The influence of delayed payment obligation on purchase decision of household: evidence from Nigerian data

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Abstract

The purpose of this study is to examine the influence of delayed payment obligation on household purchase decision in Nigeria. Unlike the large of existing studies, this study used binary regression model estimation and draws a dataset of 2019 General Household Survey with sample size of 2911 household for the analysis. The stylized facts from the dataset revealed more share of rural household than their counterparts in urban household. Interestingly, the results show that delayed payment obligation is positive and significantly influence purchase decision of household in Nigeria. But when the household is disaggregated into rural and urban household, the result shows that some household that barrowed from friends and family and household that reduced food consumption expenditure have positive and significant influence on purchase decision in both rural and urban household while household that received assistance from friends and family has positive and significant influence on purchase decision by rural household. This study recommends delayed payment obligation for important factor to drive purchase decision by household. This could be achieved through policy formulation that will promote delayed payment obligation.

JEL Classifications: D4; EH5; O15; P16

1 Introduction

The importance of purchase decision by household during this recent spread of Covid-19 pandemic in stimulating overall growth and development cannot be overemphasized. There are many studies documented in the literature (Fuster and Willen, 2013; Tracy and Wright, 2012; Adelino et al., 2013; Haughwout et al., 2009; Agarwal et al., 2006). These studies revealed that purchase decision contribute to lower default risk of hybrid mortgage at the rate reset, helps to lower the rates of default in prime adjustable-rate mortgages and lower re-default rates in modified loans. According to Qi et al. (2021) purchase decision helps household to identify their needs, which in turn helps the household to plan in the country. These facts mentioned above, implies that when there is an adequate purchase decision, the trickledown effect is that there will be a lower default risk of mortgage that have a positive and significant impact on the standard of living of the local dwellers. Surprisingly, it has been found that the issues of purchase decision of many households in Nigeria are yet to lower default risk and improving ling standard of their local communities. These challenges are becoming worrisome for household to strive for excellence at business transactions. It is believed that when business transactions are negatively affected due to purchase decision, the effect will not only cause poor living standard but also call up an unprecedented negative effects that could cause for retardation in marketing and sales (Ojonta & Ogbuabor, 2021). Purchase decision in this context is referred to as process of thought that lead a buyer from observing a need, sourcing option and make choice for desired product and brand (Prasad et al., 2019; Mangleburg, 1990). This study measures purchase decision in binary where yes = 1 if household has purchase decision and No = 0, if household do not have purchase decision.

Hence, Nigeria is a typical developing economies characterized by high poverty, low income, high dependency ratio and large household size (Nwosu et al., 2018). These characteristics existing among different strata of household may have caused by the challenges associated with purchase decision by household. Often this purchase decision by household has been traced to the level of business skill acquisition since business skills have a way of reducing various form of decision in a business (Adballa and Hussein, 2002). This study suggests that as a high rate of dependency ratio, inequalities, poverty and large household size become apparent, the purchase decision is likely to be significant. This implies that if purchase decision is not given adequate attention, the effect will put serious retardation in growth and development (Abdul-Rahman and Berawi, 2006).

The role of purchase decision in household savings and investment in stimulating job creation has been acknowledged by recent studies in extant literature. (e.g., DeRitis et al.,2010; Arabi, 2019; Christiano et al., 2016; Okiemy and Mbongo, 2021). These studies emphasized that purchase decision can help in building opportunity cost from one characteristics

by wasteful spending to that distinguished by pattern of consumption expenditure. According to Yogesh and Yesha (2014) social media opinions affect purchase decision process. For instance, study by Cameron & Worswick (2003) that have investigated the determinants of purchase decision attest the fact that social media form large opinion of purchase decisions. The importance of delay payment obligation and how such payment obligation influences purchase decision of household is yet to be studied. This form the knowledge gap this study seeks to address in the literature. The delayed payment obligation in this context is defined as act of putting hindrances for all monies payable by the applicant under contract under terms and condition(Kwon et al., 2010). The study measures delayed payment obligation in binary where 1 = yes if household delayed payment obligation and 0 = No, if household do not delayed payment obligation. The focus of this study is to get further evidence on purchase decision and delayed payment obligation by household in Nigeria. In doing so, this study is guided by the following research questions:

i). How does delay payment obligation influences purchase decision of household in Nigeria?

ii). How does other factors influence purchase decision of household in Nigeria?

