

Adversity of FOREX Dominated Pricing of Consumer Goods on Consumption and Savings of Individuals

Ibrahim Ali Bappa and Abubakar Adamu Shehu

Department of Accountancy
School of Management studies
Federal Polytechnic Damaturu

Corresponding author: assumamba@gmail.com, +2348035995875

ABSTRACT

This study examines how businesses use the fluctuations in the foreign exchange to fixed-up artificial price to consumer goods thereby negatively affecting the purchasing power of the consumer. A price is the consideration for the value of a product or service and is arrived at after a series of calculation, research and understanding and risk taking ability. However, businesses uses the Forex fluctuations to arbitrarily fixed- up selling prices for their products without taken input cost into consideration, thereby adversely affecting the purchasing power of the consumer. The study employs the use of questionnaire administered to the Federal Polytechnic Damaturu community to obtain primary data. The data obtained were analyzed using descriptive and inferential statistics. The result shows that Price increase and MPC is statistically significant suggesting that price increase of consumer goods has a strongly, significantly and positively influence on MPC, while it indicates an insignificant positive effect of Price increase on MPS. Suggesting that price increase of Consumer goods has no significant influence with MPS. Thus it was concluded that government should put in mechanism to moderate consumer goods prices, and not allow the market prices to be dominated by movement of foreign exchange

Keyword: *Forex, Price, Input cost, import.*

INTRODUCTION

In many developing and import-dependent economies, consumer goods (especially essentials like food, fuel, and electronics) are priced based on foreign exchange (forex) rates rather than local production costs. When the local currency depreciates, prices of these goods surge, reducing consumers' purchasing power. This forex-dominated pricing mechanism adversely affects household consumption patterns and savings behavior, leading to broader economic instability. A price is what consumers are willing to pay for a particular product at a particular time and place, pricing strategy may increase sales, purchasing, consumption and stocking (Gittlesohn, Trude and Kim 2017). A price is the consideration for the value of a product or service and is arrived at after a series of calculation, research and understanding and risk taking ability (The economic times 2019). Price is one of the four p's of marketing that is concern with getting value for the company (Singh 2012). In fixing up a selling price the market condition, input cost and the ability of the targeted consumer to pay is worthy of consideration (The Economic times 2019). However, Forex fluctuations involves constant changes in the value of a country currency may impact international trade and investment. Forex (foreign exchange) refers to market where currencies are traded. The Forex has a direct impact on trading as goods are imported based on the currency of the country being imported from or the use of Dollar (Boz, Gopinath and Moller 2017). A weaker local currency makes import more expensive and export cheaper. Import price may change by a smaller proportion than the exchange rate between the exporting and the importing country (Goldberg and Knetter 1996).

Forex price fluctuations may lead to an increase cost for businesses with the tendency of reducing profit or alternatively affect the consumer perception of prices. Therefore it is

paramount to decide on a pricing strategy that may mitigate risk to businesses and at the same time ensure that consumers are not adversely affected.

Objectives of the study

- To analyse the relationship between exchange rate fluctuations and consumer goods pricing.
- To assess the impact of forex-driven inflation on household spending and savings.
- To recommend policy or financial strategies to stabilize consumption and savings.

Statement of the Problem:

Nigeria, despite being Africa's largest economy, remains heavily reliant on imports for essential goods including refined petroleum, machinery, food items (e.g., rice, wheat, and dairy), and pharmaceuticals. With limited domestic manufacturing capacity, the prices of these goods are pegged to the US dollar (USD), making them highly sensitive to exchange rate fluctuations.

This study seeks to examine how forex-dominated pricing of consumer goods negatively impacts individuals' consumption and savings, focusing on:

1. Reduced Purchasing Power: How do frequent currency fluctuations and price hikes affect household budgets?
2. Consumption Shocks: Do consumers shift from essential to inferior goods due to rising import costs?
3. Savings Erosion: Does inflation from forex-driven pricing discourage long-term savings and investments?
4. Income Inequality: Does forex volatility disproportionately affect low-income households?

