabilities View Theory

This hypothesis, developed by Teece, Pisano and Shuen (1997), sought to compliment the resource based view theory which stipulated that the competitive edge of a venture is determined by specific firm resources. Teece, Pisano and Shuen (1997), in enhancing RBV, argued that the dynamic capabilities of a firm reflect its capacity to attain new ways of realizing a competitive edge, in spite of path dependences and core inflexibilities in the technical and organizational processes.

The key objective of dynamic capabilities is to derive a competitive advantage that is sustainable and yields improved performance (Cepeda & Vera, 2007). The dynamic capabilities thus respond to environmental changes through generation, development, and accumulation of organizational resources requisite for an enterprise to adopt to the changing environment yet remain competitive.

2.1.4 Organizational Learning Theory

Duncan and Weiss (1979), the proponents, posit that for a firm to be competitive in an environment that is changing, the venture must change their strategy and actions to attain their objectives. The theory further asserts that information within an organization can only be traced when it's properly stored to enable easy retrieval and communication and later used in making goals of the firm that it becomes organizational learning (Cha, Pingry & Thatcher, 2008).

The ultimate outcome of the learning process is adaptation (Serenko, Bontis & Hardie, 2007), endorsing accountable risk taking, being open to new tactics and perceiving staff faults as possible bases of new inventions (Marquardt, 2011). This theory therefore informs the operating business environment variable of the study.

2.2 Empirical Review

Earlier studies that focused on social capital and firm performance include Kaua and Namusonge (2015) who focused on Social Capital in manufacturing small and medium enterprises within the manufacturing top 100 firms, and Oke (2013) and Obiero, Njeru and Muriithi (2018) who focused on the effect of social networks on the growth of enterprises among women owned ventures. Kiprotich (2014) also assessed social capital and performance of firms. Clopton (2011) analyzed social capital and team performance among undergraduate athletes across 23 universities within the USA.

Various scholars, in their studies on social capital, have explored one, two or all three of the aspects of social capital namely relational, cognitive and structural social capital. Mahmood and Pratono (2014), and Pratono, Saputra and Pudjibudojo (2016), studied social capital and the firms' operating business environment. Obiero, Njeru and Muriithi (2018) studied social network diversity among associates. Focusing on cognitive, structural, and relational social capital and its effect on performance among micro-enterprises, Muniady *et al.* (2015) and Carey, Lawson and Krause (2011) sought to explore the relationship.

Among the studies that have explored the relationship between relational social capital and firm performance include Zhou (2017), Kim and Shim (2018), Liu (2017), Sani, Mohd-Khan and Noor (2019), all whose findings affirmed that relational social capital had an effect on firm performance. The research findings concur with Tan, Sutanto and Tan (2015), Jayawarna, Jones, and Macpherson (2011), and Pinho (2013), Chollet, Géraudel and Mothe (2014), Zhou (2017), and Jayawarna, Jones, and

Macpherson (2011), all of whose outcomes displayed that relational social capital had a substantial impact on performance of enterprises.

Chen, Fu, Wang, Tsai and Su (2018) and Bratkovic and Antoncic (2016) studies used secondary data to carry our similar studies. However, findings of a study by Rowley, Behrens, and Krackhardt (2000) indicated that there was no positive effect of social capital on entrepreneurial performance. Zhang, Zhang and Song (2019) findings also indicated there was noteworthy effect of relational social capital on sustainable organizational performance.

Some studies on the relationship between structural social capital and venture performance include Carrión, Izquierdo and Cillán (2017), Lang and Fink (2019) García-Villaverde, Parra-Requena and Molina-Morales, (2018), Meseguer-Martinez, Ruiz-Ortega, and Parra-Requena (2018) and Ortiz, Donate and Guadamillas (2017), all of whose findings affirmed a relationship between structural social capital and enterprise performance. Sainaghi and Baggio (2014) suggested that structural social capital was the highest positive factor affecting performance of hotels, compared to weaker and mostly not important associations connecting possession and category and site. Wairimu (2019), opined that structural social capital positively affected communal enterprise performance.

Studies that found a significant relationship between cognitive social capital and firm performance include Wang, Zhao, Chang-Richards, Zhang, and Li (2021), Syaukat, Fauzi and Rustiadi (2020), Adedeji, Silva and Bullinger (2019) and Chima and Amodu (2017). Ha and Wikramaratne, (2021) opined that of the three social capital dimensions, only cognitive social capital was found to positively relate to firm operational performance directly.

These findings partly aligned with Saha and Barnerjee (2015) and Kamboj, Kumar and Rahman, (2017) whose findings indicated that social capital (hedonic use, social use and cognitive use) had a positive effect on firm performance (market and financial performance) while social capital was found to have partial mediation on the association between social media usage and enterprise performance. Earlier studies such as Pinho (2013) studied firm growth, which is one among many indicators of enterprise performance. The current study thus considers the aspect of enterprise performance in relation to social capital; largely because it broadens the approach, more so when the research is on MSMEs some of which may not yet be experiencing exponential growth.