The specific objectives includes:

i).To examine influence of delay payment obligation on purchase decision of household in Nigeria.

ii).To investigate influence of other factors on purchase decision of household in Nigeria.

The other relevant sections that should be considered in this study are: The next section focuses on general overview of related literature such as empirical and various theories, while the third Section describes the dataset and the method section of the study analyses. The results are presented and exhaustively discussed in the fourth section. The last fifth section discusses the conclusion of the paper.

2 Literature Review

2.1. Theoretical literature

Some theories underpin this study. These are monetary theory of business cycles, theory of demand shock and theory of total spending. The monetary theory of business cycles as propounded by Hawtrey (1927) explained the process formations of the theory. The theory explained that the changes in effective demand and changes in bank are the process formation of monetary theory of business cycles. The theory established that the creation of credit contributes to increase in money supply and such supply affects the effective demand. The theory also established that the monetary factors are responsible for changes in overall economic activities. This suggests that monetary factors have a major key role for the occurrence of business cycles. Empirical studies like Arora et al. (2019) are accurate in regards of this theory. The theory of demand shock by Lorenzoni (2009) explained the behavior of consumers and changes in aggregate productivity. The theory is of twofold. First is that the consumers take time to identify permanent changes in aggregate productivity irrespective of good information they may have on the present state of individual firm where they work. The theory establishes that the consumers have a limited information on the issue of long-run determinants of aggregate productivity. Second is that the consumers have access to public information that is significant to estimate the long-run productivity such as technological innovations and financial market prices. The theory also imposes restrictions on the relative responses of output, employment, and inflation. Empirical studies, like Rio-Chanona et al. (2020), are underpinned the viewpoint of this theory of demand delay. The theory of human behavior is propounded by Ruyon & Stewart (1987). The theory represents the beliefs held regarding the nature of human beings and the causes of their behaviour. The theory established that human beings can be viewed from many perspectives. This suggests that if human beings are viewed from an economic perspective, marketers may come up with economic incentive to influence them. But, if however, from

a social perspective, marketers will as well come up with social incentive to influence them. Thus, studies like Omotoyinbo et al. (2017) emphasizes the need for dealing with the nature of human beings and the causes of their behaviour.

2.2. Empirical literature

Some studies have been carried out on how different payment criteria and its determinants drive growth in various perspective both within and outside Nigeria. In Nigeria for example, Ezeoke et al. (2012) and Onwujekwe et al. (2010) found that payment strategy is a significant driver for access to healthcare and cost of illness to different population groups, while other studies for example, Onwujekwe et al. (2010) and Etiaba et al. (2015) found that cash payment significantly impacts on health management. Evidences also revealed that payment strategy impacts positively and significantly on the disease treatment (Obembe et al., 2020; Ewelukwa et al., 2013). The other studies outside Nigeria like Kochar (1999) revealed that payment labour as a strategy significantly influences income delay of household enterprises. Also, Cameron and Worswick (2003) estimated the impact of augmented labour supply on household payment strategy. The findings of their revealed that augmented labour supply has essential role in influencing household payment strategy. Another study, Corbett (1988) examined how payment strategies impact on household femine in Africa. Mehar et al. (2016) also revealed that transfer payment has a significant impact on drought climate delay in India. Overall, the different approach of the related empirical literature concerning how difference aspects of payment strategies influence other factors in various perspectives show that the influence of delay payment obligation on purchase decision by household is still not to be investigated. Herein lies the new contribution of our study to the literature.

