ISSN: 3079-6903
DOI: https://doi.org/10.70641/ajbds.v1i1.52

AFRICAN JOURNAL OF BUSINESS AND DEVELOPMENT STUDIES

AJBDSresearchjournal@usiu.ac.ke
journals.usiu.ac.ke

# Sensing Capabilities and Performance of Supermarkets in Kenya

*Ann Wambui Ng'ang'a[1], Joyce Ndegwa[1] and Maureen Kangu[1]*
*[1,1,1]United States International University –Africa, Nairobi, Kenya*
*jwndegwa@usiu.ac.ke[1,] mkangu@usiu.ac.ke[1]*
*Correspondence Email: annikamau@gmail.com[1]*

Cite: Ng'ang'a A.W, Ndegwa J., & Kangu M., (2024). Sensing Capabilities and Performance of Supermarkets in Kenya.African, Journal of Business & Development Studies,1(1), 1–12. https://doi.org/10.70641/ajbds.v1i1.52

**Abstract**

The retail sector in Kenya has experienced the growth of supermarkets in the last two decades. As a result of this growth, the sector is experiencing unprecedented competition and underperformance which has led to the closure of some leading brands. Despite pursuing various strategies such as branch increases, shop layout, ambiance, and in-store promotions to increase the footprint, customer loyalty, and sales; supermarkets are struggling to survive. This research sought to examine the influence of sensing capabilities on the performance of supermarkets in Kenyan cities. The research was anchored on the dynamic capability theory. The research was grounded on positivism research philosophy with the use of descriptive research design. A self-administered questionnaire was used to collect primary data. The research target population was 629 licensed supermarkets. The research population consisted of 1258 senior managers and the sample size was 304 respondents. A stratified random sampling method was used to select the sample size in each of the four cities namely Nairobi, Mombasa, Kisumu, and Nakuru. Descriptive statistics such as mean and standard deviation, and inferential statistics such as correlation, ANOVA and regression analysis were used to analyse the data. SPSS software version 28 was utilized for data exploration. The regression results revealed that sensing capabilities have a statistically significance influence on the performance of supermarkets in the Kenyan cities ($\beta$ = 0.535, t = 10.393, p < 0.05). The research recommends that supermarkets management should consistently conduct market surveys to identify new opportunities that will lead to improved performance. Investors in the supermarket sector should scan the business environment to identify valuable opportunities in order to increase survival and performance.

**Key words:** *Dynamic capability, Sensing capabilities and Performance.*

## Introduction

Firms operate in a business environment that is constantly changing and hence firms ought to develop sensing, seizing, and transformational capabilities in order to survive and thrive (Yoshikuni, 2021). Firms that are able to strategically respond to the changes in the environment have a greater chance of surviving and thriving. Chatterjee *et al*.(2022) pointed out that studies indicate that dynamic capabilities (DCs) play a vital role in influencing the business activities of a firm with an aim of achieving success regardless of whether the firm is domestic or international. Bitetti and Gibbert (2022) noted that dynamic capabilities enable firms to sense, filter opportunities and design business models to exploit new opportunities. Organizations that consistently and effectively observe, understand, and interpret information on customers' trends and competitors' activities have enhanced dynamic capabilities such as sensing (Darawong, 2018). According to Akkaya and Qaisar (2021) DCs (sensing, seizing and reconfiguring) enhances the manager's skills in firms to be able to preserve, develop and reconfigure resources in order to respond effectively to the changes in the environment and improve business performance.

Karimi and Waruguru (2018) opined that organizations need to consistently scan the environment in order to identify new industry trends and conditions which may have an impact on the organizations' performance. There is a danger of a firm vanishing due to poor performance which can result from the firm's operations remaining static in a dynamic environment (Mu, 2017). Supermarkets are known to operate in a complex and unstable environment and dynamic capability may help to adapt and achieve a competitive advantage resulting in improved performance. Dynamic capabilities are made up of sensing capabilities that monitor the environment to identify possible opportunities and threats, the seizing capability which exploits the opportunities in a manner that adds value to a firm and reconfiguring capabilities that enable resources to adapt to the changes in the business environment (Souza & Takahashi, 2019). Sensing involves scanning the environment for identification of opportunities and threats which can be achieved through trend analysis or research and development. The survival, growth and performance of an organization is largely determined by how an organization can sense the business environment, identify opportunities and threats and modify its resources to adapt to the new market changes.