Structural social capital, relational social capital and cognitive social capital, all form the aggregate social capital, which is the independent variable of this study. To measure cognitive social capital, the study applies shared goals, shared values and entrepreneurship orientation, while relational social capital is measured by considering the number of entrepreneur's networks, interpersonal trust, and number of social

connections. Network structural characteristics, business network ties and Institutional links were adopted as measures of structural social capital

This study, informed by existing literature, adopted the following hypothesis:

H₀₁: Social Capital has no significant effect on the performance of manufacturing MSMEs in Nairobi City County, Kenya.

2.2.5 Social Capital, Operating Business Environment and Enterprise Performance

Kithusi (2015) opines that the external business environment is likely to impact more on smaller firms as compared to their larger counterparts, owing to the former's high vulnerability to external influence. Paradoxically, the external environment often presents both a threat and an opportunity for small businesses; depending on how the entrepreneur manages the business during the critical moments. Managers / owners who make use of readily available resources such as social capital to harness information, scan the environment, engage internally, and make agile decisions are likely to achieve growth for the firm as opposed to those caught unawares (Ombaka, 2014).

Research in this area includes Ha and Wickramaratne, (2021) who found that social capital significantly impacted on knowledge sharing, which in turn helped the firm adopt better to changes in their operating environment. These findings corroborated prior studies (Chow & Chan, 2008; Wu, 2008; Zaqout & Abbas, 2012; Ha & Nguyen, 2020; Ha & Doan, 2021), according to Ha and Wickramaratne, (2021). The moderating effect of uncertainties within the business environment on intellectual capital, social capital, and enterprise performance was analyzed by Liu (2017) who demonstrated a negative correlation between environmental uncertainty and social capital, which ultimately affected firm performance.

A study Li, Cao, Zhang, Chen, Ren and Zhao (2017) found that social capital was a strong predictor of firm performance, concurring with Mahmood and Pratono (2014). Bouzdine and Bouzdine (2014), explored the effect of social capital among business networks. The research established that social capital played a major role in business networks. The findings of this study, however, did not conform to Akintimehin, Eniola, Alabi, Eluyela, Okere and Ozordi, (2019) whose findings indicated that internal social capital had a significant effect on firm performance, while external social capital was found to have no noteworthy effect on enterprise performance.

An appropriate conceptual framework was derived through an integrated approach incorporating the theoretical models reviewed and empirical research findings from earlier studies. Informed by the earlier studies, Business operating environment as the moderating variable was operationalized by measuring the enterprise's access to finance, the venture's competitors, and the consumer behavior towards the enterprise. Similarly, backed by earlier studies, firm performance, the dependent variable of the

study, was measured using the venture's profitability, growth in sales volume and the growth in capital employed.

Informed by the literature reviewed, therefore, this study adopted the following hypothesis:

H₀₂: There is no significant moderating effect of operating business environment on social capital and performance of manufacturing MSMEs in Nairobi City County, Kenya

3.0 Research Methodology

This research employed both descriptive and explanatory none experimental research designs; informed by its suitability in the description of the characteristics of an individual or individual group, given that the researcher had no control over the study variables.

3.1 Research Philosophy

Research philosophy assists the investigator in choosing the most appropriate research design. The philosophies include positivism or phenomenological (Smith, 2015). In the field of business-related studies there are four main exploration philosophies; positivism, interpretivism, pragmatism and realism. Positivism observes that information obtained from observations comprising of dimension is dependable. In positivism, investigators are of the view that the real thing can be perceived and observed in an independent way (Saunders, 2011). Such types of investigations often yield typically evident and measurable findings which are then computed to arrive at logical conclusions (Urus, 2013).

Positivism principles comprise of a noticeable social realism that is chosen to be investigated and only noticeable characterized by a yield in reliable data (Remenyi, Williams, Money & Swartz 2005; Saunders, Lewis & Thornhill, 2009). The research philosophy helps the researcher to come up with hypothesis that will be tested by the research and which matches with the objectives of the study (Bryman & Bell, 2007). According to Bryman and Bell (2007), the person carrying out a research should be independent in such a way that he/she is not affected by the subject matter. Therefore, positivism emphasizes on observations that are quantifiable so that they can be used in data analysis (Remenyi, *et al.*, 2005).

To help comprehend how best to investigate the effect of Social Capital and Performance among MSME's in Nairobi City County, the study adopted a positivism approach to establish an insight into the quantitative aspects. The choice of the research philosophy was deliberate, largely driven informed by the realization that the study made use of quantitative data for hypothesis testing. Consequently, the resultant findings of

the study can be generalized to a broader populace of manufacturing MSMEs; on condition that the populace has similar characteristics as those of Nairobi City County.

The results could, therefore, be used to formulate policies geared towards improving the performance of manufacturing MSMEs for business operating within regions with similar entrepreneurial characteristics as Nairobi City County.