3. Data And Methodology

3.1. Data Description

The household dataset drawn from the sample of households were interviewed in the post-harvest visit of wave 4 of the General Household Survey-panel (GHS-P) in 2018/19. The GHS- Panel sample of 2911 households with contact details are the data for the household delayed payment and these were included in this study. The sample of household is a representative nationally across all the 6 geo-political zones of the country in both urban and rural households that made up the country. The geo-political zones include North-central, North-east, North-west, South-south, South-east and South-west. Given the abundance of auxiliary data found in the GHS-Panel, a balanced sampling method (using the cube method) was used. The balanced sampling method makes it possible to select a random sample that still maintain the properties of the frame across selected explanatory variables. This study also considers the problems of spurious regression which include outliers and homogeneity. A few outliers of 10 were not considered from the observation to ensure that we do not get to the trap of spurious result. Overall, the sample survey was balanced across several relevant dimensions such as geo-political zone, sector, household delayed payment and household payment decision.

3.2. Theoretical framework

This study framework is anchored on the theory of human behavior propounded by Ruyon & Stewart (1987). The theory established that human beings can be viewed from many perspectives. This suggests that if human beings are viewed from an economic perspective, marketers may come up with economic incentive to influence them. But, if however, from a social perspective, marketers will as well come up with social incentive to influence them. The theory was established in the premises of two different group of human beings and their behaviours. These individuals have a uniform purchase decision, but some have influential incentives in purchase decision, others do not provide any influential incentives even at the position of having such influential incentives. Thus, some household believe on delay payment obligation regardless of the purchase decisions. However, the theorist establish to situation in which human being can be viewed from many perspectives even though that such view was not caused by purchase decision. The situations where

household is willing to embark on delay payment obligation despite their purchase decision can greatly cause a serious impediment on household savings and investment. When household savings and investment are not achieved as a result of purchase decision, the trickledown effect is that the household will face a problem of adverse selection or moral hazard due to delayed payment obligation. This problem if continue will adversely affect the purchase decision by household (Kochar, 1999). In other hand, delayed payment obligation by household is important to deter the purchase decision. Thus, the theory propounded by Ruyon & Stewart (1987) indicates that if household could not deal with many perspectives through which human beings can be viewed can lead to negative influence on the delay payment obligations by household. Thus, the theory of human behaviour of Ruyon & Stewart (1987) brought support of the underlying approach in this study.

2.2 Model specification

This study adopted binary regression approach which is a non-linear probability model to explore the association between a dependent variable and set of independent variables. In a case of one independent variable X with a case of dependent variable of one binary outcome variable Y, the logistic model predicts the log-odds of dependent variable (Y) from set of independent variable (X). The prediction represents a natural logarithm of odds of Y. The model can be shown based on (Peng et al., 2002):

$$\ln\left(\frac{\pi}{1-\pi}\right) = \alpha + \beta x \tag{1}$$

Following the Eq. (1), the left hands side of the equality represents the log-odds. The logistic regression model has a log-odds that is linear in X. Hence:

$$\pi(x) = E(Y \mid X) = \frac{e^{\alpha + \beta x}}{1 + e^{\alpha + \beta x}} \tag{2}$$

Where π represents the probability of the result of interest given that X = x while α denotes the parameter that represents the constant. The β is the slope parameter, the set of X captures either dummy or categorical variable. The value (Y) is always dummy or categorical. The Eq. (1) can be transformed and extended to linear regression from simple to multiple as follows:

$$\ln\left(\frac{\pi}{1-\pi}\right) = \alpha + \beta_1 x_1 + \beta_2 x_2 + \ldots + \beta_k x_k \tag{3}$$

Therefore

$$\pi(x) = \frac{e^{\alpha + \beta_1 x_1 + \beta_2 x_2 + \ldots + \beta_k x_k}}{1 + e^{\alpha + \beta_1 x_1 + \beta_2 x_2 + \ldots + \beta_k x_k}} \tag{4}$$

Where π represents the event of probability. The α denotes the Y- constant, βs are the model parameters of the slope, and X`s are sets of independent variables. The Y- constant, α and model parameters βs are estimated through the technique of maximum likelihood estimator MLE.

