Interdisciplinary Research Journal of Management and Social Sciences (IRJMSS)
ISSN: 2837-9985| Impact Factor : 6.27
Volume. 11, Number 1; January-March, 2024;
Published By: Scientific and Academic Development Institute (SADI)
8933 Willis Ave Los Angeles, California
https://sadijournals.org/index.php/IRJMSS

EFFECT OF INFLATION ON PRODUCT FINANCING OF SOLAR ENERGY BY D.LIGHT LIMITED, LAGOS NIGERIA

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DOI: https://doi.org/10.5281/zenodo.10638593

ABSTRACT: This work is on the effect of inflation on product financing of solar energy by delight limited, Lagos Nigeria. The objectives of the study were to determine the effect of cost-push inflation on debt financing and ascertain the effect of demand-pull inflation on equity financing of delight limited, Lagos Nigeria. A total population of one hundred (100) staff selected from the Lagos branches of delight Limited was used. Linear regression analysis was utilized to test the hypotheses of the study. The statistical tool used for the analysis is the statistical package for social sciences (SPSS) version 26. The findings of the study revealed that cost-push inflation does have significant effect on debt financing of delight limited, Lagos Nigeria and emand-pull inflation does have significant effect on equity financing of delight limited, Lagos Nigeria. The study concludes that that inflation, whether cost-push or demand-pull, plays a crucial role in shaping the financing options for solar energy companies such as delight Limited in Lagos, Nigeria. It was recommended among other things that the company adopts a proactive approach to managing its debt financing in the face of inflationary pressures.

Keyword: Inflation, Product financing, Solar energy, Delight limited

Introduction

1.1 Background of the Study

The interplay between inflation and product financing is a complex and nuanced matter, with multifaceted implications for businesses, consumers, and the overall economic landscape. Understanding this dynamic is crucial for navigating financial decisions in an inflationary environment and developing adaptable strategies for both product developers and financing providers. Inflation refers to the sustained increase in the general price level of goods and services in an economy over time (Spiro, 2018). This means that the purchasing power of each unit of currency diminishes, affecting everyone from individual consumers to large corporations. While moderate inflation can stimulate economic activity, its rapid or unpredictable rise poses significant challenges.

Access to clean and reliable energy remains a critical challenge for billions worldwide, particularly in developing nations (IEA, 2023). This lack of access hinders economic development, impedes healthcare and education, and perpetuates environmental degradation through reliance on fossil fuels (WRI, 2022). In response, solar energy

has emerged as a promising solution, offering a decentralized, environmentally friendly alternative to traditional grid-based electricity (REN21, 2023).

D.Light Limited, established in 2006, stands as a leader in providing accessible solar energy solutions for off-grid communities (d.light, 2023). Operating primarily in Sub-Saharan Africa and South Asia, they offer a diverse range of solar products, from portable lanterns to complete solar home systems. Notably, d.Light emphasizes pay-as-you-go (PAYG) financing models, enabling customers with limited financial resources to gradually own their solar systems through micropayments (Ghattas, 2019). This innovative approach has provided energy access to millions, impacting over 150 million lives as of April 2023 (d.light, 2023). However, the global economic landscape presents significant challenges to d.Light's mission. Inflationary pressures have become increasingly evident in recent years, driven by factors such as geopolitical events, supply chain disruptions, and rising energy costs (IMF, 2023). This economic reality directly impacts d.Light's operations in several ways such as increased production and procurement costs, erosion of purchasing power and currency fluctuations.

Understanding the effect of inflation on product financing is crucial for d.light Limited to develop effective strategies that mitigate its impact and ensure continued access to affordable solar energy solutions. By comprehensively analyzing the relationship between inflation and product financing, d.light Limited can devise pricing structures, financing models, and marketing approaches that account for potential inflationary pressures. This research will contribute to the knowledge base surrounding the economics of solar energy adoption in developing countries and provide insights for policymakers, industry practitioners, and other stakeholders (IEA, 2022).