3.2 Research Design

The study adopted a combination of two designs, namely descriptive and explanatory research designs. Mugenda and Mugenda (2003), Marczyk, DeMatteo and Festinger (2010), as well as Saunders et al., (2007), all concur that no single research design is self-sufficient; they aver that assortment of research designs facilitates delivery of optimal outcomes from the research. Descriptive design helps simplify data collected through the detailed questionnaire. Muathe (2010), and Muathe and Muraguri-Makau, (2020) have used a similar design in previous studies.

However, descriptive design has its drawbacks; it poses a weakness in confidentiality (Kiprotich, 2014) because respondents may not always be truthful. This leads to a risk of distorted findings (Kothari, 2004). It is for this reason that a combined approach is deemed appropriate. Explanatory research design helps in determining cause and effect associations between study variables. These designs thus complement each other as they help to validate both the strength and the direction of the correlation between social capital and enterprise performance.

3.3 Empirical Model

An empirical model involving simple and multiple regression model was deemed appropriate for this study. To determine the mediation and moderating effects in the study, stepwise and hierarchical regression was then used.

The multiple regression model used includes;

$$P = \beta_0 + \beta_1 RSC_1 + \beta_2 SSC_2 + \beta_3 CSC_3 + e \dots \dots \dots (1)$$

P = Enterprise Performance

{ β_i ; $i=1,2,3$ } = The coefficients for the social capital measures

X_i for;

RSC_1 = Relational social capital

SSC_2 = Structural social capital

CSC_3 = Cognitive social capital

In order to determine the joint effect, weighted average of social capital was calculated using the equation below;

$$\text{Social capital composite (SCC)} = \sum (W_1 X_1 + W_2 X_2 + W_3 X_3) / 3 \dots \dots \dots (2)$$

3.4 Data collection and analysis

Nairobi City County has the highest number of MSMEs at 268,100. However, the study was limited to the MSMEs in the manufacturing segment within Nairobi City County. This was to allow the researcher to maintain homogenous traits of the respondents (Gathenya, Bwisa & Kihoro, 2011). There are 61,931 licensed Micro, Small and Medium manufacturing businesses registered in Nairobi City County (Nairobi City County report, 2019). This includes 50,511 micro enterprises, 8,936 small enterprises and 2,484 medium enterprises; representing 81.56% micro enterprises, 14.43% small enterprises and 4.01% medium enterprises, as tabulated in Table 1.

Primary data was collected directly from the owners and managers of the MSMEs within the manufacturing sector and operating in Nairobi City County. Questionnaires were used because they are cost effective, free from prejudice, and allow the respondents ample time to understand the question and respond. A structured questionnaire incorporating questions that had been applied in earlier researches was used to collect data. Mugenda and Mugenda (2003) opined that structured questionnaires are preferred due to their nature; having a range of possible answers from which the respondent can easily choose, makes it easier for the respondent.

The questionnaires were administered with the help of qualified research assistants. Due to prevailing COVID-19 restrictions at the time of the study, the surveys were delivered electronically to the respective owners and managers of manufacturing MSMEs in Nairobi City County, after which follow ups were made by way of phone calls and emails to enhance the response rate.

4.0 Findings and Discussion

This section includes a brief summary of the respondents' characteristics, the research findings, and discussions based on the study findings in relation to the study hypotheses.

4.1 Demographic Characteristics

The demographic characteristics are summarized in Table 2 for a better understanding of the study context, and to provide insights into the diversity of the study sample i.e. gender, age bracket, education levels and marital status among others. Most of the respondent enterprise managers were fairly educated, suggesting that even the relatively uneducated venture owners hired educated managers to run their ventures. According to the findings of Amarteifio and Agbeblewu (2017) and Chilya and Roberts-Lombard (2012), the entrepreneur's level of education, age brackets and other demographic factors play a significant role in influencing the firm's performance.

Findings further revealed that majority of the respondents fell within the youth bracket. Kenya in recent times has seen an increase in the youth unemployment rate;

possibly explaining why majority of the youth are venturing in MSMEs as alternative to employment or just to make ends meet as they await employment opportunities. Chiliya and Roberts-Lombard (2012) highlight the important role of the business owner's age on the profitability of the business. On the age of the enterprise, 32.5% were below 1 year, while 34.1% were between 2 and 5 years old. Only 5.6% indicated they had been in operation for over 20 years. The study findings implied that majority of the MSMEs were below 5 years, which corroborates the report of KNBS (2016); that most MSMEs collapse before their fifth year of operation.

4.2 Descriptive Results

Table 3 summarizes the descriptive results of relational social capital. Results show an aggregate score of 4.19 while the standard deviation was 0.979, which indicated that MSMEs employed relational social capital in their ventures to improve firm performance. Findings concurred with Tan, Sutanto and Tan (2015) and Pinho (2013), both of whose outcomes displayed that relational social capital had a substantial impact on performance of enterprises. The findings further supported the findings of Zhou (2017) who demonstrated that relational social capital substantially enhanced firm performance in the performing arts industry. Kim and Shim's (2018) study demonstrated that relational social capital enhances knowledge sharing among parties, and subsequently positively improved firm performance.