The study of DC and performance by Arun and Ozmutlu (2022) on the effects of DCs on performance in Turkey established that in the post-modernist business period, the main difference that can be sustained between organizations is performance. Dynamic capabilities plays a role in firm performance which should be evaluated (Arun & Ozmutlu, 2022). The researchers noted that not all dynamic capabilities can be linked to firm performance. Different DCs may relate to performance in a unique way in different firms operating in different industries. While studies indicate that DC influences performance by creating a competitive advantage, there is a need for a firm like supermarkets to identify which capabilities influence performance to a large extent. Fatoki (2021) carried out research on the dynamic capabilities and performance of hospitality firms in South Africa. The results indicated that sensing capabilities help firms to increase sales and market shares because of the ability to search for new opportunities. The significance of dynamic capabilities has become an important area of study. Ali and Wambua (2021) researched on dynamic capabilities and performance of selected commercial banks in Nairobi County, Kenya. The main objectives of the research were to establish the influence of dynamic capabilities (innovation, technical and learning culture) on commercial banks' performance. The outcome indicated that the DCs were statistically

significant to the performance of commercial banks in Nairobi County. Dynamic capability is essential across industries such as manufacturing, hospitality and retail. Kimani and Otinga

(2019) examined the influence of DCs on performance in the manufacturing sector in Kenya. They focused on Kenya Tea Packers (Ketepa tea firm) in Kericho County. The DCs were operationalized by alliance management and dynamic managerial capabilities. The result indicated that alliance capability was important and enhanced the firm performance.

In Kenya, the retail sector has experienced unprecedented strong growth. Due to increased competition, some retailers have adopted the franchise model as an expansion strategy. Others have reduced the retail space in order to reduce the cost of operation. However, the retailers have continued to experience decreased performance (Maisori & Kinoti, 2018). Mbura and Odollo (2022) noted that supermarkets in Kenya recorded low performance due to the failure by management to properly manage the supermarket's working capital and also due to increased competition. Kanano and Wanjira (2020) further highlighted that Uchumi and Nakumatt registered rapid expansion into the East Africa region before facing cash challenges that resulted to delayed staff payments, insufficient stocks on the shelves, increased debts and low sales that led to the closure of branches. Some of the leading supermarkets such as Tuskys, Nakumatt, Ukwala, and Uchumi have either closed or have been acquired by other supermarkets. Shoprite, a South African firm, exited the market citing sustainability challenges (Mbatia & Wanjiku, 2020).

There is evidence that dynamic capabilities influence performance in different sectors. However, the influence of dynamic capabilities has received little attention in the retail sector specifically the supermarket sector in Kenya and hence there is a research gap that this study seeks to address by testing the hypothesis
$H_0$: There is no statistically significant influence of sensing capabilities on performance of supermarkets in Kenyan Cities.

## Theoretical review

### *Dynamic capabilities*

The Dynamic capability theory by Teece *et al.*(1997)which refer to the capacity of an organization to integrate, build and reconfigure both internal and external competencies in order to respond to the consistent market changes was the anchoring theory for this study. Dynamic capabilities were mainly applied in the field of strategic management to describe how firms attain sustainable competitive advantages in a fast competitive and changing environment. Dynamic capabilities are the ability of a firm to identify, grasp, and reconfigure both tangible and intangible resources and organizational processes in order to survive in a turbulent business environment (Wang et al., 2018). Teece (2014) emphasizes the need for organizations to disaggregate dynamic capabilities by sensing opportunities and threats in the external environment and, seizing such opportunities while placing in place remedies to address business threats. In doing so, firms are able to transform their resources to sustain business performance. Teece (2019) further established that firms that have enhanced dynamic capabilities are able to profitably build and renew resources that are needed to respond to the market changes and support high performance.