Research Questions:

- How does forex volatility translate into higher consumer goods prices?

Adversity of FOREX Dominated Pricing of Consumer Goods on Consumption and Savings of Individuals

- What adjustments do households make in consumption when prices are forex-driven?
- Does reliance on forex-priced goods reduce disposable income and savings rates?
- Are there policy measures that could mitigate these adverse effects?

Hypothesis

The study comes with the following hypothesis:

H0₁: Price increase of Consumer goods does not have significant influence on MPC

H0₂: price increase of consumer goods does not have significant influence with MPS.

CONCEPTUAL review

A price is the consideration for the value of a product or service and is arrived at after a series of calculation, research and understanding and risk taking ability (The economic times 2019). In price determination many factors are to be considered, this factors includes: input cost, market condition, segment, ability to pay and trade margin.

Input cost

Input costs are the expenses a company incurs to obtain the resources and materials needed to produce goods or services these costs are an important factor in determining the price of a product or service as well as the company's

overall profitability. These costs include materials, labor, equipment, and other resources required for production (Ji & Westcott 1981). It is therefore essential to consider how much is spent in the production of goods and survives in determining the product selling price and not on the movement in foreign exchange.

Market condition

Market condition is being determined by the demand and supply of a product which is another important factor to consider in determining the price of a product. Demand is when consumers are willing to make a sacrifice of effort to satisfy their needs, whereas supply is the availability of goods and services offered at a particular price and time (Esper, et, al. 2010). Consumers and producers react differently to a change in price, while increase in price may affect the producer's willingness and ability to supply more goods; the consumers' willingness and ability to purchase more goods will decrease as a result of increase in price. Equally where the price decrease supply will also decrease and demand will increase (Whelam, Mseter and Chung 2001).

Therefore an optimum point of demand and supply known as the equilibrium point has to be determined; this may be presented diagrammatically below:

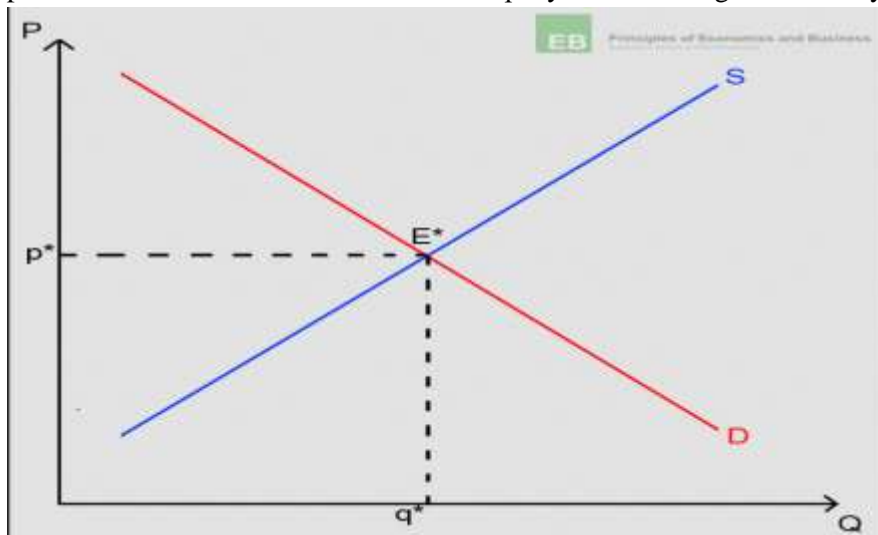


Figure 1: Demand and supply curve.

Adversity of FOREX Dominated Pricing of Consumer Goods on Consumption and Savings of Individuals

Source Quickconomics (2019)

From Fig. 1, P axis represent price while the Q axis represent quantity. The demand is a downward sloping line from left to right direction, whereas the supply is a downward sloping line from the right to the left direction. At point E is where the demand and supply curve intersect and is refer to as the equilibrium point, at this point consumers and supply curve intersect and is refer to as the equilibrium point, at this point consumers are willing to buy as much good or service as the producers are willing to sell. Any shift in price above the equilibrium point will result in increased supply and decrease in demand and vice versa (Quickconomics, 2019).

