International Journal of Democratic and Development Studies (IJDDS), Vol. 5, No. 2, January, 2022.
Available online at http://journals.rcmss.com/index.php/ijdds ISSN: 2350-224X (E) ISSN: 2346-7223 (P)
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Dynamic Capability and the Performance of West African Ceramics Limited Ajaokuta, Kogi State

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Abstract
There is a steady increase in the rate of competitiveness in business owing to the reality of global dynamics, increased customers awareness and influence of advanced technology. This study titled: dynamic capability and performance of West African Ceramics Limited Ajaokuta, Kogi state North-central Nigeria is written to examine the effect of dynamic capability on performance of manufacturing sub-sector in North-central Nigeria. The study adopts descriptive research design and population of the study is 841 which cut across Management, senior and junior categories of employees in the company. However, considering the large size of the population the study adopt the Rakesh 2013 sample size statistical formula to reach respondents numbering 280 through a structured questionnaire but only 244 respondents completed and returned their questionnaire given 84% retrieval rate. Pilot study was conducted using a test retest method and tested using Cronbach alpha to establish the reliability of the instrument. The instrument was also face and content validated. More so, survey research design was adopted, and the statistical tools used comprised descriptive and inferential statistics while hypotheses tested using linear regression analysis. Findings revealed that there is a significant positive relationship between adaptive capability and first pass yield ($r = .928$, p-value <0.05) and that there is a significant positive relationship between absorptive capability and cycle time ($r = .883$ p-value <0.05). In view of the findings, the study concludes that there is significant positive relationship between dynamic capability and performance of West African Ceramics Limited Ajaokuta Kogi State North-central Nigeria. Premised on the finding the study therefore recommends that manufacturing firms should strengthened their dynamic capability strategies to enable them integrate their policies towards continuous monitoring of likely changes in the industry. This will guarantee the continuous performance improvement of the firms since industrial climate is becoming more dynamic.
Keywords: *Dynamic, Capability, Innovation, Performance.*

DOI: URL:https://doi.org/10.36758/ijdds/v5n2.2022/02

Introduction

There is a steady increase in the rate of competitiveness in business owing to the reality of global dynamics, increased customers awareness and influence of advanced technology. This scenario poses survival threats to all forms of businesses (public and private, manufacturing and services). Thus, striving amidst this current reality do not only require adoption of innovative business strategies but to adopt them currently. Manufacturing sector play significant role to socio-economic development of nations globally considering its multiplier effects in improving nations revenue profile, employment generation, creating a platform for entrepreneurial pedagogy (Naida & Von, 2014) . For example, in Nigeria, the manufacturing sub -sector accounts for the persistent improvement in

the nation's economic profile globally, this is due to its potentials in the areas of increased revenue, entrepreneurial culture, employment generation and the capability of broadening economic value chain (Agbionu, 2018). In a dynamic business environment, rapid adaptation, innovation or transformational activities to strive amidst such changes are deemed as competitive advantage (Akpan, Enemuo, Onyechere, 2019, Tobias & Stephen, 2021). This implies that if businesses must strive, they require to consistently adopt transformational and innovative strategies to strive and compete favourably in the business terrain.

However, manufacturing sector in Nigeria have seen faced with the challenges of low performance in the past (Cristiane *et al*, 2017). This is also evidence in west Africa Ceramics company limited Ajaokuta, Kogi State. Though, the company has in recent time initiated and adopted innovative strategies to integrate, build and reconfigure the firm internal resources to enable it compete amidst these glaring challenges but its performance is still not up to the desired expectations. For instance, the management adopted dynamics capability strategies which are seen as the firm potential in adopting new and unique techniques of conforming its internal resources to tackle the controllable and uncontrollable business environments (Naida & Von, 2014). This implies that dynamic capability which could be executed through both adaptive and absorptive capability is expected to enhance firm performance leading to first pass yield and cycle time minimization.

More so, there have been studies carried out on the impact of dynamic capability on firm performance Naidi and Von (2014), Mohammed, Norshahrizan and Wan (2017), David et al (2019), Cannet and Versha (2017) and Critiance et al (2017) but the performance of manufacturing firms still persist. This studies even though bordered on manufacturing firms were carried out in different environments thus could not be relied on completely. The Nigerian government has shown concern in the past to address the glaring challenges of manufacturing firms but these challenges still persist. In North-central Nigeria, the major manufacturing firms produce Ceramic tiles. These firms also supply its products across all other regions of the country. This therefore suggests that the product do not only have significant socio-economic impact on the North-central but also to the entire nation. Based on this premise, the performance of Ceramic firms affects the nation economic fortunes thus; this study focuses on the firm with the intent of not only sustaining such performance but to improve such.