## Literature review

### *Sensing capabilities*

Sensing capability helps an organization identify new opportunities. In this study, the measures will be environmental scanning, identification of opportunities and entrepreneurial activities. Sensing capability enables a firm to scan the business environment and evaluate the market trends and competitors and identify new opportunities that can help the firm to survive and

improve performance in the uncertain business environment (Darawong, 2018). Chiarelli (2021) noted that when sensing capability is enhanced in a firm, it helps the firm to discover and create opportunities and respond to threats. Firms that do not have sensing capability can fail to develop the right services at the right time to serve their target market and hence register poor performance. The sensing capability through market analysis may lead to market demands that require transforming and building of capabilities within the firm in order to enable it respond effectively and efficiently to the market environment. Sensing capability is embodied with insight and vision which is attained through data analysis and helps organizations to identify new opportunities and markets (Teece,2019). Sensing capability can help a firm to thrive and grow by scanning the market information and identifying new opportunities and threats.

Pundziene *et al.* (2021) in their study noted that environmental scanning involves detecting and collecting data from different sources with an aim of monitoring the firm's internal and external environment. They conducted research on the nexus between dynamic capabilities and competitive firm performance. The dynamic capability was operationalized by using environment scanning, opportunity selection, employee engagement, and organizational learning. The study findings showed that employees must be sensitive to market changes and customers' needs. The sensing capabilities play a crucial role to filter and align the identified opportunities to the company's vision, mission and objectives. Interpreting the opportunity in line with the organization's experience is essential and facilitates good decisions. Kalu and Alagah (2022) carried out research to establish the association between sensing capability and the organizational competitiveness of manufacturing firms. The research findings also established that there was a positive association between sensing capability and speed of product/service delivery. Sensing capability enabled manufacturing firms in South-South of Nigeria to sense the environment and market and hence improve organizational competitiveness.

Sudrajat *et al.* (2019) conducted research on the role of sensing capability and financial performance. The results established that sensing capability (SC) had a positive effect on both innovative logistics services and financial performance. The results revealed that sensing capability enhances environment scanning and analysis of customer's logistics operations patterns, product requirement characteristics and market trends. An empirical survey was conducted by Chiarelli (2021) on the impact of dynamic capabilities and market orientation on firm performance. The study was on sole traders, micro and small enterprises (MSEs). The results indicated that sensing capability had a positive and significant relationship with performance. The performance improved where the sensing capability was enhanced because the organizations scanned the business environment to identify opportunities. A study of nine domestic airlines in Nigeria was conducted by Adim and Pio (2021) to establish the influence of opportunity-sensing capability and entrepreneurial mindset.

The research findings further established that opportunity-sensing capability supported the entrepreneurial mindset of the domestic airlines that thrived. Mursitama et al. (2021) carried out a study on the role of sensing capability, and entrepreneurial ecosystem to boost performance. The researchers established that sensing capability played an important role in small businesses. It helped enhance recognition and creation of new opportunities, and competitiveness in the market which improved business growth and performance. Xiao *et al.* (2023) carried out research on how digital transformation improve Government performance in Jiangsu province in China. The results indicated that sensing capability had a positive

influence on government performance. The sensing capabilities enabled the government to identify opportunities and threats from the environment which helped to improve performance.

**Balance score card**

The balanced scorecard has become a worldwide acceptable measurement tool that was first proposed by (Kaplan & Norton, 2001). Organizations have to consistently review their performance in order to ascertain whether they are on course to achieve their set goals. Gazi *et al*. (2022) noted that performance measures compare the organization expected results with the actual results. Most organizations translate their objectives into measurable goals. The authors noted that, in the past, most measurements of performance were based on financial goals only. However, they highlighted that the balanced scorecard measures both financial and non-financial performance giving an organization an overview of factors that determine performance and therefore what need to be enhanced or improved. The four perspectives highlighted by balanced scorecard tool include financial, customer, internal processes, and learning and growth.