However this is not always the case as sometimes even where there is a change in price demand will not change based on the elasticity of demand. Elasticity of demand is the responsiveness of demand with response to a change in price, as the demand of some goods such as necessities e.g. food items, medicine etc. is seldom affected by a change in price i.e. their demand is perfectly inelastic. Also demand of some product that are not of necessity such as clothing, home appliances etc. will be affected by a change in price i.e. their demand is perfectly elastic (Business dictionary, 2019).

Other factors that may affect the elasticity of demand include.

1. Expensive or conspicuous goods – These are products that represent a sign of expensive living, such products includes jewelries, customized or bespoke products, or other goods that distinct the user from others. The demand of such products will not be affected by change in price, where price increase demand may also tend to increase as price is not a determinant for the income category of such consumers (Quora.com 2018).

2. Goods with alternative uses – These are goods that have more than one uses e.g. electricity, milk etc., their demand is more elastic as compared to single use goods. A decrease in their prices will make consumers to be using them for other purposes as well, but if their prices increase then consumers will limit their uses to the urgent purpose only (Nitisha 2018).
3. Inferior goods – Inferior goods are those goods that are of low quality and their price is also low, because of their low quality the elasticity of their demand is low as the demand for such product will not increase even where their prices decreases because of their low price (Quora.com 2018).
4. Goods with close substitute – The availability of or other competing substitute goods usually affect the elasticity of demand due to a change in price of some substitute goods. Thus the demand for goods with close substitute is highly elastic, whereas the demand of goods with no substitute is inelastic as change in price will not affect demand (Nitisha 2018).
5. Possibility of deferment of consumption – If the consumption of a product may be deferred, then the demand elasticity of such product will be high because if the price of the product increases then demand will be deferred, whereas if the price decreases then the deferred demand will reappear in the market (Quora.com 2018).
6. Complementary goods - Complimentary goods or goods that are consumed jointly have an inelastic demand in that the increase in price of one product will not affect its demand unless the price of

Adversity of FOREX Dominated Pricing of Consumer Goods on Consumption and Savings of Individuals

the other product raises as well e.g. printer and paper (Nitisha 2016).

After identifying the various factors that may influence demand then the pricing strategy to be developed will take the above factors into consideration.

Segmentation

Market segmentation is the process of dividing a broad target market into smaller groups (segments) based on shared characteristics. This allows businesses to tailor their marketing strategies and products to specific needs and preferences, improving efficiency and effectiveness (Dibb, 1998). This allows businesses focus their marketing efforts on the most promising groups, avoiding wasted resources on those who are less likely to be interested. By understanding these segments and tailoring their marketing efforts accordingly, the businesses can increase sales and build a stronger brand (Wing and Bell 2008). This implies as sale increases the tendency is for price to reduce whilst the businesses should maintain their profitability because of higher sale.

Income of the consumer

The elasticity of demand is also dependent on the proportion of the consumers income spend

on the goods, therefore if the consumers spend a small proportion of their income on the product an increase in the price of such product may not affect its elasticity of demand, because the consumers only buy a small quantity and irrespective of the price the consumer may buy the same quantity. However if the consumers spend a significant proportion of their income on the product, then an increase in price will affect the elasticity of demand for such product (Quora.com 2018).

Foreign exchange fluctuation

In 2023, the foreign exchange market in Nigeria experienced significant volatility, particularly the Naira's depreciation against the US dollar. The official exchange rate saw a substantial decline, moving from N462 to N134.64 per dollar, a 14.76% decrease. Simultaneously, the black market rate also increased, reaching around N750 per dollar. This difference created a wide gap between official and black market rates, which contributed to market instability and eroded foreign investor confidence. From June 2023 onwards, the naira continued to depreciate and displayed significant volatility, It has traded between NGN 589 and NGN 1,013 per USD. in December, this can be depicted by the forex movement in figure 2.