Ceramics play an important role in addressing several household, industrial and environmental needs hence it is very significant to Nigeria's socio economic development. For example, Adegbie and Adeniji (2017), Nzewi, Obianuju and Chibuzor (2017) and Nzewi, Obianuju, Agu and Augustine (2017) revealed that industrialization propels economic growth and rapid technological exploration towards national development. Specifically, Eke (2009) and Kunle (2015) revealed that ceramic production has played an impressive role to Nigerian economy through its economic value chain in the building industry. This according to Kunle (2015) led to economic progression and local material utilization. Again, the significant role of the manufacturing sub – sector particularly Ceramic companies in improving Nigerian economic and social fortunes through exploration of local raw materials, increased employment opportunities as well as broadening entrepreneurial opportunities cannot be over-emphasized. However, there seems to be a glaring gap between what the customers and other stakeholders expects and what the firms actually provides hence, this research examine the application of dynamic capability and how it to enhances the performance of west African ceramics company limited Ajaokuta, Kogi State North central, Nigeria.

Statement of the Problem

Manufacturing firms in Nigeria particularly North-central seem not to have strived successfully in meeting its immediate and strategic objective (Omale & Oriaku, 2017). There seems to be a gap between the real output and the expected targeted of West African Ceramics Limited Ajaokuta, Kogi

State despite its business strategies in pursuing these objectives. For example, the firm first pass yield seems to be abysmally low as the rate of scrap, repairs and rejection increases while the cycle time seems not to be efficient too.

There seems to be increase in idle time, waiting time and wastages despite measures adopted by the firm through adoptive and absorptive capability to address these. These challenges of low performance still persist. Similarity, extant literature supported this, for example, Vaneet and Versha (2017), Naida and Von (2014),Cristiane et al (2017) and David et al (2019) revealed that performance of manufacturing firms largely depends on its innovative strategies.

However, it is still unclear the extent of relationship between dynamic capability and firm performance in Nigeria as most of these studies were conducted outside Nigeria, David *et al* 2019) , Germany, Cristaine *et al* (2017), Brazil, Vancet and Versha (2017), India, Naidi and Von (2014), Europe while that of Mohammed et al (2017) conducted in Nigeria covered small and medium scale enterprises in all sectors. These studies therefore produced conflicting, inclusive and inconsistent findings. Thus, this research is set to examine the relationship between dynamic capability and performance of West African Ceramic Limited Ajaokuta, Kogi State, North-central Nigeria.

Objectives of the Study

Generally, this study examines dynamic capability and its impact on the performance of West African Ceramics Limited Ajaokuta, Kogi state North-Central, Nigeria. The study is however set to achieve the following specific objectives:

1. To determine the relationship between adaptive capability and first pass yield.
2. To examine the relationship between absorptive capability and cycle time.

Research Questions

This study is guided by the following research questions:

1. What are the effects of adaptive capability on first pass yield?
2. What are the effects of absorptive capability on cycle time?

Hypotheses of the Study

Consequent upon the research objectives and research questions, the study formulates the following research hypotheses in their null form to guide the research:

H_1: There is no significant relationship between adaptive capability and first pass yield.

H_2: There is no significant relationship between absorptive capability and cycle time.

Literature Review

Dynamic capability

Business environment is becoming more competitive owing to the global dynamics where customers are becoming more aware, competition becoming stiffer therefore firms needs to strategizes and re-strategize to fit in and adapt its internal resources toward attaining its immediate and strategic objectives thus the need for dynamic capability. Dynamic capability is seen as the conscious capability of a firm to adapt firm resource base. Thus, dynamic capability enables the firm to build, integrate as well as reconfigure its internal and external competency towards meeting rapidly changing environment (Muhammed, Norshahrizan & Wan, 2017). Dynamic capability is also seen as the firm inherent capability to purposely and optimally adapt and pursue firms' immediate and strategic objectives using resource base. Thus, dynamic capability should be able to add value in exploiting the firms several opportunities thereby neutralizing the threats as a result of the market volatility (Nguyen, 2021). Muhammed *et al* (2017) argued that dynamic capability also involves co-

specialization which is seen as a strategy of combining both human resources, physical assets as well as the firms' intellectual resources. More so, dynamic capability is cauterized with rareness which enables the firm to posses' rare competencies and resourcefulness to strive successfully in the market terrain. More so, dynamic capability entails the firms involving key personnel to learn, re-learn and unlearn outdated skills to enable them attain innovative strategies to fit in and sustain its business operations effectively. Thus, dynamic capability enables the firm to attain both internal and external transformation of its current assets by configuring same to meet the business dynamics in the most efficient manner. Again, sustaining firm competitive advantage requires innovative strategies amidst this global competitiveness characterized by changing, unpredictable customers demands and preferences hence, manufacturing firms adapts its internal competences and resources to pursue its goals.

Adaptive Capability

Adaptive capability is seen as firm ability to rapidly configure, reconfigure and coordinate its resources in response to sudden environmental changes in pursuance of sustaining its previous performance, Kvar and Mehta (2016), Hofer, Nichoff and Wuehrer (2015) identified adaptive capability as the firms exploration of business opportunities while remaining flexible to fit business environmental dynamics.

Adaptive capability is seen as the ability of a firm to monitor changes in an industry to enable them match the skills and strategies of other stakeholders in the industry (Kuar & Mehta, 2016). Therefore, adaptive capability enables firm to posses the ability to identify and recognize the value of new information, comprehend and convert such into a commercial enterprise.

