



EFFECTS OF CAPACITY PLANNING AND CONTROL ON CUSTOMER SATISFACTION IN SELECTED BANKS IN NORTH CENTRAL STATES, NIGERIA

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ABSTRACT

The research project considered effects of capacity planning and control on customer satisfaction in selected banks in North Central States, Nigeria. Banks key elements of effective capacity factors such as Automatic Teller Machine (ATM), Bank Hall aesthetic and comfortability, and Process factor in terms of time it takes for service delivery were examined. The objective was to ascertain whether each of these elements has any influence on customer satisfaction. Primary source of data was employed for this study. Data for this study was collected with the aid of a structured questionnaire. Questionnaire was shared to 1,050 customers of selected banks. Data was analyzed through Grand Mean test. Findings revealed that ATM, Banking Hall and Process factor have significant influence on customer satisfaction. On the basis of these findings, the study recommends that Banks should provide ATMs that are of high quality so that the rate at which customers account are debited without dispensing cash would be reduced. More seats are to be added to the existing sitting arrangement since there is increase in the number of people that are making use of banks in their transactions. It is equally recommended that the average time customers spent in the banking hall to access service should be looked into. There should be switching of staff when necessary.

KEY WORDS: *Capacity Planning and Control, Customer Satisfaction, Nigeria*

1.1 INTRODUCTION

The take-off and the continued growth and expansion of a bank depend on the level of capacity available. Usually, type of activities engaged in, technology available and responsiveness to competitive trends are contributing factors that shape the progressiveness or otherwise of a bank's capacity structure. In some instances, capacity choices are made regularly as part of an ongoing process. The aim of the capacity planner is to plan so well that new capacity is

added just in time to meet the anticipated need but not so early that resources go unused for a long period (Fitzsimmons and . Fitzsimmons, 2001; Wisner and Stanley, 2008

1.2 STATEMENT OF THE PROBLEM

Demand volatility presents problem for capacity planners. It tends to be higher for services than for goods, not only in timing of demand but also in the time required to service individual customers. The fact



that services cannot be stored means service system cannot turn to inventory to smooth demand requirements on the system the way the goods-producing systems are able to do (Saloner et al., 2001; Wisner and Stanley, 2008; Jhingan and Stephen, 2009; and Madueme, 2009). Due to this, customers do spend their productive hours in banks awaiting services. Customer satisfaction in the banks in the North Central States, Nigeria remains largely unattended to, upon this backdrop; the study will provide both short and long term solution to time wasting while accessing services at the bank by customers.

1.3. RESEARCH QUESTIONS

- i. What is the effect of ATM on customer satisfaction?
- ii. What is the effect, if any, of aesthetic appeal of bank building and comfortability on customer satisfaction?
- iii. What is the effect of process factor in terms of time taken on customer satisfaction?

1.4. AIMS, GENERAL AND SPECIFIC OBJECTIVES OF THE STUDY

The general objective of this study is effects of capacity planning and control on customer satisfaction in selected banks in north central states of Nigeria. The specific objectives are:

1. To find out the effects of Automatic Teller Machine (ATM) service on customer satisfaction.
2. To identify the effect of banking hall aesthetic and comfortability on customer satisfaction.
3. To determine whether the time taken for service delivery has significant effect or not on customer satisfaction.

1.5. RESEARCH HYPOTHESES

- i. Ho ATM service has no significant effect on customer satisfaction.
- ii. Ho Banking Hall aesthetic and comfortability does not significantly contribute to customer satisfaction.
- iii. Ho Time Taken for service delivery has no significant influence on customer satisfaction.

SIGNIFICANCE OF THE STUDY

The indispensability of banking hall on customer satisfaction cannot be overemphasized in banks. Previous studies carried out on customer satisfaction include the following. Okoh, Agavwe, and Aghadiuno (2009) investigated imperatives of effective management of customers' relationship, marketing for

efficient operations in industrial marketing organizations. Amue (2006) examined relationship marketing as the development, growth, and maintenance of long-term, cost-effective exchange relationships with individual customers, suppliers, employees, and other partners for mutual benefit. Okoroafor (2010) examined the exact timing and magnitude of fixed asset expansion through maintenance of a close relationship with the customers. However, this study would bridge the gap by focusing on effective and efficient service delivery in banks through effects of capacity planning and control on customer satisfaction in selected banks in North Central States, Nigeria. This study would be of significance for some reasons. It will contribute to knowledge by filling a gap in the area of meeting service delivery effectively and efficiently in selected banks in North Central States, Nigeria. Banks would also be better directed on policy decisions with regards to requirements needed for efficient service delivery. Findings of this study can help stimulate government blueprint for capacity planning and control measures in banks. In addition, the study would enhance conceptual issues relating to capacity planning. Future researchers in similar or related fields would find the material of invaluable use. Finally, it will serve as a pointer to ginger new research efforts in areas not touched in this study.