Majority of MSMEs in Kenya start and operate with very limited financial resources, hence hiring qualified personnel becomes a challenge. Subsequently, they heavily rely on relational social capital in order to remain operational – from the casual labor (internal) to the supply of raw materials payable later (external). This implies that use of relational social capital was high among the micro, small and medium manufacturing ventures operating within Nairobi City County in Kenya. However, the findings did not align with Rowley, Behrens, and Krackhardt (2000) whose study findings indicated that there was no positive effect of social capital on entrepreneurial performance and Zhang, Zhang and Song (2019) that indicated there was no noteworthy effect of relational social capital on sustainable organizational performance.

Table 4 on structural social capital shows an aggregate score of 3.73 and a standard deviation of 1.01. This implied that majority of MSMEs in Nairobi used structural social capital to improve enterprise performance; with the standard deviation of 1.01 indicating a minor variation of the responses from the mean score. The study outcomes were aligned with those by Sainaghi and Baggio (2014), whose results suggested that structural social capital was the highest positive factor affecting performance of hotels, compared to weaker and mostly not important associations.

Similarly, the findings corresponded Wairimu (2019), who found that structural social capital positively affected communal enterprise performance. In Kenya, most entrepreneurs working within the same operational locality though doing divergent business, upon developing trust, tend to pool funds as a way for short term saving, through table banking. Each member gives a specific amount every day / week and the full amount is regularly given to the pre-agreed member to boost their business. The cycle runs until every group member has had their chance to receive the lump sum amount, then a new cycle begins with the same or different members.

Determination of the payment sequence is done by balloting; small papers with serialized numbers on them are folded, mixed to eliminate predictability, and each member picks a random paper and displays to all. The number each one picks determines their payment position within that cycle. This thus possibly explains why the MSMEs in Nairobi City County strive to closely relate with other entrepreneurs around them, and in the process boost their venture performance.

The study findings demonstrate that most of the respondents were in agreement with the statement used to measure the effect of cognitive social capital on firm performance, as evidenced on Table 5. The aggregate score of 3.94 and a standard deviation of 1.039 indicates that a small proportion significantly deviated from the mean score; implying that not all small enterprises applied cognitive social capital to improve performance of their businesses. The study findings are aligned with Chima and Amodu (2017), who revealed that social networks influenced entrepreneurship orientation. The findings demonstrated that a significant connection happens amongst compact social networks held by businesspersons; these social nets often drive innovative performance too.

The findings resonated with Wang, *et al.* (2021) and Analia *et al.* (2020) who demonstrated that cognitive social capital significantly predicted performance. However, these findings were only partially aligned with Saha and Barnerjee (2015) and Kamboj, Kumar and Rahman, (2017) study findings. Kamboj *et al.* (2017) indicated that social capital (hedonic use, social use and cognitive use) had a positive effect on firm performance (market and financial performance) while social capital partially mediated the association between social media usage and enterprise performance.

Businesses in Kenya and particularly in Nairobi City County tend to be dominated by people with similar cultures, norms and often from the same ethnic communities. For example, manufacturing of metallic items such as metal boxes and stoves is often dominated by the Western Kenya communities, while the real estate and printing industry is mostly dominated by communities from Central Kenya. Charcoal and charcoal product sales, tyre retreading and manufacture of rubber sandals is dominated by communities from Eastern Kenya. The shared norms among peers and across the supply chain would thus be behind the significant effect of cognitive social capital on their venture performance, as evidenced in the study outcomes.

The combined mean score for operating business environment was 4.18 and a standard deviation of 1.097 as detailed in Table 6, which indicated that as much as respondents agreed with the statement on operating business environment, some of them disagreed, hence the slightly high deviation of the response from the mean score. The needs and preferences of the modern customers are quite dynamic, and businesses both local and international must keep abreast. This is the only way that MSMEs in Kenya can achieve high performance by always responding to the changing demands of their customers. Similarly, Mahmood and Pratonno (2014) established that environmental instability boosted the association amid social capital and performance. Findings further displayed that on high environmental instability, social capital negatively impacted on organizational performance.

Table 7 shows the descriptive results for enterprise performance. On average, the results show that majority of the ventures experienced high growth of sales and generally increased performance as shown by the aggregate score of 4.08. The standard deviation score of 0.900 shows there was a slight variation of the enterprise performance among the MSMEs that were sampled.

4.3 Linearity Test

The Pearson's correlation coefficient was employed in this investigation to check for conformity with the linearity assumption as indicated by (Wooldridge, 2000). A p value that is less than 0.05 indicated a linear relationship while a value above 0.05 was considered non-linear. The correlation coefficient demonstrates the quality and bearing of the straight relationship (Field, 2009). Table 8 shows the linearity test results. Kumari and Yadav (2018) in support of linearity analysis opines that this is a critical test, more so when correlation and regression analysis were adopted to test the association between social capital and enterprise performance of MSMEs.

4.4 Hypotheses Testing

To assess the study hypotheses, researchers used multivariate regression analysis. The researchers used multivariate regression to see if social capital (cognitive social capital, structural social capital and relational social capital) could predict MSMEs' success in Nairobi. The regression analysis outcomes are shown in Table 9.