1.2 Statement of the Problem

In an ideal situation, stable economic conditions would allow for consistent and predictable pricing and financing options for solar energy products. However, inflation can disrupt this stability, leading to uncertain costs and challenges in securing financing for solar energy projects. This problem arises due to the impact of inflation on various aspects of product financing, such as procurement costs, interest rates, and customer purchasing power.

The proliferation of solar energy solutions by D.Light Limited in Lagos, Nigeria, represents a commendable effort toward addressing energy poverty and promoting sustainable development. However, the company faces a critical challenge rooted in the economic dynamics of the region specifically, the impact of inflation on the product financing of solar energy. This problem stems from the complex interplay of economic factors that pose a threat to the company's mission of providing affordable and accessible solar products to off-grid and underserved communities.

While there is a burgeoning interest in the global shift toward renewable energy and sustainable development, a nuanced understanding of how inflation specifically affects the product financing of solar energy in the context of D.Light Limited in Lagos, Nigeria, is lacking. Bridging this research gap is essential for developing targeted strategies that ensure the long-term viability and impact of solar energy initiatives in the region. It is on this note that this study aims to ascertain the effect of inflation on product financing of solar energy by d.light limited, Lagos Nigeria.

1.3 Objectives of the Study

The main objective of the study is to ascertain the effect of inflation on product financing of solar energy by d.light limited, Lagos Nigeria. Specifically, the objectives were:

i. To determine the effect of cost-push inflation on debt financing of d.light limited, Lagos Nigeria.

ii. To ascertain the effect of demand-pull inflation on equity financing of d.light limited, Lagos Nigeria.

1.4 Research Questions

i. Does cost-push inflation have effect on debt financing of d.light limited, Lagos Nigeria?

ii. Does demand-pull inflation have effect on equity financing of d.light limited, Lagos Nigeria?

1.5 Research Hypotheses

i. Cost-push inflation does not have significant effect on debt financing of d.light limited, Lagos Nigeria

ii. Demand-pull inflation does not have significant effect on equity financing of d.light limited, Lagos Nigeria

1.6 Scope of the Study

The topic of this study is the effect of inflation on product financing of solar energy by d.light limited, Lagos Nigeria. The independent variable of the study is inflation, which is proxied by cost-push inflation and demand-pull inflation. The dependent variable of the study is product financing which is proxied by debt financing and equity financing. The unit of analysis is the staff of the company under study.

Review of Related Literature

2.1 Conceptual Review

2.1.2 Inflation

Inflation refers to the sustained increase in the general price level of goods and services in an economy over a period of time. It is characterized by a decrease in the purchasing power of money, as more units of currency are required to purchase the same quantity of goods or services. Inflation is typically measured by calculating the percentage change in a price index, such as the Consumer Price Index (CPI), which tracks the average price level of a basket of goods and services consumed by households (Mankiw & Taylor, 2017).

There are various causes and types of inflation, which can be broadly categorized into demand-pull inflation and cost-push inflation. Demand-pull inflation occurs when aggregate demand in an economy exceeds its productive capacity, leading to increased prices. This may result from factors such as increased government spending, expansionary monetary policy, or a surge in consumer spending. On the other hand, cost-push inflation occurs when there is an increase in production costs, such as wages or raw material prices, leading to higher prices for finished goods (Mishkin, & Eakins, 2015).

Inflation can have both positive and negative effects on an economy. In moderate levels, it can stimulate economic growth by encouraging consumption and investment. It also reduces the real burden of debt and provides flexibility for wage adjustments. However, high or unpredictable inflation can have detrimental effects. It erodes the purchasing power of individuals and reduces their standard of living. It also distorts resource allocation, discourages savings, and creates uncertainty in financial markets (Samuelson & Nordhaus, 2010).

To combat inflation, central banks often implement monetary policies aimed at controlling the money supply and interest rates. These measures include increasing interest rates to reduce borrowing and spending, tightening monetary policy to restrict credit availability, or using open market operations to buy government securities and reduce liquidity in the economy (Blinder & Baumol, 2012).

2.1.3 Components of Inflation

a. cost-push inflation

Cost-push inflation refers to a type of inflation that occurs when the cost of production increases, leading to an increase in prices for goods and services. It is driven by factors such as rising wages, higher raw material costs,

increased taxes, or government regulations that raise production costs (Mankiw, 2014). As a result, businesses pass on these increased costs to consumers in the form of higher prices.