2.0. LITERATURE REVIEW

The initial take-off, as well as continued growth and expansion of an organization hinges on the level of capacity available. Usually, type of activities engaged in, technology available and responsiveness to competitive trends are contributing factors that shape the progressiveness or otherwise of an organization's capacity structure. This is buttressed by Stevenson (2002) that capacity is an upper limit or ceiling on the load that an operating unit can handle. The operating unit might be a plant, department, machine store or worker. This clearly indicates that capacity is the maximum amount of work that an organization is capable of completing in a given period of time. Therefore, there is a need to make capacity issues part of both long term and operating strategy. For example, a strategy of capacity expansion may be used to provide a presence in geographical locations before competitors gain access to a market (Chase, Aquilano, and Jacobs, 2007; Greasley, 2009; Patel and Nangle, 2008).

In some instances, capacity choices are made very infrequently; in others, they are made regularly, as part of an ongoing process. Generally, the factors that influence this frequency are the stability of demand, the rate of technological change in equipment and product



design, and competitive factors. In any case, management must review product and service choices periodically to ensure that the company makes capacity changes when they are needed for cost, competitive effectiveness, or other reasons. If a firm has excess capacity, or can quickly add capacity that may serve as a barrier to entry by other firms. In addition, capacity can affect delivery speed, which can be a competitive advantage (Stevenson,2002; Kasimoglu,2018; Saloner, Shepard, and Podolny, 2001 ; and Jhingan and Stephen, 2009).

A typical capacity concern of many enterprises is whether resources (labour, machine, etc.) will be in place to handle an increasing number of requests as the number of users or interactions increases. The aim of the capacity planner is to plan so well that new capacity is added just in time to meet the anticipated need but not so early that resources go unused for a long period. The successful capacity planner is one that makes the trade-offs between the present and the future that overall prove to be the most cost-efficient. The capacity planner, using business plans and forecasts, tries to imagine what the future needs will be.

A discrepancy between the capacity of an organization and the demands of its customers results in inefficiency, either in underutilized resources or in unfulfilled customers. The goal of capacity planning minimizes this discrepancy. Demand for an organization's capacity varies based on changes in production output, such as increasing or decreasing the production quantity of an existing product, or producing new products. Better utilization of existing capacity can be accomplished through improvements in overall equipment effectiveness (OEE). Capacity can be increased through introducing new techniques, equipment and materials, increasing the number of workers or machines, increasing the number of shifts, or acquiring additional production facilities (Uwanna, 2010). Knowing the significance capacity planning plays in giving sense of direction to capacity requirements, organizations should take it seriously.

3.0. RESEARCH METHODOLOGY

The research design considered appropriate for this study was survey research. The population of this study comprised of all bank customers in the north central states of Nigeria.

Accidental (convenience) sampling was used for this study. Accidental sampling method was adopted because questionnaire was given to customers who were available at the bank and willing to fill on the days of sharing the questionnaire. Questionnaire was used to draw data from the respondents

Both descriptive and inferential statistics was used for data analysis.

Grand Mean was used to determine the effects of the independent variable on the dependent variable.

3.1. The Study Location

The study location is the north central states of Nigeria. It comprises the following states: Kogi, Kwara, Benue, Plateau, Nassarawa, Niger and Federal Capital Territory, Abuja.

4.1. DISCUSSION OF RESULTS ON ATM

Hypothesis 1 states that Automated Teller Machine service has no significant effect on customer satisfaction.

1,050 questionnaires were served, 50 at each bank (First Bank, United Bank for Africa (UBA), and Polaris Bank) of each bank in all the North Central States, Nigeria and Abuja. 1, 001 questionnaire was retrieved from customers.

Summary of responses on indication of customer satisfaction with each of the statement describing the ATM usage are below.

4.1.1: Experience in ATM Usage in terms of Efficiency in Dispensing of Cash without Error

In terms of the experience in ATM usage in terms of efficiency in dispensing of cash without error, the results obtained are in Table 4.1.1.

Table 4.1.1: Summary of Response on Experience in ATM Usage in terms of Efficiency in Dispensing of Cash without Error

	Frequency First Bank	Frequency UBA	Frequency Polaris Bank	Total	%	Valid %	Cumulative %
Very Satisfactory	33	41	67	141	14.1	14.1	14.1
Satisfactory	186	135	138	459	45.9	45.9	60
Just Satisfactory	55	53	74	182	18.2	18.2	78.2
Unsatisfactory	48	82	25	155	15.5	15.5	93.7
Very Unsatisfactory	7	25	32	64	6.4	6.4	100.0
Total	329	336	336	1,001	100.0	100.0	

Source: Survey Data, 2020



The result in Table 4.1.1 was tested with Grand Mean and Table 4.1.2 shows that the calculated value of Mean is 2.54 which is less than the bench mark (Average) which is 3.

Table 4.1.2: Result of Grand Mean Test on Experience in ATM Usage in terms of Efficiency in Dispensing of Cash without Error

	Result
Valid	1,001
Missing	0
Mean	2.54

Source: Survey Data, 2020

Decision Rule: The Mean (2.54) is less than the cut or bench mark (3). Therefore, the null hypothesis is rejected because the Grand Mean result is satisfactory. It does mean that customers are satisfied with their experience in ATM usage in terms of efficiency in cash withdrawal. This result supports the works of Fitzsimmons and Fitzsimmons (2001) and Saloner et al., (2001).