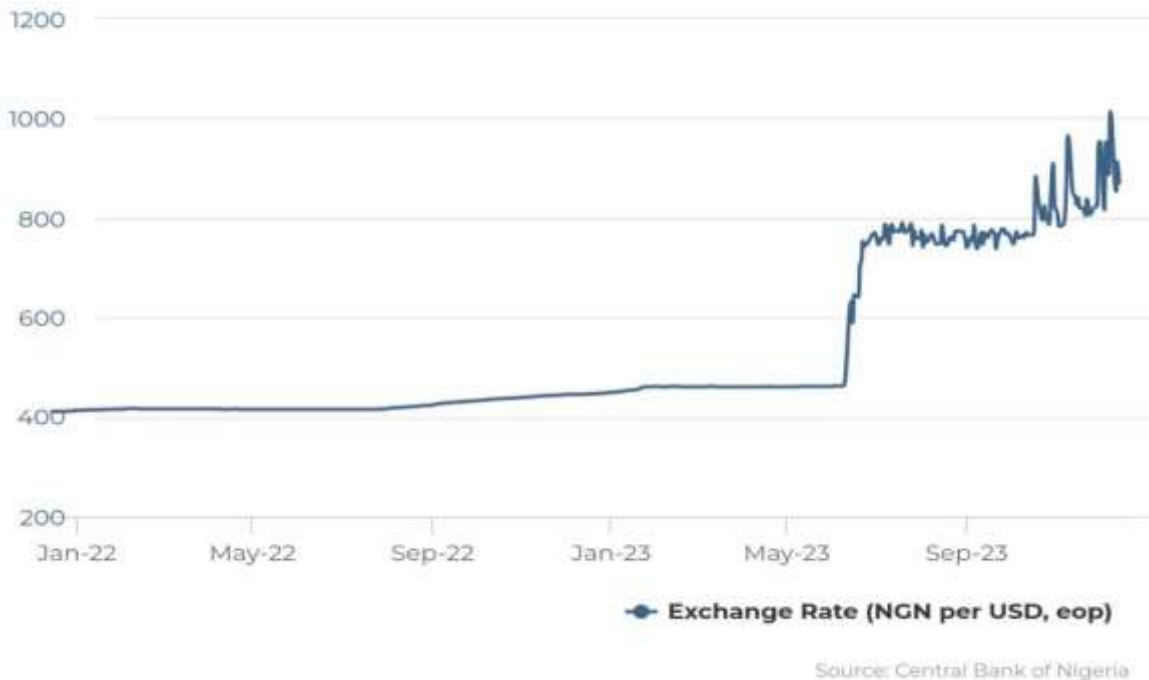


Figure 2: forex movement

The freefall of the naira has helped fuel inflation to a nearly two-decade high, thereby exacerbating the cost-of-living crisis and weighing on the domestic economy. In the third quarter of 2023, the non-oil sector of the economy decelerated to 2.7% growth from 3.5% in second quarter of 2023 (Focus economics 2023).

Effect of increase in price on the consumer

Price increases, or inflation, have multiple effects on individuals, businesses, and the overall economy. For consumers, it reduces purchasing power, meaning they can buy less with the same amount of money (Ludvigson 2004). Businesses may see decreased sales initially as consumers adjust to higher prices, but potentially increased profit margins per unit sold. The economy as a whole can experience reduced activity and lower growth if inflation is not managed effectively. Price increase may also lead to distortion of purchasing power over time for both recipients and payers of fixed interest

rates. Also significant price increase if not managed effectively, could lead to social unrest as individuals struggle to afford basic necessities. In essence increase price affect the consumption and savings of individual as well as the multiplier effect (Kraiwani 2021).

Theoretical framework

The pricing of consumer goods in foreign exchange (forex) terms, particularly in economies with volatile local currencies, introduces significant challenges for individuals' consumption patterns and savings behavior. This framework explores the theoretical underpinnings of how forex-dominated pricing affects purchasing power, consumption decisions, and savings rates.