Vaneet and Versha (2017) noted that the adaptive capability of a firm is broader than that of individual employee within the firm thus; adaptive capability is seen as a systematic approach which must be properly articulated and be accepted by all the critical stakeholders within the system thus, firms that pursues and possess adaptive capability strive effectively.

Absorptive capability

Absorptive capability is the firm ability to identify posses and utilize external resources in its favour. Tseng and Lee (2014) noted that absorptive capability entails integration of firms' external information into its knowledge base. Absorptive capability is also seen as the ability of a firm to harness and comprehend new knowledge acquired through network and collaborations so as to improve the skill possessed by the firm (Kuar & Mehta, 2016). Therefore, Vanneet and Versha (2017) argued that absorptive capability is anchored on four fundamental dimension such as knowledge acquisition, knowledge transformation, knowledge assimilation and knowledge exploitation. However, adaptive capability could be displayed through knowledge acquisition and assimilation while knowledge transformation and acquisition is the evidence of absorptive capability.

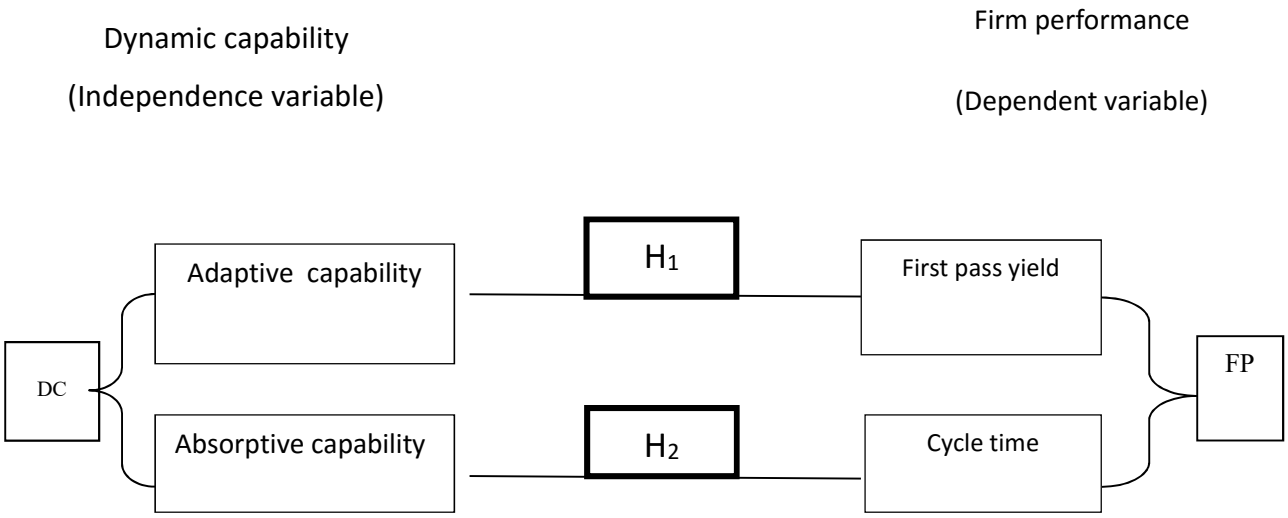
Firms' Performance

Organizational or firm performance can be described as the organizational capacity to reach its goal by utilizing resources in an efficient and effective manner (Ayesa, 2015). However, Anyadike (2013) sees firm performance as the cumulative record of firm output in relation to individual accomplishment. According to Apeyusi (2012) performance encompasses the integrated competency level and accomplishment which include objective settings and review. To this end, performance also integrate the measure which according to Armstrong (2012) indicated what is being expected from the individual employees as well as the organization itself thereby pursuing the attainment of these objectives. Thus, Ayesa *et al* (2015) argued that performance should be concise, precise, unequivocal and comprehensive enough to understand and be interpreted towards giving the relevant

output that would increase organizational efficiency. Andre and Paul (2011), Agbionu and Arachie (2018), Agbionu and Audu (2021) noted that effective performance would cover the several areas such as first pass yield and cycle time, product quality, employees satisfaction, customers satisfaction etc. Consequently, performance tools should be accepted by both the job incumbent and the employers so that the climate for mutual collaboration towards the achievement of these objectives could be paramount.

Conceptual model

Fig 1: Dynamic Capability and Performance



Source: Vaneet & Versha (2017)

Figure 1 above shows that dynamic capability is the independent variable and it is decomposed with adaptive and absorptive capabilities while the dependent variable is firm performance. The performance of firm which is the dependent variable is decomposed with first pass yield and cycle time. From the figure 1 too, it revealed that adaptive capability could enhance first pass yield while absorptive capability leads to cycle time.

Empirical Review

Naidi and Von conducted a research in 2014 titled : Dynamic capabilities and performance: An empirical study of Audio-visual producers in Europe. The objective of the study was to examine the relationship between dynamic capability and performance. The study which was quantitative adopted a descriptive research design and data was collected through primary sources and analyzed using mean and standard deviation while hypotheses were tested with ordinary least square equation. This study revealed that there is a significant relationship between dynamic capability and firm performance. The study was conducted in Europe.