The outcomes of the ANOVA of the model fitted to examine the relevance of the overall multivariate regression model used to relate social capital with enterprise performance are also presented in Table 9. The f-statistics were 517.884 and the p-value was 0.000, which was less than 0.05. As a result, the study was unable to reject the null hypothesis that the model used had a good fit.

According to the study findings, the model used to assess if social capital predicted enterprise success was statistically significant, at the 0.05 level of significance. The findings are reinforced by Kozak and Piepho (2018) who opined that ANOVA test

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is important in assessing the overall significance of the model and is an integral part of the regression modelling. The finding further agreed with Hau, Kim, Lee and Kim (2013) that found that social capital which comprise relational, structural and cognitive social capital are good predictor variables of enterprise performance.

H₀₁: Social capital has no significant effect on performance of manufacturing MSMEs in Nairobi City County, Kenya

The study tested this hypothesis through fitting a multivariate regression analysis to determine whether each of the three dimensions of social capital significantly predicted enterprise performance of MSMEs in Nairobi City County. The social capital composite was then derived and applied in subsequent analysis. The findings of this study are in line with the proponents of the behavioral theory of the firm; that the goals of the firm can only be attained through the process of bargaining, where the members of the coalition agree on the specific aims (Cyert & March, 1992).

The findings also concurred with those of Le Van *et al.* (2018) who found that social networks, such as persons, custom, belief have definite influence on entrepreneurship orientation. Similarly, Chima and Amodu (2017) findings displayed that a significant connection happens amongst social networks density and reactive-ness amongst businesspersons. However, this study's findings did not concur with those of Ha and Wikramaratne (2021) whose findings revealed that out of the three social capital dimensions i.e. structural, relational and cognitive social capital, only cognitive social capital was found to positively relate to firm operational performance directly.

These findings partly aligned with Saha and Barnerjee (2015) and Kamboj *et al.* (2017) who found a partial mediating effect of social capital on the relationship between social media usage and venture performance.

H₀₂: There is no significant moderating effect of operating business environment on social capital and performance of manufacturing MSMEs in Nairobi City County, Kenya

The final objective of the study was to test the moderating effect of operating business environment on the relationship between social capital and the performance of manufacturing MSMEs within Nairobi City, Kenya. The hypothesis for this relationship was stated as follows; H₀₅: there is no significant moderating effect of operating business environment on social capital and performance of manufacturing MSMEs in Nairobi City County, Kenya.

Step One: Operating Business Environment as a Predictor Variable

The first step for moderating testing was to test whether operating business environment significantly predicted enterprises performance. A regression model was thus estimated with both SCC and OBE as predictor variables. The findings, as indicated on Table 10, demonstrated that in addition to being a moderating variable, operating business environment also predicted the enterprise performance.

Step Two: Operating Business Environment as a Moderating Variable

In the second step, an interaction variable (SCC*OBE) between social capital composite and operating business environment is introduced. The criteria for significance moderating effect is achieved when the coefficient of SCC*OBE is significant. The results, as per Table 11, show that social capital composite*operating business environment had a coefficient of was $\beta = -0.014$, (p -value = 0.7850) which was statistically insignificant. Informed by these findings, the study failed to reject the null hypothesis that H_{02} : there is no significant moderating effect of operating business environment on social capital and performance of manufacturing MSMEs operating within Nairobi City County, Kenya.

This study finding concurred with that of Liu (2017) whose finding indicated that environmental uncertainty had negative moderating effect on the connection between social capital and firm performance of cultural and creative organizations in China. Similarly, the finding agreed with Li *et al.*, (2017) that found that stringent government regulation negatively affected the association between organizational slack and financial performance. The research thus concluded that government regulations are a key component of firm performance. The study failed to agree with the finding of Mahmood and Pratonno (2014) that established that environmental instability boosted the association between social capital and performance. Outcomes further displayed that on high environmental instability, social capital negatively influenced organizational performance. This is possibly because negative classified information was spread through the networks just as effectively as positive information would.

5.0 Conclusion

The study findings determined that holding other factors constant, relational social capital played a critical role in improving the performance of manufacturing MSMEs operating in Nairobi City County. The research further concluded that manufacturing MSMEs in Nairobi City County invested in maintaining close relationships amongst employees, which resulted in high profit margins.

The MSMEs further had a great level of trust by the customers and gathered a lot of information from their social groups, which are some of the aspects of relational social capital that contributed to increased performance. MSMEs that have numerous

networks, engage in information sharing, have goals that are reliable and finally share business goals with suppliers leverage on partners' information and business expertise to enrich the performance of their ventures.

The study finally concluded that even though operating business environment is critical in business, it failed to strengthen the association between social capital and firm performance among manufacturing MSMEs in Nairobi City County. The extent of use of social capital to some degree depends on the pro-activeness of the managers and owners of the enterprises, which is independent of the existing operating business environment.