Purchasing Power Parity (PPP) Theory:

Purchasing Power Parity (PPP) is a fundamental economic theory that asserts exchange rates between currencies should adjust to equalize the purchasing power of different currencies. The theory suggests that in the absence of

Adversity of FOREX Dominated Pricing of Consumer Goods on Consumption and Savings of Individuals

transportation costs and trade barriers, identical goods should have the same price in different countries when expressed in a common currency (Krugman & Obstfeld, 2018). The Purchasing Power Parity (PPP) theory establishes that the rate of exchange between two countries' currencies is the ratio of the prices of these two countries, measured in their own currencies. To be a precise measure of purchasing power, these prices must include most of the goods and services produced in each country. The forex-dominated pricing of consumer goods disrupts consumption and savings through multiple channels: reduced purchasing power, inflationary pressures, behavioral adjustments, and income effects. Theoretical models (PPP, PIH, LCH, Behavioral Economics) collectively explain why individuals struggle to maintain stable consumption and savings in such environments. Future research should empirically test these mechanisms in forex-sensitive economies (Krugman & Obstfeld, 2018).

Shift Towards Foreign Currency Savings (Dollarization):

In environments with persistent currency depreciation and FOREX-dominated pricing, individuals may lose confidence in the domestic currency and opt to save in foreign currencies (often the US dollar). While this might offer some protection against domestic currency depreciation, it can also have negative consequences for the domestic economy, such as

1. Descriptive Analysis

Table 1: Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Price	50	1.00	2.00	1.8000	.77591
MPC	50	1.33	5.50	2.0867	.64263
MPS	50	1.30	5.87	2.2667	.52381
Valid N (listwise)	50				

Source: *IBMS SPSS Version 23*

reduced liquidity in the domestic financial system and increased reliance on foreign currency reserves. This phenomenon of "dollarization" is a well-studied topic in international finance and development economics (Reinhart & Rogoff, 2010).

Methodology

The study examined the adverse effect of how the movement in foreign exchange has dominated the pricing of consumer goods between the periods of the year 2022 to 2024 in Nigeria. The study is based on primary data collected through the use of questionnaire. The targeted population of the research is the Federal Polytechnic Damaturu community. 50 questionnaires were administered to the householders selected using convenient sampling technique to measure the effect of the hyper price increase on their consumption (marginal propensity to consumed) as well as their savings (marginal propensity to save) with a view to determine the multiplier effect. The study employed descriptive and inferential statistics for data analysis. The research objectives were analysed using descriptive statistics (mean and standard deviation) while inferential statistics (Regression Analysis) was used to test the hypotheses.

Result

The results were presented in tables and discussed according to the research objectives and hypotheses.

The descriptive statistics for Price reveal a range from a minimum score of 1 to a maximum of 2.0. The mean score is 1.800, indicating a central tendency toward the midpoint of the scale. The standard deviation, at 0.7759, suggests a low level of variability in respondents' consumption and saving. For the marginal propensity to consume (MPC), the range spans from a minimum of 1 to a maximum

of 6.0. The mean score is 2.0867, with a standard deviation of 0.64363. This statistics suggest moderate level of agreement among respondents. In the case of marginal propensity to save (MPS), the descriptive statistics showcase a range from 1 to 5.87. The mean score is 2.2667, and the standard deviation is 0.523811. The notable standard deviation suggests varied perspectives among respondents.

2. Regression Analysis

Table 2: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.623 ^a	.388	.362	.61987

a. Predictors: (Constant), MPS, MPC

The result from the regression model summary is shown in table 2, Price as its independent variable, while MPC and MPS as the dependent variables. The absolute value of the correlation co-efficient between the variables is 0.623 indicate the strength of the relationship. This indicates that any 1% increase in price, there will be 62.3% changes in MPC and MPS. The R-Square of 0.388 or 38.8% is the proportion of

variation in the independent variable (price) as explained by the regression model. The values of R Square range from 0 to 1 indicate that the dependent variables (MPC and MPS) occupy 38% in the factors that account is low which means that consumers resort to buying essential goods of necessity signifying that their purchasing power is drastically affected by price increase of consumer goods.