Again, Vaneet and Versha conducted a research in 2017 on Dynamic Capability for competitive advantage: A comparative study of IT multinationals in India. The research adopted descriptive research survey design and reached respondents who are employees of IT multinational companies in India. The data were analyzed using both descriptive and inferential statistics while finding revealed that dynamic capabilities enhance firm competitive advantage in India. More so, Critiane, Winnie, Miguel and Cintia conducted a research in 2017 on CRM system: The Role of Dynamic capabilities in creating innovation capability. The research was conducted in Brazil and the

researchers reached respondents through interview method. Findings revealed that dynamic capability is a potent tool in creating firm innovative capability in Brazil.

Canh and Bui in 2019 carried out a research on the relationship between innovation capability and firm performance in Electronic companies, Vietnam. The study adopted research survey design by reaching respondents numbering 374 and data were analyzed using ordinary least square equation models. Finding revealed that there is a significant relationship between firms' innovative capability and performance.

Finally, David, Ehringer, Stadlmann, Uberwimmer, Mang and Anna conducted a research in 2019 on the performance effect of dynamic capabilities in Servitizing companies. The research was carried out in Germany and it adopted a descriptive research survey design reaching 206 manufacturing firms. The data were analyzed using descriptive and inferential statistics; findings revealed that dynamic capabilities enhance firm performance.

Gap in Literature

Though, most of these studies border on dynamic capability and firm performance. The studies also revealed that there is significant relationship between dynamic capability and performance David *et al* (2019), Vaneet and Versha (2017), Naida and Von (2014). However, most of these studies were conducted in other countries such as India, Brazil and Germany hence, the findings can not expressly be replicated in Nigeria. Besides, these studies covered service sector whereas, the current study is focused on manufacturing firm. More so, to the best of the researchers knowledge, none of these studies measured performance of firms using first pass yield and cycle time hence, this study fills the gap. More so, the Nigerian business environment is more prone to low performance owing to the adverse economic effect of the novel coronavirus pandemic. Thus, the findings of this research would be able to review how manufacturing firms could strive through application of dynamic capability.

Theoretical Framework

This study on dynamic capability and performance of manufacturing firms focuses on dynamic capability view.

Dynamic capability view

Dynamic capability view validates firms' strategies to strive competitively using firm internal capabilities. This theory according to Barreto (2010) and Enbrink *et a*l (2009) enable firms to strive in a complex, dynamic and unpredictable business environment using firms internal resources. Thus, this theory focuses on firm ability to pursue its immediate and strategic objectives, adoption of its internal resources. Therefore, dynamic capability view leads to firm operational efficiency as well as improved performance through an aggressive integration of its resources towards conforming such with the environmental dynamics. More so, the dynamic capability view portrays that there are firms internal resources which could either have direct or indirect effects. To this end, dynamic capability view enables the firms to identify and pursue strategies that spur them to pursue their goals profitably by conforming their internal resources, structures, strategies towards their goals hence formulates and articulates strategies to create new products to render new services to enable them survive the trends and business dynamic. This theory is relevant to the study on dynamic capability and firm performance considering the fact that the theory has practical application to this research.

Research Methodology

This research adopts the descriptive research survey design. This technique is basically adopted as a research survey through which group of individuals or items are reached by collecting and analyzing data from few respondents or which represents the entire population. Hence, the study which

examines dynamic capability and the performance of West African ceramics Limited Ajaokuta, Kogi state involved collecting data through primary sources. The primary data obtained is through a 16 items structured questionnaire. The population of this study comprised the entire employees in the focused firm. The total population is 841. However, considering the fact that the population for this study is relatively large, it becomes impossible to cover the entire population. Hence, the researchers reached respondents sampled for the study. To this end, out of the total of 841 questionnaires distributed only 280 were duly completed and retrieved giving a response rate of 84%. The research adopts the probability random sampling technique so that every respondent could be given fair chances of representation. The researchers applied the Rakesh 2013 sample size statistical formula to determine the sample size.

The Rakesh 2013 sample size formula is given thus:

$$SS = \frac{PS}{[1+(PS\ x\ PE)^2]}$$

Where: SS = sample size

P = population size

PE = precision of error (5%)

Hence since the population is 841 we have;

$$SS = \frac{841}{[1+(841\ x\ 0.05)^2]}$$

$$SS = \frac{841}{[1+841\ x\ 0.0025]}$$

SS = 280, however out of the total questionnaire distributed only 244 were returned giving 84% retrieve rate.

The questionnaire was the main source of primary data and it bordered on both independent and dependent variables. The questionnaire was designed in close ended form using a five- point Likert-scale responses of strongly agree (5), Agree (4), Undecided (3), Disagree (2) and strongly disagree (1). The study employed the services of a trained research assistant who helped in the distribution and retrieval of the research questionnaire. More so, the research questions were analyzed using a five - point's Likert-scale with the decision rule to accept any mean value with 3.00 and above. The inferential statistics used in testing the hypotheses is linear regression which examined the strength of relationship between the independent and dependent.