Table 1
Measurement of variables in the Model

Variable Name	Variable label	coding	expected sign
Dependent variable: Purchase decision (Y)	PURCHASE	Yes = 1; No = 0	Un applicable
Independent variables			
Market price(X_1)	MARKET	Yes = Increase; No = Decrease	(+/-)
Engaged in additional income generating activities(X_2)	INCOME	1 = yes; 0 = No	(+/-)
Received assistance from friends and family(X_3)	ASSISTANCE	1 = yes; 0 = No	(+/-)
Borrowed from friends and family(X_4)	BORROWED	1 = yes; 0 = No	(+/-)
Delayed payment(X_5)	PAYMENT	1 = yes; 0 = No	(+/-)
Sold harvest in advance(X_6)	ADVANCE	1 = yes; 0 = No	(+/-)
Reduced food consumption(X_7)	FOOD	1 = yes; 0 = No	(+/-)
Reduced nonfood consumption(X_8)	NONFOOD	1 = yes; 0 = No	(+/-)
Relied on savings(X_9)	SAVINGS	1 = yes; 0 = No	(+/-)
Did nothing(X_{10})	NOTHING	1 = yes; 0 = No	(+/-)
Source: Author's compilation from National Bureau of Statistics (NBS, 2020) using SPSS			

- Y denoting PURCHASE is a dependent variable. The variable is defined as purchase decision. It is a binary variable assigned yes = 1 if the household has purchase decision and No = 0, if the household do not have purchase decision. Studies like Etiaba et al. (2015) had a positive coefficient for purchase decision, but Onwujekwe et al. (2011) had the opposite which is a negative coefficient. Hence, our a priori expected sign shows that the coefficient of delayed payment could neither be positive nor negative.

The independent variables as presented and assigned in Eq. (1) are discussed in Table 1. The set of independent variables are measured as follows:

- X_1 denoting MARKET is defined as changes in commodity market price. It is also a binary variable that takes a value of yes = 1 if the household had an increase in the commodity market price and No = 0, if the household had a decrease in commodity market price. Following Rothan and Byrareddy (2020), our a priori expected sign in changes in commodity market price is either positive or negative.

- X_2 denoting INCOME said yes = 1 if the household engaged in additional income generating activities while No = 0, if the household do not engaged in additional income generating activities. Amzat et al. (2020) study shows a positive coefficient for additional income generating activities, while Tuccio et al. (2019) had the opposite which is coefficient with negative a priori. Thus, the expectation of our a priori is that the coefficient for additional income generating activities could be either negative or positive.

- X_3 denoting ASSISTANCE is a dummy variable assigned yes = 1 which implied that the household received assistance from friends and family but No = 0, if household do not received assistance from friends and family.

Following McDonald (1999) the expectation of a priori for assistance by household is positive.

- X_4 represents BORROWED which implies that the household borrowed from friend and family. It is also a dummy variable assigned yes = 1which represent that household borrowed from friends and family and No = 0, if the household did not borrow. Following Ojonta and Ogbuabor (2021), the expectation of a priori for access to borrow is positive.

- X_5 denoting PAYMENT represents delayed payment obligation by household. It is a dummy variable that takes a value of yes = 1 if the household delayed payment obligation while No = 0, if household do not delay payment obligation. Following Ezeoke et al. (2012), our expected a priori for delayed payment obligation is positive.

- X_6 denoting ADVANCE represents sold harvest in advance by household. It is a dummy variable that takes a value of yes = 1 if the household sold harvest in advance while the No = 0, if the household do not. Following Ezeoke et al. (2012), our expected a priori for harvest in advance is positive.