Table 3: ANOVA^a

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	11.441	2	5.720	14.887	.000 ^b
	Residual	18.059	47	.384		
	Total	29.500	49			

a. independent Variable: Price

b. Predictors: (Constant), MPS, MPC

The regression sum of squares of 11.441 in table 3 was considered low in comparison to the residual sum of square of 18.059. This implies that the model account for the variation in the independent variable (Price) (Griethuijsen et al., 2023). The model explains low of the variation in Price increase, MPC and MPS. Besides, the F-value of 14.887 is significantly at the 0.000 level whereby being less than the alpha value of 0.05 represented this model is good and fit for the study.

4 Testing of Hypotheses

The standardized coefficient indicates whether the direction of the effect is either positive or negative, while the t-value assesses whether this effect is significant or not (Hair, et al., 2010). The regression for the model is presented in the table above. In the model, two hypotheses, embracing three variables Price, MPC and MPS were tested using regression.

Table 4: Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	.147	.463		.317	.753
	MPC	.747	.139	.619	.385	.000
	MPS	.042	.170	.028	.245	.808

a. Independent Variable: Price

Decision Rule:

The decision rule is to reject null hypothesis if the calculated significance value is (less/equal to) ≤ 0.05 , then the variable is making a significant unique contribution to the prediction of the dependent variables. However, if greater than 0.05 then it can be concluded that the variable is not making a significant unique contribution to the prediction of the dependent variables.

Hypothesis One

The first null hypothesis was postulated as follows:

H0₁: Price increase of Consumer goods does not have significant influence on MPC. This result of the study shows ($\beta=0.619$, $t=0.385$, $Sig=0.000$). The result shows that Price increase and MPC is statistically significant ($P\leq 0.05$). From the result, the significance value was 0.000 which is equal to the P-Value of 0.05. Therefore, the H0₁ was rejected as price increase of consumer goods has a strongly, significantly and positively influence on MPC.

Hypothesis Two

The second null hypothesis was postulated as follows:

H0₂: price increase of consumer goods does not have significant influence with MPS. The result of the study shows ($\beta=-0.028$, $t=-0.245$, $Sig = 0.808$). This indicates an insignificant positive effect of Price increase on MPS. From the result, the significance value was 0.808 which is

greater than the P-Value of 0.05. Hence, this provide evidence of accepting null hypothesis, which states that has price increase of Consumer goods has no significant influence with MPS.

Discussion and conclusion

The adverse of price increase of consumer goods that is influence by movement of foreign exchange between the years 2023 to 2024 was analyzed. Hypothesis one shows that Price increase and MPC is statistically significant, thus suggesting that consumption is tilted toward necessities as the purchasing power of the consumer is drastically affected consistent with (Godwin, at. ell 2008). Equally hypothesis two suggest an insignificant positive effect of Price increase on MPS, thus implying that even with increase in prices savings is to be unlikely be affected. This may likely be due to the little aloft level of the income of the respondents. Nevertheless government should put in mechanism to moderate consumer goods prices, and not allow the market prices to be dominated by movement of foreign exchange. This may likely result in boasting the demand of consumer and non-consumer goods with a view stimulate market and production, thereby creating employment and attaining macro-economic stability.