***Conceptual framework***

The conceptual framework illustrates the variables and their measurements.

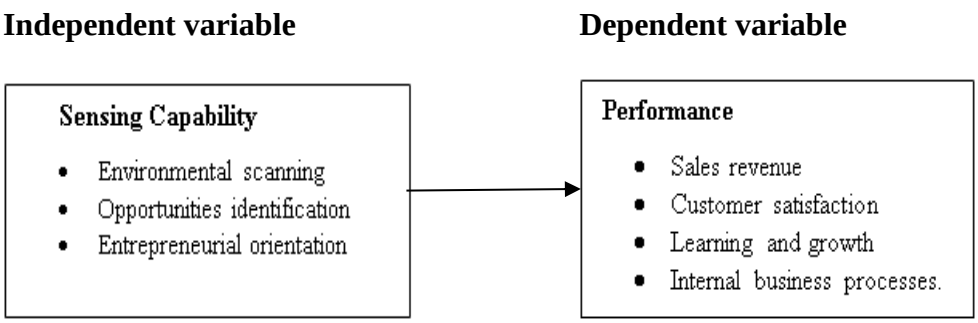


**Figure 1** *Conceptual framework*

**Methodology**

The research adopted cross sectional research data and collected primary data using self-administered questionnaires. The study targeted a total of 629 licensed supermarkets. The study population constituted 1258 senior managers. The population sample size of 304 respondents was determined using Yamane's (1973) formula. A stratified random sampling method was used to select the sample size from Nairobi, Mombasa, Kisumu and Nakuru cities. The received responses from 253 study participants yielded to a response rate of 83.2%. A pilot survey of 30 respondents which was 10% of the study sample was carried out to establish the validity and reliability of the research tool. Cronbach's Alpha was used to test reliability and the result was 0.907 which is above the 0.7 threshold therefore reliability was established.

**Table 1**

*Cronbach's Alpha Reliability for Seizing Capabilities*

| Variable | Components of Variables | Cronbach's Alpha | Number of items | Decision |
|---|---|---|---|---|
| Seizing Capabilities | • Business Model<br>• Allocation of resources<br>• Mobilization of resources | 0.907 | 9 | Reliable |

The average variance extracted (AVE), its square root and correlation were used to test the constructs' convergent and determinant validity. The results were all above the 0.5 threshold and therefore the validity of the study instruments was established.

**Table 2**
*Convergent and Discriminant Validity Results for Sensing Capabilities*

| Sub - Variable | AVE | Sqrt (AVE) | Environmental Scanning | Identification of opportunities | Entrepreneurial Activity |
|---|---|---|---|---|---|
| Environmental Scanning | 0.519 | 0.721 | 1 | | |
| Identification of opportunities | 0.536 | 0.732 | .522 | 1 | |
| Entrepreneurial Activity | 0.581 | 0.762 | .508 | .615 | 1 |

The pilot survey was conducted in supermarkets in Kiambu County. The sensing capabilities measures included environmental scanning, identification of opportunities and entrepreneurial activity. The study utilized descriptive statistics mainly mean and standard deviation to analyze the data. The inferential statistics that were used to test the hypothesis included correlation and regression analysis.

## Research Results

Five-point Likert scale ranging from 1 (indicating strong disagreement) to 5 (indicating strong agreement) was used to rate the responses. The descriptive statistics of means (M) and standard deviations (SD) were used to analyze the responses. The mean values that ranged from 1.00 to 1.80, were interpreted as strongly disagree, 1.81 to 2.60 as disagree, 2.61 to 3.40 as not sure, 3.41 to 4.20 as agree and 4.21 to 5.00 as strongly agree.

### Descriptive Statistics for Sensing Capabilities

The research sought to explore the prevalence of sensing capabilities in the supermarkets in Kenyan cities.