4.1.2.: Satisfaction in terms of the Time it Take to Correct ATM Error in Cash Withdrawal

In terms of the satisfaction of the time it takes to correct ATM error in cash withdrawal, the results obtained are in Table 4.1.3.

Table 4.1.3: Summary of Response on Satisfaction in terms of the Time it Take to Correct ATM Error in cash withdrawal

	Frequency First Bank	Frequency UBA	Frequency Polaris Bank	Total	%	Valid %	Cumulative %
Very Satisfactory	35	7	10	52	5.2	5.2	5.2
Satisfactory	94	87	135	316	31.6	31.6	36.8
Just Satisfactory	99	106	109	314	31.4	31.4	68.2
Unsatisfactory	54	89	51	194	19.4	19.4	87.6
Very Unsatisfactory	47	47	31	125	12.5	12.5	100.0
Total	329	336	336	1,001	100.0	100.0	

Source: Survey Data, 2020

The result in Table 4.1.3 was tested with Grand Mean and Table 4.1.4 shows that the calculated value of Mean is 3.02 which is greater than the bench mark (Average) which is 3.

Table 4.1.4: Result of Grand Mean Test on Satisfaction in terms of the Time it Take to Correct ATM Error in cash withdrawal

	Result
Valid	1,001
Missing	0
Mean	3.02

Source: Survey Data, 2020

Decision Rule: The Mean (3.02) is greater than the cut or bench mark (3). Therefore, the null hypothesis is accepted because the Grand Mean result is unsatisfactory. It does mean that customers are unsatisfied with the time it takes to correct ATM error in cash withdrawal when it occurred. This result supports the works of Chase et al., (2004) and Stevenson (2002).

4.1.3: Satisfaction on the Availability of Cash at the ATM

In terms of satisfaction on the availability of cash at the ATM, the results obtained are in Table 4.1.5.

**Table 4.1.5: Summary of Response on Satisfaction on the Availability of Cash at the ATM**

	Frequency First Bank	Frequency UBA	Frequency Polaris Bank	Total	%	Valid %	Cumulative %
Very Satisfactory	57	52	36	145	14.5	14.5	14.5
Satisfactory	115	101	149	365	36.5	36.5	51
Just Satisfactory	79	111	111	301	30.1	30.1	81.1
Unsatisfactory	67	50	19	136	13.6	13.6	94.7
Very Unsatisfactory	11	22	21	54	5.4	5.4	100.0
Total	329	336	336	1,001	100.0	100.0	

Source: Survey Data, 2020

The result in Table 4.1.5 was tested with Grand Mean and Table 4.1.6 shows that the calculated value of Mean is 2.56 which is less than the bench mark (Average) which is 3.

Table 4.1.6: Result of Grand Mean Test on Satisfaction on the Availability of Cash at the ATM

	Result
Valid	1,001
Missing	0
Mean	2.56

Source: Survey Data, 2020

Decision Rule: The Mean (2.56) is less than the cut or bench mark (3). Therefore, the null hypothesis is rejected because the Grand Mean result is satisfactory. It does mean that customers are satisfied with availability of cash when the need to withdraw arises. This result supports the works of Jhigan and Stephen (2009) and Patel and Nangle (2008).

4.1.4: Satisfaction on Supply of Power to the ATM

In terms of satisfaction on supply of power to the ATM, the results obtained are in Table 4.1.8

Table 4.1.7: Satisfaction on the Supply of Power to the ATM

	Frequency First Bank	Frequency UBA	Frequency Polaris Bank	Total	%	Valid %	Cumulative %
Very Satisfactory	68	44	42	154	15.4	15.4	15.4
Satisfactory	167	96	142	405	40.5	40.5	55.9
Just Satisfactory	54	108	94	256	25.6	25.6	81.5
Unsatisfactory	40	88	29	157	15.7	15.7	97.2
Very Unsatisfactory	0	0	29	29	2.9	2.9	100.0
Total	329	336	336	1,001	100.0	100.0	

Source: Survey Data, 2020

The result in Table 4.1.8 was tested with Grand Mean and Table 4.1.9 shows that the calculated value of Mean is 2.50 which is less than the bench mark (Average) which is 3.

Table 4.1.8: Result of Grand Mean Test on Satisfaction on the Supply of Power at the ATM

	Result
Valid	1,001
Missing	0
Mean	2.50

Source: Survey Data, 2020



Decision Rule: The Mean (2.56) is less than the cut or bench mark (3). Therefore, the null hypothesis is rejected because the Grand Mean result is satisfactory. It does mean that customers are satisfied with the supply of power at the ATM. This result supports the works of Amue (2006) and Kasimoglu (2010).

4.1.4: Satisfaction on Supply of Power to the ATM

In terms of satisfaction on supply of power to the ATM, the results obtained are in Table 4.1.9.