- X_7 denoting FOOD represents reduced food consumption expenditure by household. It is a dummy variable that takes a value of yes = 1 if the household food consumption expenditure is reduced but No = 0, if food consumption expenditure by household do not reduced. Following Ezeoke et al. (2012), our expected a priori for food consumption expenditure is positive.

- X_8 denoting NONFOOD represents reduced nonfood consumption expenditure by household. It is a dummy variable that takes a value of yes = 1 if the household nonfood consumption expenditure is reduced but No = 0, if nonfood consumption expenditure by household do not reduced. The nonfood consumption expenditures include expenditures on utility bills, tax, vehicles, cooking utensils and household properties. Following Ezeoke et al. (2012), our expected a priori for nonfood consumption expenditure is positive.

- X_9 denoting SAVINGS represents relied on savings. It is a dummy variable that takes a value of yes = 1 if the household is relying on their savings but No = 0, if household do not rely on their savings. Following Ezeoke et al. (2012), our expected a priori for savings is positive.

- X_{10} represents NOTHING which implies that household did nothing. It is a dummy variable that takes a value of yes = 1 if household did nothing but No = 0, if household did something. Following Ezeoke et al. (2012), our expected a priori for doing something is positive.

4. Result And Discussion

4.1. Descriptive analysis

Table 2 represents the household characteristics. The household characteristics shows different tasks and household factors. The table captures ten different characteristics of household which represent independent variables. As shown in Table 2, the sample size of the data is 2911 observations and the data set were classified into two groups including details about their percentage share.

Table 2
Household Characteristics

Market price			Engaged in additional income generating activities		
	Observations	% share		Observations	% share
Decreased	390	13.4	No	2742	94.2
Increased	2521	86.6	Yes	169	5.8
Received assistance from friends and family			Borrowed from friends and family		
	Observations	% share		Observations	% share
No	2651	91.1	No	2677	92
Yes	260	8.9	Yes	234	8
Hire purchase			Reduced food consumption		
	Observations	% share		Observations	% share
No	2762	94.9	No	1767	60.7
Yes	149	5.1	Yes	1144	39.3
Relied on savings			Sold harvest in advance		
	Observations	% share		Observations	% share
No	2286	78.5	No	2772	95.2
Yes	625	21.5	Yes	139	4.8
Did nothing			Reduced nonfood consumption		
	Observations	% share		Observations	% share
No	2436	83.7	No	2375	81.6
Yes	475	16.3	Yes	536	18.4
Source: Author's compilation from National Bureau of Statistics (NBS, 2020) using SPSS					

For instance, the market price by household has two groups, the first represents increase in market price and the second decrease in market price. The first observations have a total of 2521 observations with 86.6 percent individuals believe for increased market price while 390 observations with 13.4 percent individuals believe for decreased market price. Other characteristics such as household engaging in additional income generating activities is classified into two groups that is assigned yes for1 and No for 0. The sample size for yes groups is 169 observations represent 5.8 percent and the second group which is No with 2742 observations represent 94.2 percent. Household receiving assistance from family and friends is also classified into two groups which is yes or No group. The yes group with 2651 observations represent 91.1 percentage share of the observation while the second group which is No has 260 observations to represent less share worth about 8.9 percent. Borrowed from friends and family has 234 observations for yes group with 5 percent share while the second group which is No has 2677 observations which is representing a share of 95 percent. Purchase decision has 2762 for No and 149 for yes representing a share of 94.9 and 5.1 percent respectively. But, sold harvest in advance by household recorded 2772 observations for No and 139 observations for yes with a share of 95.2 and 4.8 percent respectively. Again, reduced food consumption captures 1767 observations for No group with 60.7 percent share while 1144 observations was captured for yes group to represent 39.3 percent share. Considering the reduced nonfood consumption, the first group which is No captures 2375 observations which represents 81.6 percent of the observations

while the second group which is yes holds observations worth of 536 with 18.4 percent of the observations. Relied on savings by household has 2286 observations for the groups assigned No with 78.5 percent representing the observations while the second groups which is yes captures 625 observations and 21.5 percent share of observations. The table also provided the observations and percentage share of household that did nothing in terms of coping strategies. The first groups which is No which was not in support has 2436 observations with 83.7 percent share while the second groups which is yes have 475 observations with 16.3 percent share of observations.