Reliability of the Instrument

Reliability of this study was used to determine the internal consistency of the instrument. Bello etal (2014) argued that research instrument is termed to be reliable if it produces similar results under consistent circumstances. More so, Bello *et al* (2014) noted that any coefficient of reliability which is 0.70 and above should be considered reliable. Therefore, to test the reliability of the research instrument, the study conducted a pilot study by distributing questionnaires numbering twenty five (25) to the target respondents through the help of a trained research assistant; the Cronbach Alpha coefficient measure of internal consistency was adopted. The reliability of the instrument using Cronbach alpha reliability test with the Statistical Package for Social Sciences (SPSS) version 23 showed the result of 0.82 for absorptive capability, 0.77 for first pass yield, 0.88 for absorptive capability and 0.73 for cycle time. The reliability results are shown in table 1 and 2 respectively.

Table 1. Reliability Statistics

Proxies/ Independent Variable	Number of items	Cronbach Alpha
Adaptive capability	4	0.82
First pass yield	4	0.77

Source: SPSS statistical analysis

The 1 revealed that all the variables have Alpha Values above 0.70. Therefore, in line with the recommendation by Bello et al (2014) the instrument is deemed reliable.

Table 2. Reliability Statistics

Proxies/ dependent Variable	Number of items	Cronbach Alpha
Absorptive capability	4	0.88
Cycle time	4	0.73

Source: SPSS statistical analysis

The 2 revealed that all the variables have Alpha Values above 0.70. Therefore, in line with the recommendation by Bello et al (2014) the instrument is deemed reliable.

Data Analysis and Results

This section presents and analyses the data obtained from the respondents. The total number of questionnaires distributed to respondents was 280 but only 244 were duly completed and returned given 84% retrieval rate. Therefore, 36 respondents which form 16% of the entire sample size did not returned their questionnaires hence the presentation and analysis of data in this section was executed using the total respondents who returned their questionnaires. This is in line with Aruwa and Ame (2015) and Olumide (2015).

Table 3. Descriptive statistics on adaptive capability

	Adaptive capability	SA 5	A 4	U 3	D 2	SD 1	Mean	Standard Deviation
1.	My employer does encourage me to adopt new marketing strategies.	95 (38.6%)	72 (29.3%)	44 (17.9%)	24 (9.8%)	9 (3.7%)	3.90	1.14
2.	I am sensitized to constantly monitor technical changes in the industry.	87 (35.4%)	75 (30.5%)	46 (18.7%)	24 (9.8%)	12 (4.9%)	3.82	1.16
3.	My firm does encourage me to consistently observe competitors actions.	43 (17.5%)	37 (15%)	60 (24.4%)	81 (32.9%)	23 (9.4%)	2.98	1.25
4.	My employer does encourage me to keep regular check on innovative activities in the market.	95 (38.6%)	52 (21.1%)	46 (18.7%)	26 (10.6%)	25 (10.2%)	3.68	1.35
	Average mean/SD						3.60	1.23

Source: Research Survey, 2022

Table 3 shows the responses on the likert scale questions, mean and standard deviation. For the question on whether the employer does encourage them to adopt new marketing strategies 95 respondents (38.6%) strongly agreed, 72 respondents (29.3%) agreed, 44 respondents (17.9%) were undecided, 24 respondents (9.8%) disagreed while 9 respondents (3.7%) strongly disagreed. The mean value of 3.90 and standard deviation 1.14 > 3.00 which means that most of the respondents agreed. For the questions on whether employees are sensitized to constantly monitor technical changes in the industry, 87 respondents (35.4%) strongly agreed, 75 respondents (30.5%) agreed, 46 respondents (18.7%) were undecided, 24 respondents (9.8%) disagreed while 12 respondents (4.9%) strongly disagreed. The mean value is 3.82 and standard deviation 1.16 > 3.00 showing that most of the respondents agreed.

For the questions on whether firm does encourage employees to consistently observe competitors actions, 43 respondents (17.5%) strongly agreed, 37 respondents (15%) agreed, 60 respondents (24.4%) were undecided, 81 respondents (32.9%) disagreed while 23 respondents (9.4%) strongly disagreed. The mean value of 2.98 and standard deviation 1.25 < 3.00 indicating that most of the respondents disagreed. In addition, for the question on whether the firm does encourage respondents to keep regular check on innovative activities in the market, 95 respondents (38.6%) strongly agreed, 52 respondents (21.1%) agreed, 46 respondents (18.7%) were undecided, 26 respondents (10.6%) disagreed while 25 respondents (10.2%) strongly disagreed. Therefore with the mean value of 3.68 and standard deviation of 1.35 which is > 3.00 it means that most of the respondents agreed. Finally the average mean value of 3.60 and standard deviation 1.23 > 3.00 indicating acceptance of the overall response on adaptive capability.