Table 4.1.9: Satisfaction on the Time Spent at the ATM during Transactions

	Frequency First Bank	Frequency UBA	Frequency Polaris Bank	Total	%	Valid %	Cumulative %
Very Satisfactory	53	5	32	9	9.0	9.0	9.0
Satisfactory	137	114	132	383	38.3	38.3	47.3
Just Satisfactory	75	48	94	217	21.7	21.7	69
Unsatisfactory	39	127	46	212	21.2	21.2	90.2
Very Unsatisfactory	25	42	32	99	9.9	9.9	100.0
Total	329	336	336	1,001	100.0	100.0	

Source: Survey Data, 2020

The result in Table 4.1.9 was tested with Grand Mean and Table 4.1.10 shows that the calculated

value of Mean is 2.85 which is less than the bench mark (Average) which is 3.

Table 4.1.10: Result of Grand Mean Test on Satisfaction on the time spent at the ATM during transactions

	Result
Valid	1,001
Missing	0
Mean	2.85

Source: Survey Data, 2020

Decision Rule: The Mean (2.85) is less than the cut or bench mark (3). Therefore, the null hypothesis is rejected because the Grand Mean result is satisfactory. It does mean that customers are satisfied with the time spent at the ATM during transactions. This result supports the work of Uwanna (2010).

4.2. DISCUSSION OF RESULTS ON BANKING HALL

Hypothesis 2 states that Banking Hall aesthetic and comfortability does not significantly contribute to customer satisfaction.

1,050 questionnaires were served, 50 at each bank (First Bank, United Bank for Africa (UBA), and Polaris Bank) of each bank in all the North Central States, Nigeria and Abuja. 1, 001 questionnaire was retrieved from customers.

Summary of responses on indication of customer satisfaction with each of the statement describing the Banking Hall are below.

4.2.1: Level of Ventilation in the Banking Hall while Awaiting Service

In terms of the level of ventilation in the Banking Hall while awaiting service, the results obtained are in Table 4.2.1.

**Table 4.2.1: Summary of Response on Level of Ventilation in the Banking Hall While Awaiting Service**

	Frequency First Bank	Frequency UBA	Frequency Polaris Bank	Total	%	Valid %	Cumulative %
Very Satisfactory	50	38	12	100	10.0	10.0	10.0
Satisfactory	108	55	32	195	19.5	19.5	29.5
Just Satisfactory	150	220	208	577	57.7	57.7	87.2
Unsatisfactory	21	8	44	73	7.3	7.3	94.5
Very Unsatisfactory	0	15	40	55	5.5	5.5	100.0
Total	329	336	336	1,001	100.0	100.0	

Source: Survey Data, 2020

The result in Table 4.2.1 was tested with Grand Mean and Table 4.2.2 shows that the calculated value of Mean is 2.79 which is less than the bench mark (Average) which is 3.

Table 4.2.2: Result of Grand Mean Test on Level of Ventilation in the Banking Hall While Awaiting Service

	Result
Valid	1,001
Missing	0
Mean	2.79

Source: Survey Data, 2020

Decision Rule: The Mean (2.79) is less than the cut or bench mark (3). Therefore, the null hypothesis is rejected because the Grand Mean result is satisfactory. It does mean that customers are satisfied with the level of ventilation in the banking hall while awaiting services. This result supports the work of Stevenson (2002).

4.2.2: Effectiveness of Air Conditioners in the Banking Hall

In terms of the effectiveness of air conditioners in the Banking Hall, the results obtained are in Table 4.2.3.

Table 4.2.3: Summary of Response on the Effectiveness of air conditioners in the Banking Hall

	Frequency First Bank	Frequency UBA	Frequency Polaris Bank	Total	%	Valid %	Cumulative %
Very Satisfactory	40	29	15	84	8.4	8.4	8.4
Satisfactory	136	69	27	232	23.2	23.2	31.6
Just Satisfactory	125	206	210	540	54.0	54.0	85.6
Unsatisfactory	28	32	51	111	11.1	11.1	96.7
Very Unsatisfactory	0	0	33	33	3.3	3.3	100.0
Total	329	336	336	1,001	100.0	100.0	

Source: Survey Data, 2020

The result in Table 4.2.3 was tested with Grand Mean and Table 4.2.4 shows that the calculated value of Mean is 2.78 which is less than the bench mark (Average) which is 3.

Table 4.2.4: Result of Grand Mean Test on Effectiveness of Air Conditioners

	Result
Valid	1,001
Missing	0
Mean	2.78

Source: Survey Data, 2020



Decision Rule: The Mean (2.78) is less than the cut or bench mark (3). Therefore, the null hypothesis is rejected because the Grand Mean result is satisfactory. It does mean that customers are satisfied with the effectiveness of air conditioners in the banking hall while awaiting services. This result supports the work of Wisner and Stanley (2008).

4.2.3: Availability of Seat in the Banking Hall

In terms of the availability of seat in the Banking Hall, the results obtained are in Table 4.2.5.