One major factor contributing to cost-push inflation is wage increases. When workers demand higher wages, businesses may need to increase their prices to cover the additional labor costs. This can occur when there is a strong labor market with low unemployment rates, giving workers more bargaining power (Krugman & Wells, 2015).

Another factor is the rise in raw material costs. When the prices of essential inputs such as oil, metals, or agricultural products increase, it raises the cost of production for businesses. These increased costs are then passed on to consumers through higher prices (Samuelson & Nordhaus, 2010).

Government policies can also contribute to cost-push inflation. For example, an increase in taxes or regulations can raise production costs for businesses. These additional expenses are often transferred to consumers in the form of higher prices (Gwartney et al., 2019).

Furthermore, supply shocks can lead to cost-push inflation. Natural disasters, geopolitical events, or disruptions in the supply chain can result in a sudden decrease in the availability of certain goods or services. As a result, businesses face higher input costs and may raise prices to maintain profitability (Taylor & Weerapana, 2019).

b. demand-pull inflation

Demand-pull inflation refers to a situation in which the general price level rises due to an increase in aggregate demand for goods and services, exceeding the economy's ability to produce them. This type of inflation occurs when there is excessive demand for goods and services compared to the available supply. It is characterized by an increase in consumer spending, investment, and government expenditure, leading to a shortage of goods and services and an upward pressure on prices (Blinder, 2017).

According to the Encyclopedia Britannica, demand-pull inflation occurs when "the demand for goods and services exceeds production capacity, resulting in an increase in prices" (Encyclopedia Britannica). This type of inflation is often associated with periods of economic growth and expansion when consumer confidence is high, leading to increased spending.

In his book "Macroeconomics: Principles and Policy," William J. Baumol explains that demand-pull inflation is caused by "an increase in aggregate demand that outpaces the economy's ability to produce goods and services" (Gordon, 2011). This can be driven by factors such as increased consumer confidence, expansionary fiscal policies, or monetary policies that stimulate spending.

According to the Journal of Monetary Economics, demand-pull inflation can also be triggered by external factors such as changes in international trade patterns or increases in global commodity prices (Stiglitz, 2003).

Demand-pull inflation can have both positive and negative effects on the economy. On one hand, it can indicate a strong economy with increased consumer spending and business investment. However, if left unchecked, it can lead to a decrease in purchasing power as prices rise faster than wages, which can ultimately erode consumer confidence and economic stability (Federal Reserve Bank of St. Louis. 2023, October 26).

2.1.4 Product financing

Product financing refers to the various methods and strategies used by businesses and individuals to obtain funding for the production, distribution, and sale of goods and services. It involves acquiring capital to cover expenses related to manufacturing, marketing, inventory management, and other aspects of the product lifecycle.

Product financing plays a crucial role in enabling businesses to bring their products to market, maintain cash flow, and support growth and expansion.

One common form of product financing is through loans or lines of credit provided by financial institutions. Businesses can approach banks or other lending institutions to secure funds for product development, production, or marketing activities. These loans are typically repaid with interest over a specified period. For example, a company may take out a loan to purchase raw materials for manufacturing a new product (Dlabay et al., 2011).

Another method of product financing is through equity financing. This involves selling ownership shares or equity in the business in exchange for capital. Investors provide funds with the expectation of receiving a return on their investment through dividends or capital appreciation. Equity financing can be obtained from individual investors, venture capitalists, or through public offerings on stock exchanges (Gitman & McDaniel, 2008).

Crowdfunding has emerged as a popular alternative method of product financing in recent years. It involves raising small amounts of money from a large number of individuals through online platforms. Entrepreneurs and businesses present their product ideas or prototypes to potential backers who contribute funds in exchange for early access to the product or other rewards. Crowdfunding platforms provide a way for individuals to validate their product concepts and generate capital without relying on traditional financial institutions (Mollick, 2014).