**Table 3**
*Descriptive Statistics for Sensing Capabilities*

| Statements on Sensing Capabilities | M | SD |
|---|---|---|
| **Environmental Scanning** | | |
| The supermarket engages in environmental scanning and identification of customer trends | 4.25 | .752 |
| Collection and analysis of data on business environment has enabled the supermarket serve the target market with the right products | 4.27 | .719 |
| The supermarket consistently monitors competitors' activities and develops strategies | 4.35 | .716 |
| **Identification of opportunities** | | |
| The supermarket has timely identification and exploitation of new business opportunities | 4.18 | .739 |
| The supermarket engages in interpretation of information to identify new customer demands | 4.31 | .632 |

| | | |
|---|---|---|
| The supermarket invests in searching for new market opportunities | 4.14 | .841 |
| **Entrepreneurial Activity** | | |
| Exploitation of entrepreneurial opportunities has given the firm access to new markets | 4.16 | .815 |
| Our supermarket proactively pursues business opportunities such as innovating and developing new products and services | 4.12 | .855 |
| The supermarket takes the risks to venture into new business opportunities | 4.07 | .864 |

The findings provided in Table 3 indicate that the study participants agreed and, in some cases, strongly agreed that the surveyed supermarkets generally conducted market surveys, analyzed and interpreted information to identify new opportunities and take risks to venture into new businesses.

**Table 4**

*Correlation between Sensing Capabilities and Performance of Supermarkets*

| | | Performance |
|---|---|---|
| Sensing Capabilities | Pearson Correlation | .527** |
| | Sig. (2-tailed) | .000 |
| | N | 283 |

**. Correlation is significant at the 0.01 level (2-tailed).

The findings in Table 4 portray that there is a significant and moderate positive relationship between sensing capabilities and performance of supermarkets in the Kenyan cities ($r = 0.527$, $p < 0.05$).

**Regression Analysis for Sensing Capabilities and Performance**

The study sought to determine the influence of sensing capabilities on performance of supermarkets in Kenyan cities. The study applied simple linear regression to provide answers to this research question. Additionally, the findings from the simple linear regression analysis were applied to test the null hypothesis of the study which was;

$H_0$: There is no statistically significant relationship between sensing capabilities and performance of supermarkets in Kenyan cities.

The regression model summary shown in Table 4includes the correlation coefficient (R) and the R-squared relating to the relationship and explanatory power of sensing capabilities towards performance of supermarkets in Kenyan cities.

**Table 5**

*Model Summary for Sensing Capabilities and Performance*

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | .527 | .278 | .275 | .50950 |

a. Predictors: (Constant), Sensing Capabilities

The study results in Table5 demonstrate a moderate linear relationship between sensing capabilities and performance of supermarkets in Kenyan cities ($r = 0.527$). The study findings additionally indicate that sensing capabilities explains 27.8% of the variation in the performance of the supermarkets in Kenyan cities (r-squared = 0.278). This implies that

variables that were not included in the model explained 72.2% of the variation in the performance of performance of the supermarkets in Kenyan cities.

The researcher conducted an ANOVA test to evaluate the statistical significance of the model. Table 6 provides a summary of the findings.

**Table 6:**
*ANOVA for Sensing Capabilities and Performance*

| Model | | Sum of Squares | Df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 28.041 | 1 | 28.041 | 108.019 | .000[b] |
| | Residual | 72.945 | 281 | .260 | | |
| | Total | 100.985 | 282 | | | |

a. Dependent Variable: Performance
b. Predictors: (Constant), Sensing Capabilities

The study findings summarized in Table 6 demonstrate that the f-value for the model was statistically significant, thereby indicating that the model was statistically significant ($F = 108.019$, $p < 0.05$). The results indicate that the regression model is a good fit for the empirical data gathered on sensing capabilities and performance of supermarkets in Kenyan cities. The results further portray that the performance of supermarkets in Kenyan cities was significantly influenced by their sensing capabilities.