Table 4.2.5: Summary of Response on the Availability of Seat in the Banking Hall

	Frequency First Bank	Frequency UBA	Frequency Polaris Bank	Total	%	Valid %	Cumulative %
Very Satisfactory	30	20	59	109	10.9	10.9	10.9
Satisfactory	67	36	116	219	21.9	21.9	32.8
Just Satisfactory	46	71	64	181	18.1	18.1	50.9
Unsatisfactory	85	92	59	236	23.6	23.6	74.5
Very Unsatisfactory	101	117	38	256	25.6	25.6	100.0
Total	329	336	336	1,001	100.0	100.0	

Source: Survey Data, 2020

The result in Table 4.2.5 was tested with Grand Mean and Table 4.2.6 shows that the calculated value of

Mean is 3.31 which is greater than the bench mark (Average) which is 3.

Table 4.2.6: Result of Grand Mean Test on Availability of Seat

	Result
Valid	1,001
Missing	0
Mean	3.31

Source: Survey Data, 2020

Decision Rule: The Mean (3.31) is greater than the cut or bench mark (3). Therefore, the null hypothesis is accepted because the Grand Mean result is Unsatisfactory. It does mean that customers are unsatisfied with the availability of seat when the need to seat arises in the banking hall while awaiting

services. This result supports the works of Chase et al.,(2004) and Patel and Nangle (2008).

4.2.4: The Neatness of the Banking Hall

In terms of the neatness of the Banking Hall, the results obtained are in Table 4.2.7.

Table 4.2.7: Neatness of the Banking Hall

	Frequency First Bank	Frequency UBA	Frequency Polaris Bank	Total	%	Valid %	Cumulative %
Very Satisfactory	65	49	25	139	13.9	13.9	13.9
Satisfactory	215	214	199	628	62.7	62.7	76.6
Just Satisfactory	34	48	64	146	14.6	14.6	91.2
Unsatisfactory	15	25	48	88	8.8	8.8	100.0
Very Unsatisfactory	-	-	-	-	-	-	
Total	329	336	336	1,001	100.0	100.0	

Source: Survey Data, 2020

The result in Table 4.2.7 was tested with Grand Mean and Table 4.2.6 shows that the calculated value of

Mean is 2.18 which is less than the bench mark (Average) which is 3.

**Table 4.2.8: Result of Grand Mean Test on Neatness of the Banking Hall**

	Result
Valid	1,001
Missing	0
Mean	2.18

Source: Survey Data, 2020

Decision Rule: The Mean (2.18) is less than the cut or bench mark (3). Therefore, the null hypothesis is rejected because the Grand Mean result is Satisfactory. It does mean that customers are satisfied with the neatness of the banking hall. This result supports the work of Okoh et al., (2009).

4.2.4: Gaining Access into the Banking Hall through Security Door

In terms of gaining access into the Banking Hall, the results obtained are in Table 4.2.9

Table 4.2.9: Gaining Access into the Banking Hall through Security Door

	Frequency First Bank	Frequency UBA	Frequency Polaris Bank	Total	%	Valid %	Cumulative %
Very Satisfactory	61	81	108	250	25.0	25.0	25.0
Satisfactory	124	146	158	428	42.8	42.8	67.8
Just Satisfactory	67	53	50	170	17.0	17.0	84.8
Unsatisfactory	52	44	20	116	11.6	11.6	96.4
Very Unsatisfactory	25	12	0	37	3.7	3.7	100.0
Total	329	336	336	1,001	100.0	100.0	

Source: Survey Data, 2020

The result in Table 4.2.9 was tested with Grand Mean and Table 4.2.10 shows that the calculated value of

Mean is 2.26 which is less than the bench mark (Average) which is 3.

Table 4.2.10: Result of Grand Mean Test on Gaining Access into the Banking Hall through Security Door

	Result
Valid	1,001
Missing	0
Mean	2.26

Source: Survey Data, 2020

Decision Rule: The Mean (2.26) is less than the cut or bench mark (3). Therefore, the null hypothesis is rejected because the Grand Mean result is Satisfactory. It does mean that customers are satisfied with gaining access in to the banking hall. This result supports the work of Greasley (2009).

States, Nigeria and Abuja. 1, 001 questionnaire was retrieved from customers.

Summary of responses on indication of customer satisfaction with each of the statement describing the process in term of Time Taken are below.

4. 3. DISCUSSION OF RESULTS ON PROCESS IN TERM OF TIME TAKEN

Hypothesis 3 states that Time Taken for service delivery has no significant influence on customer satisfaction.

1,050 questionnaires were served, 50 at each bank (First Bank, United Bank for Africa (UBA), and Polaris Bank) of each bank in all the North Central

4.3.1: Time Taken during Opening of an Account

The level of satisfaction in terms of time taken during opening of an account, the results obtained are in Table 4.3.1.

**Table 4.3.1: Summary of Response on Level of Satisfaction in Terms of Time Taken during Opening of an Account**

	Frequency First Bank	Frequency UBA	Frequency Polaris Bank	Total	%	Valid %	Cumulative %
Very Satisfactory	0	0	35	35	3.5	3.5	3.5
Satisfactory	38	61	192	291	29.1	29.1	32.6
Just Satisfactory	90	72	22	184	18.4	18.4	51
Unsatisfactory	58	89	54	201	20.1	20.1	71.1
Very Unsatisfactory	143	114	33	290	29.0	29.0	100.0
Total	329	336	336	1,001	100.0	100.0	

Source: Survey Data, 2020

The result in Table 4.3.1 was tested with Grand Mean and Table 4.3.2 shows that the calculated value of Mean is 3.42 which is greater than the bench mark (Average) which is 3.