Table 3
Percentage Distribution of Household Purchase decision and Payment obligation by sector

delayed payment obligation												
Purchase decision	No				Yes				Total			
	Urban Area	% share	Rural Area	% share	Urban Area	% share	Rural Area	% share	Urban Area	% share	Rural Area	% share
No	902	94.06	1852	96.61	4	40	4	16	906	93.5	1856	95.57
Yes	57	5.94	65	3.39	6	60	21	84	63	6.5	86	4.43
Total	959	100	1917	100	10	100	25	100	969	100	1942	100
Source: Author's computation from National Bureau of Statistics 2020 using SPSS												

Table 3 provided an empirical report for percentage share of household delayed payment obligation according to their purchase decision by sector in Nigeria. The table shows that the purchase decision according to their delayed payment obligation by household for the group "yes" have share of 84% and 60% for rural and urban areas respectively. But purchase decision according to their delayed payment obligation by household for the group "No" have share of 94.06% and 96.61% for urban and rural areas respectively. This implies that the "No" group for purchase decision according to their delayed payment obligation by household are more than the "yes" group for purchase decision according to their delayed payment obligation by household. The result however, implies that household for "No" group has more percentage share when compared with "yes" group.

4.2. Diagnostic Checks

This study further investigated a diagnostic test for model suitability in Table 4. The suitability test depends on the results provided by pseudo R-square and statistical level in the model. Conversely, the statistical level for this study indicates that the model is positive at 1% level of significant. The pseudo R^2 for Cox & Snell is equal to 0.086 and Nagelkerke = 0.259 are accurate. The test is in conformity values got by Aziz et al. (2017) including Astari and Kismiantini (2019). Additionally, the percentage of correct prediction shows that 95.7% is accurately predicted by the model. In conclusion, the diagnostic checks show that the adopted model is suitable for inference.

Table 4
Tests for Model Suitability

Test Statistics	Value	Significance
Table 3: Model Suitability Test		
-2log-Likelihood	179.124	
Cox and Snell R square	0.066	
Nagelkerke R square	0.544	
Chi-square	199.918***	0.000
Percentage correct prediction	99.4	
Number of Observations	2911	
Source: Authors. Note: *** denotes significance at 1% level.		

Moreover, this study also considered the importance of classification tests in our model. We further estimated classification tests as indicated in Table 5. The classification results for the binary logistic model reveal that the Visible Error Rate (VER) is 12.67% while the overall Visible Correct Classification Rate (VCCR) is 87.33%. Those findings confirm that the model is adequate in terms of classification. These results are consistent with study by Abdullah and Majid (2014) and Abdulqader (2017).

Table 5
Final classification results for the binary logistic model

Kind of Test	Delayed	Not-Delayed	Total
Delayed	123	26	149
Not-Delayed	2759	3	2762
VER		12.67%	
VCCR		87.33%	
Notes: VER: represents Visible Error Rate while VCCR: represents Visible Correct Classification Rate			

4.3. Estimation results

Table 6 presents the estimates of the binary logistic regression model. The values for variables coefficient and their corresponding p-values for the two dummies of delayed payment obligation by household: i.e. household had delayed payment obligation and household do not have delayed payment obligation as bench mark category variable.