The study generated regression coefficients form the regression model fitted in order to ascertain the degree to which sensing capabilities influenced the performance of supermarkets in Kenyan cities. The regression coefficients were utilized to evaluate both the magnitude and direction of the influence. The standardized and unstandardized regression coefficients, t-tests and the significance (p) values are presented in Table 7.

**Table 7**
*Regression Coefficients for Sensing Capabilities and Performance*

| | | **Unstandardized Coefficients** | | **Standardized Coefficients** | | |
|---|---|---|---|---|---|---|
| **Model** | | **B** | **Std. Error** | **Beta** | **t** | **Sig.** |
| 1 | (Constant) | 1.688 | .219 | | 7.719 | .000 |
| | Sensing Capabilities | .535 | .051 | .527 | 10.393 | .000 |

a. Dependent Variable: Performance

The research findings shown in Table 6 give rise to the subsequent regression model:

$$\text{Performance} = 1.688 + 0.535\ (\text{Sensing Capabilities})$$

The study findings presented in Table 7 and the subsequent regression model demonstrate that if the supermarkets did not have any sensing capabilities, their performance would have a rating of 1.688 (constant = 1.688). The findings also depict that sensing capabilities had a significant positive influence on the performance of supermarkets in Kenyan cities ($\beta = 0.535$, $t = 10.393$, $p < 0.05$). Hence, the null hypothesis stating that 'Sensing capabilities have no statistically significant influence on the performance of supermarkets in the Kenyan cities', was rejected. Additionally, the study findings suggest that a one-unit increase in sensing capabilities would result in a comparable increase of 0.535 in performance and vice versa.

## Discussion

The correlation analysis results indicated that there was a significant and moderate relationship between sensing capabilities and performance ($r= 0.527$, $p < 0.05$). These results imply that the influence of sensing capabilities on the performance of supermarkets in Kenyan Cities is statistically significant. The results support the findings of research conducted by Pundziene *et al.* (2021) that established that sensing capabilities play a crucial role in filtering and aligning identified opportunities to the company's vision, mission, and objectives that facilitate good results that lead to improved firm performance. Additionally, the results of this results agree with a study conducted in Indonesia by Sudrajat *et al*. (2019) on the role of sensing capabilities on financial performance. The result of the study indicated that sensing capabilities enhanced environmental scanning and analysis of market trends resulting in improved financial performance.

The results of this study support the results of another study conducted by Chiarelli (2021) on the impact of dynamic capabilities and market orientation on firm performance. The study was on sole traders, micro and small enterprises (MSEs). The results indicated that sensing capability had a positive and significant relationship with performance. Mursitama *et al*. (2021)carried out a study on the role of sensing capability, and entrepreneurial ecosystem in boosting performance. The results of the first hypothesis showed that sensing capability had a positive and significant effect on small businesses' performance. The findings of the study conducted by Mursitama *et al*. (2021)are similar to the results of this study which indicate that sensing capabilities have a significant influence on the performance of supermarkets.

## Conclusion

The study sought to examine the influence of sensing capabilities on the performance of supermarkets in Kenyan cities. The research findings revealed that sensing capabilities have a statistically significant influence on the performance of supermarkets in Kenyan cities hence the null hypothesis was rejected. The results affirmed that sensing capabilities enable supermarkets to consistently monitor competitors' activities and identify customer trends by collecting, analyzing, and interpreting data from the business environment. Environmental scanning enables supermarkets to serve the target customers better, which impacts positively on performance. The ability of management to take risks to venture into new business opportunities is enhanced through entrepreneurial orientation. The study therefore concludes that supermarkets that have enhanced sensing capabilities can identify opportunities in the business environment that lead to improved supermarket performance.

## Recommendation

The study demonstrated that sensing capabilities had a significant influence on the performance of supermarkets in Kenyan cities. The study recommends that for supermarkets in Kenyan cities to improve performance, they should consistently identify new opportunities by conducting business environment analysis. The senior managers in supermarkets should develop simple but effective channels to enhance collection and analysis of the business environment. The study also recommends that managers should enhance their ability to interpret information to identify customer trends and new markets which will result in improved performance. Investors who want to focus on the supermarket sector should carry

out an analysis of the business environment to identify business opportunities and customer trends so that they can invest in products and areas that will lead to high returns.