Table 4.3.2: Result of Grand Mean Test on Time Taken in Opening of an Account

	Result
Valid	1,001
Missing	0
Mean	3.42

Source: Survey Data, 2020

Decision Rule: The Mean (3.42) is greater than the cut or bench mark (3). Therefore, the null hypothesis is accepted because the Grand Mean result is Unsatisfactory. It does mean that customers were dissatisfied with the time taken to open accounts. This result supports the works of Okoroafor (2010) and Stevenson (2002).

4.3.2: Time Taken during Withdrawal at the Counter

The level of satisfaction in terms of time taken during withdrawal at the counter, the results obtained are in Table 4.3.3

Table 4.3.3: Summary of Response on Level of Satisfaction with the Time Taken during Withdrawal at the Counter

	Frequency First Bank	Frequency UBA	Frequency Polaris Bank	Total	%	Valid %	Cumulative %
Very Satisfactory	0	0	28	28	2.8	2.8	2.8
Satisfactory	51	45	110	206	20.6	20.6	23.4
Just Satisfactory	68	73	58	199	19.9	19.9	43.3
Unsatisfactory	92	83	66	241	24.1	24.1	67.4
Very Unsatisfactory	118	135	74	327	32.7	32.7	100.0
Total	329	336	336	1,001	100.0	100.0	

Source: Survey Data, 2020

The result in Table 4.3.3 was tested with Grand Mean and Table 4.3.4 shows that the calculated value of Mean is 3.63 which is greater than the bench mark (Average) which is 3.

Table 4.3.2: Result of Grand Mean Test on Time Taken during Withdrawal at the Counter

	Result
Valid	1,001
Missing	0
Mean	3.63

Source: Survey Data, 2020



Decision Rule: The Mean (3.63) is greater than the cut or bench mark (3). Therefore, the null hypothesis is accepted because the Grand Mean result is Unsatisfactory. It does mean that customers were dissatisfied with the long time taken to withdraw at the counter. This result supports the works of Amue (2006) and Greasley (2009).

4.3.3: Time Taken for Request and Delivery of ATM Card

The level of satisfaction in terms of time taken for request and delivery of ATM card, the results obtained are in Table 4.3.5

Table 4.3.5: Summary of Response on Time Taken for Request and Delivery of ATM Card

	Frequency First Bank	Frequency UBA	Frequency Polaris Bank	Total	%	Valid %	Cumulative %
Very Satisfactory	0	0	40	40	4.0	4.0	4.0
Satisfactory	58	60	76	194	19.4	19.4	23.4
Just Satisfactory	75	116	180	371	37.1	37.1	60.5
Unsatisfactory	93	101	40	234	23.4	23.4	83.9
Very Unsatisfactory	103	59	0	162	16.2	16.2	100.0
Total	329	336	336	1,001	100.0	100.0	

Source: Survey Data, 2020

The result in Table 4.3.5 was tested with Grand Mean and Table 4.3.6 shows that the calculated value of

Mean is 3.63 which is greater than the bench mark (Average) which is 3.

Table 4.3.6: Result of Grand Mean Test on Time Taken for Request and Delivery of ATM Card

	Result
Valid	1,001
Missing	0
Mean	3.28

Source: Survey Data, 2020

Decision Rule: The Mean (3.28) is greater than the cut or bench mark (3). Therefore, the Null hypothesis is accepted because the Grand Mean result is Unsatisfactory. It does mean that customers were dissatisfied with the time taken for request and delivery of ATM Card. This result supports the works of Kasimoglu (2010) and Saloner et al., (2001).

4.3.4: Time Taken to Withdraw Cash at the ATM

The level of satisfaction in terms of time taken to withdraw cash at the ATM, the results obtained are in Table 4.3.7

Table 4.3.7: Summary of Response on Time Taken for Cash Withdrawal at the ATM

	Frequency First Bank	Frequency UBA	Frequency Polaris Bank	Total	%	Valid %	Cumulative %
Very Satisfactory	-	-	-	-	-	-	-
Satisfactory	52	66	34	154	15.4	15.4	15.4
Just Satisfactory	75	86	64	225	22.5	22.5	37.9
Unsatisfactory	95	97	110	302	30.2	30.2	68.1
Very Unsatisfactory	107	85	128	320	32.0	32.0	100.0
Total	329	336	336	1,001	100.0	100.0	

Source: Survey Data, 2020

The result in Table 4.3.7 was tested with Grand Mean and Table 4.3.8 shows that the calculated

Value of Mean is 3.79 which is greater than the bench mark (Average) which is 3.