Table 6
General estimation results of binary regression model

Dependent variable: PURCHASE				
Variables	B	S.E.	p-value	Exp(B)
INTERCEPT	-4.307	0.434	0.000	0.013
MARKET	0.466	0.441	0.29	1.594
INCOME	-0.027	0.443	0.952	0.974
ASSISTANCE	0.525	0.261	(0.045)**	1.69
BORROWED	1.47	0.235	(0.000)***	4.35
PAYMENT	3.275	0.52	(0.000)***	26.452
ADVANCE	0.19	0.435	0.662	1.209
FOOD	1.217	0.227	(0.000)***	3.378
NONFOOD	-0.19	0.241	0.432	0.827
SAVINGS	-0.287	0.248	0.248	0.751
NOTHING	-2.282	1.018	(0.025)**	0.102

Notes: Observation: 2911, pseudo R^2: 0.259, correctly predicted: 95.7, dependent variable: purchase decision. Abbreviation: 1 = B: relative risk ratio value, which represents the estimated coefficients, 2 = S.E: denotes robust standard error, 3 = p-value: represents probability value of estimated model, 4 = Exp(B): denotes exponential of B (coefficient).*, ** and *** indicate the significance level at 5% and 1% respectively.

The table indicates that delayed payment obligation by household (PAYMENT) has a positive coefficient of 3.275, which is statistically significant at 1% level. This implies that the higher the delayed payment obligation, the higher will be the tendency for purchase decision. The 26.452 is odds-ratio to 1 in favour of purchase decision by household. This result is consistent with Nwosu et al. (2018), who also in their study found that delayed payment obligation by household influences purchase decision. This result is also consistent with studies conducted by Ojonta and Ogbuabor (2021) and Ojonta et al. (2021). Thus, this study also find that delayed payment obligation is a relevant factor that drives purchase decision by household in Nigeria. The findings in Table 6 also show that assistance from family and friends (ASSISTANCE) by household has a positive impact on purchase decision. The impact is statistically significant at 5% level. This result is in conformity with the studies by (Onyeaghala and Olajide, 2020).The odds ratio of 1.69 to 1 in favour of purchase decision by household is also consistent with this result. At this point, our findings have shown that two variables, delayed payment and assistance from friend and family are significant for purchase decision by household in Nigeria. These results are very interesting because the two variables would likely cause a serious impediment during this period of Corona virus diseases. In Nigeria, Omaka-Amari1 et al. (2020) demonstrated that the covid-19 pandemic has brought in so much distractions and unethical behaviour to social life such as social and physical distancing, regular wearing of face mask and constant rubbing of sanitizer. These unusual practices have severely impacted on household purchase decisions. The stylized facts that has emerged in this paper suggests that for household to abide by such practice that are conflicting with social life, there is an urgent support for government to address the challenges of delayed payment obligations facing household for purchase decisions. The findings in Table 6 further show that borrowing from family and friends (BORROWED) also positively and significantly impact on purchase decision by household at 1% level of significance. The result is consistent with the odds ratios of 4.35 reported for this variable in favour of purchase decisions by household. The results are also in conformity with the study conducted by Haggblade et al. (2010). The study revealed positive coefficients for the variable studied. Additionally, the table shows that reduced

food consumption expenditure (FOOD) also positively and significantly at 1% level influences the purchase decisions by household. This implies that the higher the household reduced food consumption expenditure, the higher will be the tendency for purchase decisions. This result also supports the theory of consumption propounded by Keynes. The theorist established that consumption is a function of income while purchase decision is driven by income. Therefore income in this context is synonymous with purchase decision. The result suggests that the coefficient of -2.282 and p-value of 0.025 at 5% significant level shows that household with nothing is not an important factor driven the purchase decision by household in Nigeria. Thus, the table also reveals that had nothing (NOTHING) has a negative impact on the purchase decision by household at 5% level of significant. Finally, the table revealed that changes in commodity market price (MARKET), sold harvest in advance (ADVANCE), engaged in additional income generating activities (INCOME), reduced nonfood consumption expenditure (NONFOOD), relied on savings (SAVINGS) by household are insignificant and do not have any important role in influencing purchase decision.