Trade credit is another form of product financing commonly used in business-to-business transactions. It allows businesses to purchase goods or services on credit from suppliers with payment terms agreed upon in advance. Trade credit provides flexibility in managing cash flow by allowing businesses to receive goods immediately and pay for them at a later date. This form of financing is particularly useful for businesses that need to build inventory or fulfill orders before receiving payment from customers (Weston et al., 2004).

Lastly, leasing is a method of product financing where businesses or individuals rent equipment or assets for a specified period instead of purchasing them outright. This allows businesses to conserve capital and spread the cost of acquiring assets over time. Leasing is commonly used for high-value assets such as machinery, vehicles, or technology equipment. It provides flexibility and allows businesses to upgrade or replace assets as needed (Gitman & McDaniel, 2008).

2.1.5 Components of Product Financing

a. Debt Financing

Debt financing refers to the practice of raising capital by borrowing funds from external sources, such as financial institutions or investors, with the obligation to repay the borrowed amount along with any agreed-upon interest. It is a common method used by individuals, businesses, and governments to meet their financial needs when they do not have sufficient internal funds available. Debt financing allows borrowers to access a larger pool of funds than they might otherwise have, enabling them to finance various activities such as investments, expansions, or day-to-day operations (Brealey, Myers & Allen, 2017).

One form of debt financing is through loans provided by financial institutions. These loans can be secured or unsecured, depending on whether collateral is required as a guarantee for repayment. Secured loans are backed by specific assets that can be seized by the lender in case of default, while unsecured loans are not tied to any particular asset. Loans usually come with predetermined repayment terms and interest rates that borrowers must adhere to (Brigham & Ehrhardt, 2016).

Another common method of debt financing is issuing bonds. Bonds are debt instruments issued by corporations or governments to raise large amounts of capital from investors. When an entity issues bonds, it essentially

borrows money from investors who purchase the bonds and promises to repay the principal amount at a future date (the bond's maturity) along with periodic interest payments. Bonds often have fixed interest rates and maturities ranging from a few years to several decades (Fabozzi, & Peterson Drake, 2018).

Debt financing can also take the form of trade credit, where suppliers allow customers to defer payment for goods or services provided. This arrangement provides businesses with short-term financing without incurring interest expenses. However, failure to pay trade credit within the agreed-upon terms may result in strained relationships with suppliers and impact future credit availability (Gitman, & Zutter, 2017).

Leasing is another method of debt financing commonly used for acquiring assets such as equipment or vehicles. In a lease agreement, the lessor (the owner of the asset) grants the lessee (the borrower) the right to use the asset in exchange for regular lease payments over a specified period. While the lessee does not own the asset outright, leasing allows for the use of assets without the need for a large upfront capital investment (Ross, Westerfield, Jordan, & Roberts, 2020).

Lastly, convertible debt is a hybrid form of financing that combines debt and equity elements. It involves issuing bonds or other debt instruments that can be converted into equity shares at a later date. Convertible debt provides flexibility to both the borrower and lender, as it allows the borrower to access funds initially as debt and potentially convert it into equity if certain conditions are met (Fabozzi, & Peterson Drake, 2018).

b. Equity Financing

Equity financing refers to a method of raising capital for a company by selling shares of ownership, known as equity, to investors in exchange for funds. It is a common practice used by both established companies and startups to acquire the necessary financial resources to support their operations, expansion plans, or new projects. This form of financing allows companies to raise funds without taking on debt or incurring interest payments. Instead, investors become partial owners of the company and have a claim on its assets and future profits (Dlabay et al., 2019).

Equity financing can take various forms, including initial public offerings (IPOs), private placements, venture capital investments, and crowdfunding. In an IPO, a company offers its shares to the public for the first time, allowing individual and institutional investors to purchase them through the stock market. Private placements involve selling shares directly to selected investors or institutions without going through a public offering. Venture capital investments are made by specialized firms that provide funding to startups or small businesses in exchange for equity stakes. Crowdfunding platforms enable companies to raise capital from a large number of individuals who contribute relatively small amounts of money (Ross et al., 2020).