**Table 4.3.8: Result of Grand Mean Test on Time Taken for Cash Withdrawal at the ATM**

	Result
Valid	1,001
Missing	0
Mean	3.79

Source: Survey Data, 2020

Decision Rule: The Mean (3.79) is greater than the cut or bench mark (3). Therefore, the null hypothesis is accepted because the Grand Mean result is Unsatisfactory. It does mean that customers were dissatisfied with the time taken for cash withdrawal at the ATM. This result supports the works of Amue (2006) and Okoroafor (2010).

4.3.5: Time Taken to Correct ATM Withdrawal Error

The level of satisfaction in terms of time taken to correct ATM withdraw error, the results obtained are in Table 4.3.9

Table 4.3.9: Summary of Response on Time taken to Correct Withdrawal Error

	Frequency First Bank	Frequency UBA	Frequency Polaris Bank	Total	%	Valid %	Cumulative %
Very Satisfactory	35	7	10	52	5.2	5.2	5.2
Satisfactory	94	87	135	316	31.6	31.6	36.8
Just Satisfactory	99	106	109	314	31.4	31.4	68.2
Unsatisfactory	54	89	51	194	19.4	19.4	87.6
Very Unsatisfactory	47	47	31	125	12.5	12.5	100.0
Total	329	336	336	1,001	100.0	100.0	

Source: Survey Data, 2020

The result in Table 4.3.9 was tested with Grand Mean and Table 4.3.10 shows that the calculated value of Mean is 4.11 which is greater than the bench mark (Average) which is 3.

Table 4.3.10: Result of Grand Mean Test on Time Taken for Correction of ATM Withdrawal Error

	Result
Valid	1,001
Missing	0
Mean	4.11

Source: Survey Data, 2020

Decision Rule: The Mean (4.11) is greater than the cut or bench mark (3). Therefore, the null hypothesis is accepted because the Grand Mean result is Unsatisfactory. It does mean that customers were dissatisfied with the time it takes to correct ATM withdrawal error. This result supports the works of Chase et al., (2004) and Uwanna (2010).

4.4. Research Findings

On running a Grand Mean test on three Capacity Planning and Control factors (ATM, Banking Hall and Process in term of Time Taken) the results revealed are as follows.

On ATM, there was a significant relationship between ATMs efficiency in dispensing of cash without error and customer satisfaction. Timely ATMs

error correction in dispensing of cash has significant effect on customer satisfaction. Customers were satisfied when cash was available at the ATMs when withdrawal was made. There was a significant relationship between the supply of power to the ATMs and customer satisfaction. The time spent during withdrawal at the ATMs significantly affects customer satisfaction.

On Banking Hall, the study revealed that customers were satisfied with the level of ventilation in the banking hall while awaiting services. It was revealed that customers were satisfied with the effectiveness of air conditioners in the banking hall. The study revealed that customers were dissatisfied with sitting arrangement in the banks under study. It was also established that banking halls were in good



sanitary condition. This research unraveled the fact that the security doors of the selected banks are in good condition.

On the issue of Process in terms of time taken, customers were dissatisfied with the time it took to open accounts, withdrawal at the counter, and request and delivery of ATM cards. Customers were also grossly not satisfied with the time taken to withdraw cash at the ATM as well as the time it took to correct ATM withdrawal errors.

4.5. DISCUSSION OF FINDINGS

The major thrust of this study is to ascertain the “Effects of Capacity Planning and Control on Customer Satisfaction in Selected Banks in North Central States, Nigeria.

On running a Grand Mean test on ATM variables, it was found that customers were fairly satisfied on all the variables tested except one (time taken to correct ATM error in cash withdrawal). Findings revealed that bank equipment in terms of ATM is an influencing factor on customer’s satisfaction (see tables 4.1.2, 4.1.4, 4.1.6, 4.1.8, and 4.1.10). Fitzsimmons and Fitzsimmons (2001); Stevenson (2002); and Chase et al., (2004) note that equipment is an effective determinant of capacity hence ATMs. The functionality and availability of ATMs will determine the rate and number of customers that can be attended to at a time, hence, customer satisfaction.

Banking Hall Grand Mean test revealed that customers were satisfied with all variables tested except one (the non availability of seats when there was a need to sit). Findings revealed that Banking Hall has great influence on customer satisfaction (see tables 4.2.2, 4.2.4, 4.2.6, 4.2.8 and 4.2.10). Wisner and Stanley (2008); and Okoh et al., (2009); submit that the aesthetic and comfortability of Banking Hall has gross impact on customer satisfaction.

On Process factor in terms of Time Taken, the Grand Mean test showed that all the variables were above bench mark. Customers were highly dissatisfied. Findings revealed that the time taken for service delivery affect customer satisfaction (See tables 4.3.2, 4.3.4, 4.3.6, 4.3.8, and 4.3.10). This supports the works of Amue (2006), Okoroafor (2010); Greaseley (2006); and Jhingan and Stephen (2009). The process of doing a work will determine the number of customers that would be attended to. When the process of doing a work is long and staff of the organization is unnecessarily rigid, the effectiveness of capacity will be affected. Staying long in the process before receiving service can negatively affect customer satisfaction.