5.1 Policy Recommendation

Informed by the study findings, this research recommends that management of the MSMEs should leverage on social capital to positively increase their performance. The management and business owners should come up with strategies to ensure sustained close relationships between employees and the management of the venture, between the firm and the suppliers, a high level of trust in the firm by the customers and finally high interactions in cross-functional social groups by employees. These include organization team building events, recognizing and rewarding the suppliers to exemplary services and other activities that will enable them harness relational social capital to their advantage. Additionally, shared vision, goals, and values, when regularly communicated to all, would help boost venture performance.

On policy formulation, directors of the MSMEs should formulate policies that ensure that efforts made by management and employees towards maximizing the use of cognitive social capital are incentivized to them. Some of the business practices that need improvement among MSMEs in Nairobi include the management practices, introduction of new services and products ahead of those by new competitors and adoption of new trade procedures and services. This will enable them to stay ahead of the competition and guarantee high performance.

At stakeholder level, there is need to help MSMEs tap into the already existing social capital in order to enhance the survival and growth of MSMEs in Kenya as in other developing economies. Some governments have sought to formalize group lending among MSMEs. With enhanced structures and financial management education, the MSMEs would highly benefit from revolved funds set aside by governments, and ensure minimal violations.

5.2 Limitations and future Research

Muniady *et al.*, (2015) portends that researches on social capital within developing economies typically encounter many limitations, mainly because the measure of social

capital is often based on membership in formal institutions. Requirements for membership is prohibitive as it involves cost and time commitments (Krishna, 2008). Leaving out informal businesses therefore leaves out a huge portion. This limitation is true of the current study too; there are far more informal MSMEs in Nairobi City County as compared to the registered ones. For this study, only ventures that have been registered with the Nairobi County Council were considered; implying there is a huge opportunity for further research among the informal ventures in Nairobi City County. This will help establish if the findings of this study apply to the informal sector too, and to what extent.

The study was conducted during the period when the country was experiencing the COVID 19 pandemic, therefore physical meetings and interactions were prohibited as a way of curbing the spread of COVID 19, which limited the data collection process. The researcher thus embraced online dispatch and collection of the questionnaires to mitigate this limitation.

This study was carried out among MSMEs in Nairobi City County, a densely populated county that hosts most of the country's MSMEs. According to Muathe (2010), for a research carried out in a highly mechanized region, the study findings may not be generalized to other less industrialized zones or counties; the two business environments are quite dissimilar. This study, having been carried out among MSMEs in Nairobi City County, makes it difficult to generalize the findings. This presents an opportunity for further research among dissimilar Counties, findings of which would help enrich the knowledge further, by confirming or disagreeing with the findings of this study.

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Table 1
Sample Size

Department	Population	Sample	Percent
Micro	50511	313	81.56
Small	8936	55	14.43
Medium	2484	16	4.01
Total	61,931	384	100

Source: Researcher, 2020

For this study, since the populace is more than 10,000, the formula by Fisher (2003) was applied to derive an adequately representative sample size of 384. Random sampling was then used to select the 384 manufacturing MSMEs from each of the three clusters.

Table 2
Demographic Characteristics of the Respondents

	Category	Frequency	Percent
Gender	Female	127	34.1
	Male	245	65.9
	Total	372	100
Level of education	Below Class 8	6	1.6
	Class 8	14	3.8
	Form 4	30	8.1
	Diploma	142	38.2
	A-level	58	15.6
	Degree	94	25.3
	Masters	28	7.5
	Total	372	100
Entrepreneur's age	Below 25	49	13.2
	25-30	60	16.1
	31-40	173	46.5
	Over 40	90	24.2
	Total	372	100
Marital Status	Single	63	16.9
	Married	251	67.5
	Separated	25	6.7
	Divorced	20	5.4
	Widowed	13	3.5
	Total	372	100
Age of the business	Below 1 year	121	32.5
	2-5 years	127	34.1
	6-10 years	66	17.7
	11-20 years	37	9.9
	Over 20 years	21	5.6
	Total	372	100
Branches	No	257	69.1
	Yes	115	30.9
	Total	372	100

Source: Survey Data (2021). The demographic characteristics are summarized in Table 2 for a better understanding of the study context, and to provide insights into the diversity of the study sample i.e. gender, age bracket, education levels and marital status among others.

Table 3
Descriptive Results for Relational Social Capital

Descriptive Statistics	N	Minimum	Maximum	Mean	Std. Dev
Amongst internal parties					
There are close relationships between employees and management of the firm	372	1	5	3.96	0.836
The close relationships amongst employees results in high profit margins	372	1	5	4.15	1.022
Aggregate score for amongst internal parties				4.055	0.929
Between internal and external parties					
There are close relationships between the firm and the suppliers	372	1	5	4.01	1.013
There is a high level of trust in the firm by the customers	372	1	5	4.47	1.013
I learn a lot from the social groups I belong to	372	1	5	4.34	1.053
Aggregate score for internal and External parties				4.27	1.03
Entrepreneur's networks and support					
The number of social groups one belongs to help to improve the performance of the firm	372	1	5	4.37	0.925
Young people could start their own business and be independent	372	1	5	4.41	1.124
We get good support from the local and national government when we are starting a business	372	1	5	3.82	0.85
Aggregate score for Entrepreneur's networks and support				4.2	0.966
Aggregate score for Relational Social Capital				4.19	0.979