Adversity of FOREX Dominated Pricing of Consumer Goods on Consumption and Savings of Individuals

References

- Boz, E., Gopinath, G., & Plagborg-Møller, M. (2017). *Global trade and the dollar* (No. w23988). National Bureau of Economic Research.
- Bussiness Dictionary (2019) *Elasticity of demand*, Available at: <http://www.businessdictionary.com/definition/elasticity-of-demand.html> (Accessed: 14 March 2019).
- De Gier, B., Marchal, N., de Beer-Schuurman, I., Te Wierik, M., Hooiveld, M., de Melker, H. E., & GAS study group. (2023). Increase in invasive group A streptococcal (Streptococcus pyogenes) infections (iGAS) in young children in the Netherlands, 2022. *Eurosurveillance*, 28(1), 2200941.
- Dibb, S. (1998). Market segmentation: strategies for success. *Marketing Intelligence & Planning*, 16(7), 394-406.
- Dunn, R. M. (2013). Flexible Exchange Rates and Traded Goods Prices: The Role of Oligopoly Pricing in the Canadian Experience. In *The economics of common currencies* (pp. 259-280). Routledge.
- Esper, T. L., Ellinger, A. E., Stank, T. P., Flint, D. J., & Moon, M. (2010). Demand and supply integration: a conceptual framework of value creation through knowledge management. *Journal of the Academy of marketing Science*, 38, 5-18.
- Gittelsohn, J., Trude, A.C.B. and Kim, H., 2017. Peer Reviewed: Pricing Strategies to Encourage Availability, Purchase, and Consumption of Healthy Foods and Beverages: A Systematic Review. *Preventing chronic disease*, 14.
- Goldberg, P. K., & Knetter, M. M. (1996). Goods prices and exchange rates: What have we learned?
- Goodwin, N., Nelson, J. A., Ackerman, F., & Weisskopf, T. (2008). Consumption and the consumer society. *Global Development and Environment Institute*, 126.
- Hair, J. F., Sarstedt, M., Pieper, T. M., & Ringle, C. M. (2012). The use of partial least squares structural equation modeling in strategic management research: a review of past practices and recommendations for future applications. *Long range planning*, 45(5-6), 320-340.
- Intuit (2019) *pricing -strategies-which-is-right-for-your-business*, Available at: <https://quickbooks.intuit.com/r/pricing-strategy/6-different-pricing-strategies-which-is-right-for-your-business/> (Accessed: 14 March 2019).
- Kraiwanit, T. (2021). A multiplier of e-consumption: The study of the developing economy. *Journal of Governance and Regulation/Volume*, 10(3).
- Kumar, S., & Pandey, M. (2017). The impact of psychological pricing strategy on consumers' buying behaviour: a qualitative study. *International journal of business and systems research*, 11(1-2), 101-117.

Adversity of FOREX Dominated Pricing of Consumer Goods on Consumption and Savings of Individuals

- Krugman, P., & Obstfeld, M., (2018). International Economics: Theory and Policy, the latest edition.
- Lamm Jr, R. M., & Westcott, P. C. (1981). The effects of changing input costs on food prices. *American Journal of Agricultural Economics*, 63(2), 187-196.
- Ludvigson, S. C. (2004). Consumer confidence and consumer spending. *Journal of Economic perspectives*, 18(2), 29-50
- Nähring, P. (2011). Value-based pricing: The perception of value.
- Nitisha (2018) *9 Factors That Influence Price Elasticity of Demand*, Available at: <http://www.economicdiscussion.net/elasticity-of-demand/9-factors-that-influence-price> (Accessed: 14 March 2019).
- Quickonomics (2019) *The Law of Supply and Demand*, Available at: <https://quickonomics.com/the-law-of-supply-and-demand/> (Accessed: 8 March 2019).
- Quora (2018) *What are the factors that affect the price elasticity of demand?*, Available at: <https://www.quora.com/What-are-the-factors-that-affect-the-price-elasticity-of-demand> (Accessed: 14 March 2019)
- Reinhart, C. M., & Kenneth S. R., (2010). *This Time Is Different: Eight Centuries of Financial Folly*. Princeton University Press. (Provides historical context and analysis of currency crises and dollarization).
- Schindler, R. M. (2011). *Pricing strategies: a marketing approach*. SAGE publications.
- Singh, M. (2012). Marketing mix of 4P's for competitive advantage. *IOSR Journal of Business and Management*, 3(6), 40-45.
- Wind, Y. J., & Bell, D. R. (2008). Market segmentation. In *The marketing book* (pp. 260-282). Routledge.