5.0: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Summary

This study investigated the Effects of Capacity Planning and Control on Customer Satisfaction in Selected Banks in North Central, Nigeria. The study used a structured questionnaire as data collection instrument and Grand Mean as the tool of data analysis. The key findings of the study are summarized below:

Findings revealed that availability and functionality of ATM have great influence on customer satisfaction. When cash was available for withdrawal and transactions were error free, customers were very satisfied.

Customers were also satisfied when Banking Hall was neat, functional air conditioners and ability to sit when there was a need.

Findings revealed that the time customers spent play a significantly influence on customer satisfaction. Customers were dissatisfied when the process of performing transactions was long and they stayed for a long time on the queue. However, when the process of performing transactions was short and they stayed for a minimal time on the queue, they were very satisfied.

5.2 Conclusions

In line with findings summarized above, conclusions can be drawn as follows:

ATMs significantly influence customer satisfaction. Customers expressed satisfaction when ATMs dispensed cash without error, promptly correct error when it occurred, when there is availability of cash at the ATMs, when limited time is spent at the ATMs during transactions and when there is constant supply of power to the ATMs.

Banking Hall significantly affects customer satisfaction. Customers appreciate the aesthetic nature of the banking hall, functional air conditioners, spending short time at the withdrawal point. However, they were dissatisfied with non availability of seat when there was a need to sit.

Evidence revealed from findings that the time it takes to perform a transaction has great influence on customer satisfaction. Customers were dissatisfied when they stayed long in the process of receiving services.

5.3 Recommendations

Based on the above summary and conclusions drawn, the following recommendations are hereby made:

Banks should provide ATMs that are of high quality so that the rate at which customers account are debited without dispensing cash would be reduced. Debiting of a customer account without dispensing



cash is made worst when the customer did not have money in other account which could be withdrawn to meet the customer immediate needs. ATMs that automatically correct errors should be installed. A situation where a customer has to fill form for correction, that should be done within a reasonable hours. Customer is dissatisfied when ATM error correction runs into weeks if not months. There should be availability of cash in ATMs provided as this will lead to prompt withdrawal hence customer satisfaction. Customers are dissatisfied when ATMs display temporary out of cash. Given the facts that banks are having more customers, more functional ATMs should be provided. This will ease long queue and reduce the long time spent at the ATM thereby increasing customer satisfaction.

More seats are to be added to the existing sitting arrangement since there is increase in the number of people that are making use of banks in their transactions. Though neat interior already exist, this feat can still be improved upon to enhance higher service delivery. The security doors should be upgraded even at the current functional state with emerging technology.

The average time customers spent in the banking hall to access service should be looked into. Customers spent long period of time in First Bank and UBA. There should be switching of staff when necessary. Unnecessary procedures should be avoided as this will reduce the time spent hence customer satisfaction.

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REFERENCES

1. Amue, G. J. (2006). *Industrial Marketing, Integrated Approach*. Davidstones Publishers Ltd., Port-Harcourt.
2. Chase R. B., Jacobs F. R., and Aquilano N. J. (2004). *Operations Management for Competitive Advantage (10th Ed.)*. Tata McGraw Hill Publishing Company Ltd., New Delhi.
3. Fitzsimmons, J. A. and Fitzsimmons, M. J. (2001). *Service Management: Operations, Strategy, and Information Technology (3rd Ed.)*. Irwin/ McGraw-Hill, New York.
4. Greasley, A. (2009). *Operations Management (2nd Ed.)*. West Sussex, John Wiley and Son Ltd., England.
5. Jhigan, M. L. and Stephen, J. K. (2009). *Managerial Economics (2nd Ed.)*. Vrinda Publication Ltd., Delhi.
6. Kasimoglu, M. (2010). *Survival Strategies for Companies in Global Business World- a Case*. Accessed from

<http://www.opf.slu.c2/vvr/athce/turecko/pdf/kasimoglu.pdf> on 1 December, 2018.

7. Okoh J., Agavwe O. E., and Aghadiuno P. (2009). "Imperatives of Effective Management of Customers' Relationship Marketing for Efficient Operations in Industrial Marketing Organisations." *International Journal of Business and Common Market Studies*. Vol. 6, No. 182, Pp. 80-87.
8. Okoroafor, P. C. (2010). "Identifying Borrowing Causes." *Financial Development and Finance Journal*. October Issue, Pp. 22-25
9. Patel, S. and Nangle, D. (2008). "Access Bank: Rising Star of the New Generation." *Renaissance Capital*. March Issue, Pp. 22-40.
10. Saloner, G., Shepard, A., and Podolny, J. (2001). *Strategic Management*. John Wiley and Sons, Inc., New York.
11. Stevenson, W. J. (2002). *Operation Management (7th Ed.)*. McGraw Hill, New York.
12. Uwanna, I. (2010). "Expanding the Professional Service Industry Through Business Process Outsourcing." *Financial Development and Finance Journal*. May Issue, Pp. 102-119.
13. Wisner, J. D. and Stanley L. L. (2008). *Process Management: Creating Value Along the Supply Chain; Text and Cases*. Thompson Higher Education, OH, U.S.A.