Table 4. Descriptive statistics on absorptive capability

S/no	Absorptive capability	5 SA	4 A	3 U	2 D	1 SD	Mean	Standard Deviation
5.	.My employer encourages me to collect industry relevant information informally.	58 (23.6%)	37 (15%)	34 (13.8%)	102 (41.5%)	13 (5.3%)	3.10	1.32
6.	I am encouraged to seek advice from third party.	102 (41.5%)	76 (30.9%)	53 (21.5%)	10 (4.1%)	3 (1.2%)	4.08	0.95
7.	The firm encourages me to make constant interactions outside my working environment.	94 (38.2%)	40 (16.3%)	54 (22%)	37 (15%)	19 (7.7%)	3.63	1.33
8.	I am encouraged to relate with other firms.	53 (21.5%)	23 (9.3%)	37 (15%)	18 (7.3%)	113 (45.9%)	2.53	1.64
	Average mean/SD						3.34	1.31

Source: Research Survey, 2022

Table 4 shows the responses to likert-scale questions, the mean and standard deviation. For the question on whether the firm encourages respondents to collect industry relevant information informally the responses revealed that 58 respondents representing (23.6%) strongly agreed, 37(15%) agreed, 34 (13.8%) were undecided, 102 (41.5%) disagreed and 13 (5.3%) strongly disagreed. The mean value is 3.10 and standard deviation is 1.32 which means that most respondents strongly agreed that the firm encourages respondents to collect industry relevant information informally since the mean value >3.00.

For the question on whether the employees are encouraged to seek advice from third parties 102 (41.5%) strongly agreed, 76 (30.9%) agreed, 53 of the respondents (21.5%) were undecided, 10 of the respondents (4.1%) disagreed while 3 (2.7%) strongly disagreed. This implies that most of the respondents agreed since the mean value and standard deviation are 4.08 and 0.95 respectively which justifies mean > 3.00.

More so, for the question on whether the firm encourages respondents to make constant interactions outside their working environment.94 respondents representing (38.2%) strongly agreed, 40 (16.3%) agreed, 54 of the respondents (22%) were undecided, 37 respondents (15%) disagreed while 19

respondents (7.7%) strongly disagreed. Thus it means that most of the respondents agreed since the mean and standard deviation shows 3.63 and 1.33 respectively justifying > 3.00

In addition, for the question on whether employees are encouraged to relate with other firms, 53 respondents representing 21.5% strongly agreed, 23 respondents (9.3%) agreed, 37 respondents (15%) were undecided, 18 respondents (7.3.%) disagreed while 113 respondents (45.9%) strongly disagreed. This shows that most of the respondents disagreed since the mean score of 2.53 and standard deviation of 1.64 < 3.00. Therefore, on the average, the mean value is 3.34 and standard deviation for absorptive capability is 1.31 indicating that overall response is accepted.

Table 5. Descriptive statistics on first pass yield

	First pass yield	SA 5	A 4	U 3	D 2	SD 1	Mean	Standard Deviation
9.	I observed that there is reduction of rejection of the products offered to customers.	130 (52.8%)	14 (5.7%)	2 (0.8%)	63 (25.6%)	35 (14.2%)	3.58	1.64
10.	I observed that there is a reduced internal scrap.	95 (38.6%)	72 (29.3%)	44 (17.9%)	24 (9.8%)	9 (3.7%)	3.90	1.14
11.	I observed that the repairs are avoided as much as possible during production process.	117 (47.6%)	75 (30.5%)	10 (4.1%)	7 (2.8%)	34 (13.9%)	3.99	1.44
12.	My employer ensures that there is less likelihood of unrelated activities during production process.	53 (21.5%)	23 (9.3%)	37 (15%)	18 (7.3%)	113 (46.3%)	2.53	1.64
	Average mean/SD						3.50	1.47

Source: Research Survey, 2022

Table 5 shows the responses on the likert scale questions, mean and standard deviation. For the question on whether there is reduction of rejection of the products offered to customers, 130 respondents (52.8%) strongly agreed, 14 respondents (5.7%) agreed, 2 respondents (0.8%) were undecided, 63 respondents (25.6%) disagreed while 35 respondents (14.2%) strongly disagreed. The mean value of 3.58 and standard deviation 1.64 > 3.00 which means that most of the respondents agreed.

For the questions on whether there is a reduced internal scrap, 95 respondents (38.6%) strongly agreed, 72 respondents (29.3%) agreed, 44 respondents (17.9%) were undecided, 24 respondents (9.8%) disagreed while 9 respondents (3.7%) strongly disagreed. The mean value is 3.90 and standard deviation 1.14 > 3.00 showing that most of the respondents agreed.

For the questions on whether the repairs are avoided as much as possible during production process, 117 respondents (47.6%) strongly agreed, 75 respondents (30.5%) agreed, 10 respondents (4.1%) were undecided, 7 respondents (2.8%) disagreed while 34 respondents (13.8%) strongly disagreed. The mean value of 3.99 and standard deviation 1.44 > 3.00 indicating that most of the respondents agreed.