There are several suggestions for further research. Firstly, this study was conducted among supermarkets in the retail sector and its findings may not be generalized in other sectors in Kenya. Further research using the same conceptual framework can be conducted in other sectors such as health and telecommunication. Secondly dynamic capabilities take time to

create and develop. This research was cross sectional in nature and a similar study should be conducted on a longitudinal basis to establish the evolutionary influence of dynamic capabilities on the performance of supermarkets.

**References**

Adim, C. V., & Pio, G. (2021). Opportunity-Sensing Capability and Entrepreneurial Mindset of Domestic Airlines in Nigerial. *Journal of Strategic and Internet Business*, *6*(3), 2166–2181.

Akkaya, B., & Qaisar, I. (2021). Linking Dynamic Capabilities and Market Performance of SMEs: The Moderating Role of Organizational Agility. *Istanbul Business Research*, *0*(0), 0–0. https://doi.org/10.26650/ibr.2021.50.961237

Ali, Z. M., & Wambua, P. P. (2021). Dynamic capabilities and performance of Selected commercial banks in Nairobi city County, Kenya. *International Academic Journal of Human Resource and Business Administration*, *3*(10), 273–298. https://iajournals.org/articles/iajhrba_v3_i10_273_298.pdf

Arun, K., & Ozmutlu, Y., S. (2022). Narratives of environmental munificence of 3PL firms on the relationship between dynamic capabilities, strategic management and organizational performance. *Journal of Strategy and Management*, *15*(1), 96–118. https://doi.org/10.1108/JSMA-01-2021-0019

Bitetti, L., & Gibbert, Mi. (2022). The road to continuous business model innovation: A longitudinal study unveiling patterns of cognitive sensing dynamic capabilities. *Creativity and Innovation Management*, *31*(1), 123–140. https://doi.org/10.1111/caim.12477

Chatterjee, S., Chaudhuri, R., Vrontis, D., & Thrassou, A. (2022). Impact of organizational dynamic capability on international expansion and the moderating role of environmental dynamism. *International Journal of Organizational Analysis*. https://doi.org/10.1108/IJOA-10-2021-3003

Chiarelli, A. (2021). The impact of dynamic capabilities and market orientation on firm performance: A case study of higher education consulting firms. *Small Business International Review*, *5*(1), e312. https://doi.org/10.26784/sbir.v5i1.312

Darawong, C. (2018). Dynamic capabilities of new product development teams in performing radical innovation projects. *International Journal of Innovation Science*, *10*(3), 333–349. https://doi.org/10.1108/IJIS-07-2017-0060

Fatoki, O. (2021). Dynamic capabilities and performance of hospitality firms in South Africa: The mediating effects of innovation. *GeoJournal of Tourism and Geosites*, *36*(2spl), 616–623. https://doi.org/10.30892/gtg.362spl08-690

Gazi, F., Atan, T., & Kılıç, M. (2022). The Assessment of Internal Indicators on The Balanced Scorecard Measures of Sustainability. *Sustainability*, *14*(14), 8595. https://doi.org/10.3390/su14148595

Kalu, O., & Alagah, D., A. (2022). Sensing Capability and Organizational Competitiveness of Manufacturing Firms in South-South, Nigeria. *International Academic Journal of Business Systems & Economics*, *8*(1), 01–12.

Kanano, A. G., & Wanjira, J. (2020). Strategic management practices and performance of supermarkets in Nakuru County, Kenya. . . *International Academic Journal of Human Resource and Business Administration*, *3*(9).