Source: Survey Data (2021)

Table 4
Descriptive Results for Structural Social Capital

	N	Minimum	Maximum	Mean	Std. Dev
Network diversity					
Network diversity among customers has increased profitability of the firm	372	1	5	4.03	1.085
Our firm is strongly linked by community organizations	372	1	5	3.47	1.09
Our firm is coordinating and jointly working with other firms	372	1	5	3.79	0.928
Aggregate score for Network diversity				3.76	1.034
Institutional links					
I stay connected to people that do different things from what I do	372	1	5	3.69	0.796
Connecting with firms that do different things from us helps to improve our enterprise's performance	372	1	5	3.98	0.977
I belong to social groups that contain our competitors	372	1	5	3.60	1.235
I belong to groups that contain our suppliers	372	1	5	3.57	0.962
Aggregate score for Institutional links				3.71	0.993
Aggregate for score Structural Social Capital				3.73	1.01

Source: Survey Data (2021)

Table 5
Descriptive Results for Cognitive Social Aspects

Descriptive Statistics	N	Minimum	Maximum	Mean	Std. Dev
Social Culture					
The social culture and norms of the place I stay are helpful in achieving success through one's own particular struggles	372	1	5	3.71	1.368
The social culture and norms of my community encourage entrepreneurial risk taking	372	1	5	3.81	1.068
Our firm has numerous networks and shares information with other firms	372	1	5	3.94	1.005
Aggregate for Social Culture				3.82	1.147
Shared Goals and Objectives and Values					
I clearly comprehend the firm's goals, values and mission	372	1	5	3.87	0.887
The social culture and norms of my community stress self-sufficiency, autonomy and personal inventiveness	372	1	5	3.92	0.914
Our organization has valuable goals and objectives	372	1	5	3.71	1.38
The firm's goals are reliable and do not conflict with the objectives	372	1	5	4.29	1.122
My firm focuses on realizing its goals, standards and mission	372	1	5	4.32	1.07
The firm shares same business goals with key suppliers	372	1	5	4.23	0.979
The firm shares same business values with key suppliers	372	1	5	3.64	0.778
The social culture and norms of my community encourages creativeness and innovation	372	1	5	3.93	0.868
Aggregate for Shared Goals and Objectives and Values				3.99	0.999
Aggregate for Cognitive Social Aspects				3.94	1.039

Source: Survey Data (2021)

Table 6
Descriptive Results for Operating Business Environment

Descriptive Statistics	N	Minimum	Maximum	Mean	Std. Dev
Internal processes					
My firm develops more ideas and products than any other firm in our industry	372	1	5	4.03	1.06
My firm has smooth internal communication channels and mechanisms	372	1	5	4.21	0.925
My managers are able to monitor changing environmental conditions	372	1	5	4.18	1.019
Aggregate score for Internal processes				4.14	1.001
Competitors					
My organization rapidly responds to important market changes such as pricing by competitors	372	1	5	4.28	1.053
My firm is fast to respond to significant changes in our competitors valuing and non-pricing structures	372	1	5	3.94	1.027
My firm has the ability to withstand threats of substitutes	372	1	5	4.25	1.107
Aggregate score for Competitors				4.16	1.06
Consumer Behavior					
My customers consider the firm to be health conscious	372	1	5	4.27	1.286
There has been an increase in repeat customers and referrals over time	372	1	5	4.28	1.299
Aggregate Score for Consumer Behavior				4.28	1.29
Aggregate Score for Operating Business Environment				4.18	1.097

Source: Survey Data (2021)

The combined mean score for operating business environment was 4.18 and a standard deviation of 1.097; indicating that as much as respondents agreed with the statement on operating environment, some of them strongly disagreed, resulting in a slightly high deviation of the response from the mean. However, the overall finding in this segment was indicative that majority of the MSMEs owners were aware about their operating environment and responded swiftly to any changes that would affect their businesses

Table 7
Descriptive Results for Enterprise Performance

Descriptive Statistics	N	Minimum	Maximum	Mean	Std. Dev
Profitability					
Our total profits have been increasing yearly	372	1	5	3.77	0.779
The salaries of employees are paid on time	372	1	5	4.07	0.856
Our business can comfortably pay for all its expenses	372	1	5	4.08	0.938
Aggregate score for Profitability				3.97	0.858
Capital Employed					
The amount of capital employed in the business has been increasing yearly	372	1	5	3.83	0.697
There has been expansion of the market size of our firm	372	1	5	4.19	0.989
In the last 3 years, the size of our organization has been expanding	372	1	5	4.3	1.06
Aggregate score for Capital employed				4.11	0.915
Growth in Sales Volume					
Our business has increased the number of customers we serve yearly	372	1	5	4.33	1.033
The trends of output of our firm have been on the rise in the past 3 years	372	1	5	3.92	0.91
The sales volume has been increasing every year	372	1	5	3.98	0.842
Aggregate Score for Growth in Sales Volume				4.08	0.928
Aggregate Score for Enterprise Performance				4.05	0.900