For the question on whether employer ensures that there is less likelihood of unrelated activities during production process, 53 respondents (21.5%) strongly agreed, 23 respondents (9.3%) agreed, 37 respondents (15%) were undecided, 18 respondents (7.3%) disagreed while 113 respondents (45.9%) strongly disagreed. The mean value of 2.53 and standard deviation 1.64 < 3.00 indicating that most of the respondents disagreed.

Finally the average means value of 3.50 and standard deviation 1.64 > 3.00 indicating acceptance of the overall response on first pass yield.

Table 6. Descriptive statistics on cycle time

	Cycle time	SA 5	A 4	U 3	D 2	SD 1	Mean	Standard Deviation
13.	There is prompt response in fulfilling customers order.	115 (40.4%)	74 (36%)	43 (15.1%)	30 (10.5%)	22 (7.7%)	3.96	1.25
14.	There is minimization of time in-between shipment from production to delivery to customers.	32 (11.2%)	24 (8.4%)	36 (12.6%)	59 (20.7%)	133 (46.7%)	4.03	1.19
15.	My employer strives to avoid idle time in production.	113 (39.6%)	49 (17.2%)	52 (18.2%)	46 (16.1%)	24 (8.4%)	3.10	1.32
16.	My employer is concerned about balancing time among men, machine and processes.	28 (9.8%)	25 (8.8%)	40 (14%)	18 (6.3%)	173 (60.7%)	3.85	1.19
	Average mean/SD						3.74	1.24

Source: Research Survey, 2022

Table 6 shows the responses on the likert scale questions, mean and standard deviation. For the question on whether there is prompt response in fulfilling customers order, 109 respondents (44.3%) strongly agreed, 76 respondents (30.9%) agreed, 19 respondents (7.7%) were undecided, 21 respondents (8.5%) disagreed while 19 respondents (7.7%) strongly disagreed. The mean value of 3.96 and standard deviation 1.25 > 3.00 which means that most of the respondents agreed.

For the questions on whether there is minimization of time in-between shipment from production to delivery to customers., 112 respondents (45.5%) strongly agreed, 77 respondents (31.3%) agreed, 19 respondents (7.7%) were undecided, 22 respondents (8.9%) disagreed while 14 respondents (5.7%) strongly disagreed. The mean value is 4.03 and standard deviation 1.19 > 3.00 showing that most of the respondents agreed.

For the questions on whether the firms strive to avoid idle time in production, 133 respondents (54.1%) strongly agreed, 40 respondents (16.3%) agreed, 16 respondents (6.5%) were undecided, 49 respondents (20.1%) disagreed while 6 respondents (2.5%) strongly disagreed. The mean value of 3.10 and standard deviation 1.32 > 3.00 indicating that most of the respondents agreed.

In addition, for the question on whether the firms are concerned about balancing time among men, machine and processes, 101 respondents (4.1%) strongly agreed, 53 respondents (21.5%) agreed, 53 respondents (21.5%) were undecided, 27 respondents (11%) disagreed while 10 respondents (4.1%) strongly disagreed. Therefore with the mean value of 3.85 and standard deviation of 1.19 which is >3.00 it means that most of the respondents agreed.

Finally the average means value of 3.74 and standard deviation 1.24> 3.00 indicating acceptance of the overall response on cycle time.

Test of Hypotheses

Hypothesis 1

H_1: There is no significant relationship between adaptive capability and first pass yield.

Table 7.

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.928[a]	.86.1	.749	1.60207	.106

a. Predictors: (Constant), adaptive capability
b. Dependent Variable: first pass yield

The model summary table reports the strength of relationship between the independent and dependent variables. The result of R stood at 0.928 indicating a significant relationship between the dependent variable first pass yield and the explanatory variable adaptive capability. The coefficient of multiple determinations R^2 measures the percentage of the total change in the dependent variable that can be explained by the independent or explanatory variable. The result indicates a R^2 of .861 showing that 86% of the variances in first pass yield is explained by the adaptive capability while the remaining 14% (i.e. 100 – 86) of the variations could be explained by other variables not considered in this model.

The adjusted R-square compensates for the model complexity to provide a fairer comparison of model performance. The result is supported by the value of the adjusted R which is to the tune of 86% showing that if the entire population is used, the result will deviate by 6.7% (i.e. 92.8 – 86.1), with the linear regression model, the error of the estimate is considerably low at 1.60207. The result of Durbin Watson test shows .106 therefore it shows that there is no auto correlation.

Table 8 ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	34.399	1	43.399	13.402	.000[b]
	Residual	621.122	242	2.567		
	Total	655.520	243			

a. Dependent Variable: first pass yield
b. predictors: (constant), adaptive capability

The ANOVA table confirms the results of model summary, analysis of the result revealed that F = 13.402 which is significant at (0.000) < 0.05. Hence, since the P-value < 0.05 (critical value), the null hypothesis that there is no significant relationship between adaptive capability and first pass yield is rejected.