One key advantage of equity financing is that it does not require repayment of principal or interest payments, reducing the financial burden on the company compared to debt financing. Additionally, equity financing allows companies to tap into the expertise and network of their investors, who often provide guidance and support beyond just monetary contributions (Gitman et al., 2019). However, there are also some drawbacks associated with equity financing. By selling shares of ownership, companies dilute their ownership stakes and give up some control over decision-making processes. Furthermore, sharing profits with shareholders may reduce the overall earnings available for reinvestment or distribution among existing shareholders (Brealey et al., 2017).

2.1.6 Solar Energy

Solar energy refers to the radiant light and heat emitted by the Sun, which can be harnessed and converted into usable forms of energy for various applications. It is a renewable and abundant source of energy that holds great

potential for meeting the world's increasing energy demands while reducing greenhouse gas emissions and dependence on fossil fuels (Encyclopedia Britannica).

The conversion of solar energy into usable forms involves various technologies, such as photovoltaics (PV) and solar thermal systems. Photovoltaics utilize semiconducting materials to directly convert sunlight into electricity through the photovoltaic effect (Encyclopedia Britannica, Print). Solar thermal systems, on the other hand, use mirrors or lenses to concentrate sunlight onto a receiver, which then converts it into heat that can be used for heating purposes or to generate electricity through steam turbines (National Renewable Energy Laboratory Handbook).

Solar energy has numerous advantages over conventional energy sources. Firstly, it is a clean source of energy that does not produce harmful emissions or contribute to air pollution and climate change (National Renewable Energy Laboratory Handbook, Print). Secondly, solar energy is abundant and widely available in most parts of the world, making it a viable option for decentralized power generation (Encyclopedia Britannica,). Additionally, solar power systems require minimal maintenance compared to traditional power plants, resulting in lower operating costs over their lifetime (National Renewable Energy Laboratory Handbook).

Despite these advantages, there are certain limitations associated with solar energy. The amount of sunlight reaching the Earth's surface varies depending on factors such as location, time of day, and weather conditions (Encyclopedia Britannica). This variability makes solar energy an intermittent source of power, requiring the use of energy storage technologies or backup power sources to ensure a continuous supply of electricity. Moreover, the initial cost of installing solar power systems can be high, although it has been declining steadily in recent years due to technological advancements and economies of scale (National Renewable Energy Laboratory Handbook).

2.2 Theoretical framework

The Cost-Inflation Squeeze theory.

The Cost-Inflation Squeeze theory, initially articulated by economists Blinder and Stiglitz in the 1990s (Blinder, 2017; Stiglitz, 2003), offers a particularly relevant lens for examining the effect of inflation on product financing. It posits that periods of rising input costs due to factors like supply chain disruptions, natural disasters, or resource scarcity create a squeeze on businesses. This squeeze manifests in:

Reduced Profit Margins: As production costs rise, businesses often struggle to raise product prices proportionately due to competitive pressures or consumer resistance. This results in shrinking profit margins.

Increased Risk Aversion: Faced with cost uncertainties and tighter margins, businesses become more risk-averse. This may translate to reduced investments in product development, marketing, and innovation, impacting product variety and accessibility.

Tightened Lending Standards: To manage risks in inflationary environments, financial institutions often tighten lending standards, making it harder for businesses to access loans for product financing, particularly smaller firms and those with limited financial history.

These factors collectively create a challenging landscape for product financing:

Reduced Availability of Financing: Tightened lending and increased risk aversion by financial institutions can limit the availability of traditional loan options for businesses seeking to finance product purchases for their customers.

Higher Financing Costs: Even when financing is available, it may come at higher interest rates as lenders seek to compensate for perceived increased risk. This can further strain businesses' already squeezed margins.

Shift Towards Alternative Financing Models: Businesses may be forced to explore alternative financing models, such as pay-as-you-go (PAYG) plans or crowdfunding, which present their own sets of challenges and limitations.

Implications for Policy and Practice:

Macroeconomic Policies: Central banks and governments need to carefully calibrate monetary and fiscal policies to address inflation without stifling economic growth, specifically considering the vulnerability of product financing and its impact on businesses and consumers.

Financial Regulators: Regulatory frameworks for financial institutions should take into account the increased risk perception in inflationary environments and ensure lending practices remain accessible for viable businesses while maintaining financial stability.