Source: Survey Data (2021)

Table 8
Linearity Test

		Relational Social Capital	Structural Social Capital	Cognitive Social Capital	Business Operating Environment	Organizational Innovation	Enterprise Performance
Relational Social Capital	Pearson Correlation	1					
	Sig. (2-tailed)						
Structural Social Capital	Pearson Correlation	.658**	1				
	Sig. (2-tailed)	0.000					
Cognitive Social Capital	Pearson Correlation	.596**	.681**	1			
	Sig. (2-tailed)	0.000	0.000				
Business Operating Environment	Pearson Correlation	.689**	.516**	.474**	1		
	Sig. (2-tailed)	0.000	0.000	0.000			
Organizational Innovation	Pearson Correlation	.496**	.182**	.280**	.274**	1	
	Sig. (2-tailed)	0.000	0.000	0.000	0.000		
Enterprise Performance	Pearson Correlation	.847**	.663**	.738**	.787**	.543**	1
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000	
	N	372	372	372	372	372	372

** Correlation is significant at the 0.05 level (2-tailed).

Source: Survey Data (2021).

The results indicate that all the study variables had a linear relationship; that the data complied with the regression's linearity assumption.

Table 9
Regression Results

Coefficients	Unstandardized Coefficients		Standardized Coefficients			95.0% Confidence Interval for B	
	β	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound
(Constant)	0.417	0.1		4.174	0.000	0.22	0.613
Relational Social Capital	0.573	0.028	0.631	20.153	0.000	0.517	0.629
Structural Social Capital	0.003	0.037	0.003	0.08	0.936	-0.07	0.076
Cognitive Social Capital	0.310	0.028	0.36	11.167	0.000	0.256	0.365

ANOVA		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	111.703	3	37.234	517.884	.000b
	Residual	27.537	368	0.072		
	Total	139.24	371			

Model Summary	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.896a	0.802	0.801	0.26814

a Predictors: (Constant), Cognitive Social Capital, Relational Social Capital, Structural Social Capital

b Dependent Variable: Enterprise Performance

Source: Survey Data (2021)

$P = 0.417 + 0.573(RSC) + 0.003(SSC) + 0.310(CSC) + e$

RSC₁ = Relational social capital

SSC₂ = Structural social capital

CSC₃ = Cognitive social capital

The model fitted had an adjusted R-Square = 0.801 which show that social capital which comprised of structural social capital, relational social capital and cognitive social capital, jointed explained 80.1% of the variation in firm performance of manufacturing MSMEs within Nairobi, all other factors held constant. These findings show that social capital had significant and positive effect on enterprise performance of manufacturing MSMEs within Nairobi. The finding further implied that manufacturing MSMEs which had better social capital recorded improved performance compared to those with less social capital.

Table 10

Step One: Test for Moderating Effect of Operating Business Environment

Coefficients	Unstandardized Coefficients		Standardized Coefficients			95.0% Confidence Interval for B	
	β	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound
(Constant)	0.412	0.112		3.686	0.000	0.192	0.631
SCC	0.808	0.057	0.748	14.19	0.000	0.696	0.92
OBE	0.107	0.043	0.132	2.511	0.012	0.023	0.19

ANOVA		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	104.468	2	52.234	576.843	0.000
	Residual	34.772	369	0.091		
	Total	139.24	371			

Model Summary	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.866a	0.75	0.749	0.30092

a Predictors: (Constant), OBE, SCC

b Dependent Variable: Enterprise Performance
Source: Survey Data (2021)

The coefficient for operating business environment was $\beta=0.107$, with corresponding p-value = 0.012 which indicated that operating business environment was a significant predictor variable of enterprise performance. The findings demonstrated that in addition to being a moderating variable, operating business environment also predicted the enterprise performance.

Table 11

Step Two: Test for Moderating Effect of Operating Business Environment

Coefficients	Unstandardized Coefficients		Standardized Coefficients			95.0% Confidence Interval for B	
	β	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound
(Constant)	0.223	0.699		0.32	0.7490	-1.15	1.597
Social capital composite operating business environment	0.860	0.199	0.796	4.329	0.0000	0.469	1.25
SCC*OBE	0.159	0.196	0.197	0.812	0.4170	-0.226	0.544
	-0.014	0.051	-0.109	-0.273	0.7850	-0.114	0.086

ANOVA		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	104.475	3	34.825	383.66	.000b
	Residual	34.765	368	0.091		
	Total	139.24	371			

Model Summary	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.866	0.75	0.748	0.30128

a Predictors: (Constant), Social capital composite * operating business environment, Social capital composite, OBE

b Dependent Variable: Enterprise Performance
Source: Survey Data (2021)

The results show that social capital composite*operating business environment had a coefficient of was $\beta=-0.014$, (p-value = 0.7850) which was statistically insignificant. Informed by these findings, the study failed to reject the null hypothesis that H_{02} : there is no significant moderating effect of operating business environment on social capital and performance of manufacturing MSMEs operating within Nairobi City County, Kenya.