Table 7
Sector estimation results of binary regression model

Dependent variable: PURCHASE				
Explanatory variables	Rural Household		Urban Household	
	B	p-value	B	p-value
INTERCEPT	-4.44	0.000	-4.08	0.000
MARKET	0.238	0.664	0.732	0.334
INCOME	-0.008	0.989	0.137	0.839
ASSISTANCE	0.62	(0.081)*	0.400	0.319
BORROWED	1.804	(0.000)***	1.023	(0.025)**
PAYMENT	3.578	(0.000)***	2.892	(0.001)***
ADVANCE	0.098	0.853	0.130	0.906
FOOD	1.165	(0.000)***	1.111	(0.001)***
NONFOOD	-0.217	0.521	-0.084	0.811
SAVINGS	-0.143	0.654	-0.439	0.294
NOTHING	-16.998	0.994	-1.451	0.164

Notes: Observation: rural household: 1942, rural household pseudo R^2: 0.144, correctly predicted: 92.4- Note: Observations: urban household: 969, rural household pseudo R^2: 0.214, correctly predicted: 90.5: Dependent variable: purchase decision. Abbreviation: 1 = B: relative risk ratio value, which represents the estimated coefficients, 2 = S.E: denotes robust standard error, 3 = p-value: represents probability value of estimated model, 4 = Exp(B): denotes exponential of B (coefficient).*, ** and *** indicate the significance level at 10%, 5% and 1% respectively

Table 7 revealed the estimated result of binary regression model when disaggregated into rural and urban household in Nigeria. The result indicates that the influence of delayed payment obligation by household on purchase decision (PURCHASE) is statistically significant at 1% level for rural and urban households respectively. The delayed payment obligation (PAYMENT) by household has a positive coefficient of 3. 578 in rural household and 2.892 in urban household. This implies that the positive influence of delayed payment obligation by household on purchase decision in rural household is consistent with urban household. Additionally, the table shows that reduced food consumption by household is positive and significant at 1% level. This result shows that delayed payment obligation and reduced food consumption by household are important driver of household purchase decision in both rural and urban dwellers. Another

factor, borrowed from friends and family is another important factor of factor that has positive and significant influence on purchase decision by household. The result revealed that borrowed from friend and family with coefficient of 1.804 and p-value of 0.000 indicate positive influence on purchase decision by household at 1% significant level in rural household. The result also shows that borrowed from friends and family is positive and significantly influence purchase decision by household in urban household at 5% level. The above indicated estimations results are consistent with the results in Table 6 above and as well paly important role on purchase decision by household. Assistance from friend and family influences the purchase decision by household in rural household but insignificant in urban household. This implies that borrowed from friend and family has important role in the purchase decision by rural household but insignificant for purchase decision by urban household. Finally, the table shows that relied on saving (SAVINGS), sold harvest in advance (ADVANCE), reduced nonfood consumption expenditure (NONFOOD), changes in commodity market price (MARKET), engaged in additional income generating activities (INCOME), and had nothing (NOTHING) by household are not important driver for purchase decision by household.

5. Conclusion And Policy Recommendations

Using a binary regression model, we estimated the determinants of purchase decisions by household in Nigeria. The binary regression estimation was disaggregated into rural and urban household to unveil how delayed payment obligations influence purchase decisions by household for relevance policy purposes. The following factors such purchase decision, changes in commodity market price, borrowing from friends and family, sold harvest in advance, reduced food consumption expenditure, reduced nonfood consumption expenditure, relied on savings, engaged in additional income generating activities, assistance from friends and family and doing nothing by household are included in the model estimation. The findings show that delayed payment obligation by household is an important driver for purchase decision in urban and rural dwellers. Other factors like borrowed from friends and family and reduced food consumption expenditure by household have positive and significant influence on purchase decision. The study also shows that assistance from friends and family has positive influence on the purchase decision by rural household but insignificant to their urban counterpart. Thus, there is a need to support the policies on delayed payment obligation especially for the purpose of purchase decision by household. Such policies will unveil the importance of delay payment obligations especially this current period of covid-19 pandemic. These policies will gear towards supporting the delayed payments obligations in Nigeria.

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