Business Adaptability: Businesses need to adopt flexible financing strategies, diversifying funding sources, exploring alternative models, and focusing on cost-efficiency measures to navigate the cost-inflation squeeze.

Product Innovation and Differentiation: Developing innovative and cost-effective products, catering to diverse needs and budget constraints, can help businesses maintain competitiveness in inflationary environments.

By understanding the dynamics of the Cost-Inflation Squeeze, policymakers, financial institutions, and businesses can better navigate the challenges of inflation and develop solutions to ensure continued access to product financing, fostering a resilient and innovative economy.

2.3 Empirical Review

Oladeji & Olawale (2018). The impact of inflation on product financing of solar energy by firms in Nigeria: A case study of Lagos State. The study used a quantitative approach and collected data from a sample of 100 firms involved in solar energy product financing in Lagos State, Nigeria. The researchers employed a structured questionnaire to gather information on inflation rates, interest rates, and the financing patterns of these firms. Data analysis was conducted using regression analysis. The study found that inflation had a significant negative impact on the product financing of solar energy by firms in Nigeria. As inflation rates increased, firms faced higher costs of borrowing and reduced profitability, leading to decreased investment in solar energy projects.

Ogunjimi & Akindele, (2019). Inflation and the financing of solar energy projects by Nigerian firms: Evidence from selected states. This study employed a mixed-methods approach, combining both qualitative and quantitative methods. The researchers conducted interviews with key stakeholders in the solar energy sector and also collected secondary data on inflation rates and solar energy project financing in selected states across Nigeria. The collected data were analyzed using descriptive statistics and content analysis. The findings revealed that inflation negatively affected the financing of solar energy projects by Nigerian firms. The increasing costs associated with inflation made it challenging for firms to secure affordable financing options for their projects, leading to delays or cancellations in project implementation.

Adeyemo & Ogunleye, (2020). Impact of inflation on the financial performance of solar energy firms in Nigeria. This study utilized a panel data analysis approach, using financial data from a sample of 50 solar energy firms in Nigeria over a five-year period. The researchers collected data on inflation rates, revenue, expenses, and profitability of the selected firms. The panel data regression model was employed to analyze the relationship between inflation and financial performance. The study found that inflation had a significant negative impact on

the financial performance of solar energy firms in Nigeria. Higher inflation rates led to increased costs of production and reduced profitability, hampering the growth and sustainability of these firms.

Ezeani & Okonkwo, (2017). Inflationary trends and the financing challenges of solar energy projects in Nigeria. This study employed a qualitative research design and conducted in-depth interviews with managers and executives of solar energy firms in Nigeria. The researchers explored the financing challenges faced by these firms due to inflationary trends and analyzed the interview data using thematic analysis. The findings revealed that inflation had adverse effects on the financing of solar energy projects in Nigeria. Firms faced difficulties in securing loans due to higher interest rates caused by inflation, leading to limited access to finance for their projects.

Akinwumi & Adeyemo, (2016). Inflation dynamics and investment decisions in the Nigerian solar energy sector. This study employed a quantitative research design and collected data from a sample of 80 solar energy firms operating in different regions of Nigeria. The researchers obtained information on inflation rates, investment decisions, and financial performance of these firms. The collected data were analyzed using correlation analysis and regression analysis. The study found that inflation had a significant negative relationship with investment decisions in the Nigerian solar energy sector. Higher inflation rates increased uncertainty and reduced the willingness of firms to invest in solar energy projects, impacting the growth and development of the sector.

3.0 Methodology

The study used the descriptive survey design approach. The primary source of data was the administration of questionnaire. A total population of one hundred (100) staff selected from the Lagos branches of D.light Limited was used. The entire population was used for the study as it was not large. The data gathered for this study was analyzed and presented in descriptive tables to show the frequency and percentage of responses from the respondents. Linear regression analysis was utilized to test the hypotheses of the study. The statistical tool used for the analysis is the statistical package for social sciences (SPSS) version 26.

4.1 Data presentation and analysis

Objective One

Table 4.1.1: To determine the effect of cost-push inflation on debt financing of d.light limited, Lagos Nigeria.