Tale 9. Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.286	.368		6.219	.000
	Adaptive capability	.331	.090	.229	3.661	.000

a. Dependent Variable: first pass yield

The coefficient provides information on how the explanatory variable (the estimated coefficient or beta) influences the dependent variable. The result shows that the regression constant is 2.286 giving a predictive value of the dependent variable when all other variables are zero. The coefficient of adaptive capability is .331 with p-value of 0.000 less than (0.05%) critical value. Therefore, it can be concluded that the null hypothesis that there is no significant relationship between adaptive capability and first pass yield is rejected.

Hypothesis 2

H_2**:** There is no significant relationship between absorptive capability and cycle time.

Table 10. Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.883[a]	.779	.737	1.02150	.350

a. Predictors: (constant), absorptive capability
b. Dependent variable: cycle time

The model summary table reports the strength of relationship between the independent and dependent variable. The result of R stood at 0.883 indicating a significant relationship between the dependent variable cycle time and the explanatory variable absorptive capability. The coefficient of multiple determinations R^2 measures the percentage of the total change in the dependent variable that can be explained by the independent or explanatory variable. The result indicates a R^2 of .779 showing that 78% of the variances in cycle time is explained by absorptive capability while the remaining 12% (i.e. 100 – 78) of the variations could be explained by other variables not considered in this model. The adjusted R-square compensates for the model complexity to provide a fairer comparison of model performance. The result is supported by the value of the adjusted R which is to the tune of 78% showing that if the entire population is used, the result will deviate by 10.4.% (i.e. 88.3 – 77.9). With the linear regression model, the error of the estimate is considerably low at 1.02150. The result of Durbin Watson test shows .350 therefore it shows that there is no auto correlation.

Table 11 ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	130.149	1	130.149	124.727	.000[b]
	Residual	252.519	242	1.043		
	Total	382.668	243			

a. Dependent variable: cycle time
b. Predictors: (constant), absorptive capability

The ANOVA table confirms the results of model summary, analysis of the result revealed that F = 124.727 which is significant at (0.000) < 0.05. Hence, since the P-value < 0.05 (critical value), the null hypothesis that there is no significant relationship between absorptive capability and cycle time is rejected.

Table 12. Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.237	.168		13.329	.000
	Absorptive capability	.556	.050	.583	11.168	.000

a. Dependent Variable: cycle time

The coefficient provides information on how the explanatory variable (the estimated coefficient or beta) influences the dependent variable. The result shows that the regression constant is 2.237 giving a predictive value of the dependent variable when all other variables are zero. The coefficient of absorptive capability is .556 with p-value of 0.000 less than (0.05%) critical value. Therefore, it can be concluded that the null hypothesis that there is no significant relationship between absorptive capability and Product cycle time is rejected.

Discussion of Findings

This study has been able to revealed the findings from respondents based on the analysis through the descriptive and inferential statistics. The study revealed that there is a significant positive relationship between dynamic capability and performance of west Africa ceramic limited Ajaokuta, Kogi State. This finding conforms to the findings of Naidi and Von (2014) Vaneet and Versha (2017) which revealed that there is a significant relationship between dynamic capability and firm performance.
More so, the finding which revealed that there is a significant positive relationship between adaptive capability and first pass yield collaborated the findings of Cristiane et al (2017), Cabh and Bui (2019), Vaneet and Versha (2017) which revealed a significant positive relationship between dynamic relationship between dynamic capability and firm performance which were decomposed with competitive advantage as well as performance.

Finally, the study also revealed that there is a significant positive relationship between absorptive capability and cycle time. This finding is in line with the dynamic capability view which explores competitive advantage of firms through application of its internal resources to suit the changing business environment (Kraaijenbrink, Spender and Groen, 2010). This finding also affirms the dynamic capability theory which Barreto (2010) argued that such leads to enterprise resources configuration to spur such firm towards efficient service delivery. Finally, the finding supports the empirical findings of David et al (2019) which revealed that there is a significant positive relationship between dynamic capability and firm performance.

Conclusions

This study which examined dynamic capability and its effects on performance of manufacturing firms has been able to establish that there is a significant positive relationship between dynamic capability and performance of West African Ceramics Limited Ajaokuta Kogi State. The study also established that adaptive capability leads to first pass yield while absorptive capability enhance cycle

time minimization thereby leading to reduction of idle time and wastages or scrap during production processes.

Recommendations

From the empirical evidences which established that there is a significant positive relationship between dynamic capability and performance of West African ceramics limited, this study makes the following specific recommendations: Based on the finding that there is a significant positive relationship between adaptive capability and first pass yield the study recommends that the firm should strengthened its absorptive capability strategies to enable the firm to integrate its policies towards continuous monitoring of likely changes in the industry. This will guarantee the continuous performance improvement of the firm since industrial climate is becoming more dynamic.

More so, based on the finding that there is a significant positive relationship between absorptive capability and minimization of cycle time the study recommends that the firm should sustain its network and collaboration strategies in terms of getting relevant information to enhance their performance. Again, the firm should not only rely on gathering of information through informal means alone but should put up mechanism in place towards continuous training and retraining of its workforce as this will lead to more efficient service delivery to all critical stakeholders.

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