Kaplan, R. S., & Norton, D. P. (2001). Transforming the Balanced Scorecard from Performance Measurement to Strategic Management: Part I. *Accounting Horizons*, *15*(1), 87–104. https://doi.org/10.2308/acch.2001.15.1.87

Karimi, E., & Waruguru, M. (2018). Influence of vertical integration on organizational response to the dynamic environment in wholesale and retail supermarket outlets in Nakuru in Nakuru, Kenya. *International Journal of Business Management and Economic Review*, *1*(05).

Kimani, M. M., & Otinga, H. N. (2019). Influence of dynamic capabilities on firm performance in the manufacturing sectore in Kenya. A case of Ketepa limited. *Strategic Journal of Business & Change Management*, *6*(1). https://doi.org/10.61426/sjbcm.v6i1.1094

Maisori , B. M, & Kinoti, M. (2018). *Point Of Purchase Displays And Fixtures; Rationale For Acceptance In Kenya Supermarkets*. https://doi.org/10.5281/ZENODO.1202085

Mbatia, C., & Wanjiku, A. (2020, September 14). *The Collapse of Supermarket Chains: Evidence and Lessons for Retail Giants - Business Today Kenya*. https://businesstoday.co.ke/the-collapse-of-supermarket-chains-nakumatt-collapse-ukwala-supermarkets-nakumatt/

Mbura, M. L., & Odollo, L. (2022). The influence of strategic leadership on the organizational performance of selected supermarket chains in kiambu county, kenya. *International Academic Journal of Human Resource and Business Administration*, *4*(1), 363–385.

Mu, J. (2017). Dynamic Capability and Firm Performance: The Role of Marketing Capability and Operations Capability. *IEEE Transactions on Engineering Management*, *64*(4), 554–565. https://doi.org/10.1109/TEM.2017.2712099

Mursitama, T. N., Furinto, A., & Wijanto, S., H. (2021). *Sensing capability, entrepreneurial ecosystem to boost small business performance. 27*(3), 7.

Pundziene, A., Nikou, S., & Bouwman, H. (2021). The nexus between dynamic capabilities and competitive firm performance: The mediating role of open innovation. *European Journal of Innovation Management*, *25*(6), 152–177. https://doi.org/10.1108/EJIM-09-2020-0356

Souza, C. P. S., & Takahashi, A. R. W. (2019). Dynamic capabilities, organizational learning and ambidexterity in a higher education institution. *The Learning Organization*, *26*(4), 397–411. https://doi.org/10.1108/TLO-03-2018-0047

Sudrajat, D., Saroso, H., Herlina, M., G., & Syahchari, D., H. (2019). The Role of Sensing Capability in Improving Financial Performance of Logistics Service Firms. *International Journal of Innovation*, *10*(9), 10.

Teece, D. J. (2014). The Foundations of Enterprise Performance: Dynamic and Ordinary Capabilities in an (Economic) Theory of Firms. *Academy of Management Perspectives*, *28*(4), 328–352. https://doi.org/10.5465/amp.2013.0116

Teece, D. J. (2019). A capability theory of the firm: An economics and (Strategic) management perspective. *New Zealand Economic Papers*, *53*(1), 1–43. https://doi.org/10.1080/00779954.2017.1371208

Teece, D., J., Pisano, G., & Shuen, A. (1997). *Dynamic Capabilities and Strategic Management*. 36.

Wang, L., Li, E., P, H., & Ding, X. (Sara). (2018). Does deliberate learning lead to dynamic capability? The role of organizational schema for Kodak, 1993-2011. *Journal of Strategy and Management*, *11*(1), 52–80. https://doi.org/10.1108/JSMA-11-2016-0083

Xiao, J., Zhang, H., & Han, L. (2023). How Digital Transformation Improve Government Performance: The Mediating Role of Partnering Agility. *IEEE Access*, *11*, 59274–59285. https://doi.org/10.1109/ACCESS.2023.3284793

Yoshikuni, C., A. (2021). IT Governance as Drivers of Dynamic Capabilities to Gain Corporate Performance Under the Effects of Environmental Dynamism. *International Journal of Business, Economics and Management*, *8*(3), 181–206. https://doi.org/10.18488/journal.62.2021.83.181.206