Options	SA Freq(%)	A Freq(%)	U Freq(%)	D Freq(%)	SD Freq(%)	Mean	Std
Cost-push inflation has negatively impacted the ability of d.light limited to obtain debt financing	50(51.0)	25(25.5)	10(10.2)	8(8.2)	5(5.1)	1.91	1.18
The cost of borrowing for	58(59.2)	26(26.5)	10(10.2)	3(3.1)	1(1.0)	1.60	0.87

d.light limited has increased due to cost-push inflation							
The financial stability of d.light limited has been adversely affected by cost-push inflation	51(52.0)	32(32.7)	7(7.1)	5(5.1)	3(3.1)	1.74	1.00

Source: Field Survey, 2023.

Table 4.1.1 shows the response of the respondents on the effect of cost-push inflation on debt financing of d.light limited, Lagos Nigeria. It shows that 50(51.0%) of the respondents strongly agree that cost-push inflation has negatively impacted the ability of d.light limited to obtain debt financing, 25(25.5%) of them agree to this, whereas 10(10.2%) of them were undecided, 8(8.2%) of them disagree and 5(5.1%) of them strongly disagree. This with the mean and standard deviation of 1.91 $\pm$ 1.18 implies that majority of the respondents strongly agree that the cost-push inflation has negatively impacted the ability of d.light limited to obtain debt financing. It also shows that that 58(59.2%) of the respondents strongly agree that the cost of borrowing for d.light limited has increased due to cost-pus h inflation, 26(26.5%) of them agree, while 10(10.2%) of them were undecided to this assertion, 3(3.1%) of them disagree and 1(1.0%) of them strongly disagree. With the mean and standard deviation of 1.60 $\pm$ 1.87, it implies that majority of respondents strongly agree that the cost of borrowing for d.light limited has increased due to cost-push inflation. The table finally shows that 51(52.0%) of the respondents strongly agree that the financial stability of d.light limited has been adversely affected by cost-push inflation, 32(32.7%) of them agree to this, while 7(7.1%) of them were undecided to this, 5(5.1%) of them disagree and 3(3.1%) of them strongly disagree. With the mean and standard deviation of 1.74 $\pm$ 1.00, this implies that majority of the respondents strongly agree that the financial stability of d.light limited has been adversely affected by cost-push inflation.

Objective Two

Table 4.1.2: To ascertain the effect of demand-pull inflation on equity financing of d.light limited, Lagos Nigeria.

Options	**SA Freq(%)**	**A Freq(%)**	**U Freq(%)**	**D Freq(%)**	**SD Freq(%)**	**Mean**	**Std**
Demand-pull inflation has positively influenced the availability of	53(54.1)	29(29.6)	10(10.2)	4(4.1)	2(2.0)	1.70	0.95

equity financing for d.light limited							
The value of equity investments in d.light limited has increased due to demand-pull inflation	47(48.0)	39(39.8)	7(7.1)	4(4.1)	1(1.0)	1.70	0.85
Equity financing options for d.light limited have improved as a result of demand-pull inflation	41(41.8)	40(40.8)	12(12.1)	3(3.1)	2(2.1)	1.87	1.00

Source: Field Survey, 2023.

Table 4.1.2 shows the response of the respondents on the effect of demand-pull inflation on equity financing of d.light limited, Lagos Nigeria. It shows that 53(54.1%) of the respondents strongly agree that demand-pull inflation has positively influenced the availability of equity financing for d.light limited, 29(29.6%) of them agree, whereas 10(10.2%) of there were undecided to this, 4(4.1%) of them disagree and 2(2.2%) of them strongly disagree. With the mean and standard deviation of 1.70 $\pm$ 0.95 it implies that majority of the respondents strongly agree that demand-pull inflation has positively influenced the availability of equity financing for d.light limited. The table also show that 47(48.0%) of the respondents strongly agree that the value of equity investments in d.light limited has increased due to demand-pull inflation, 39(39.8%) of them agree, while 7(7.1%) of them were undecided to this assertion, 4(4.1%) of them disagree and 1(1.0%) strongly disagree. With the mean and standard deviation of 1.70 $\pm$ 0.85, it implies that majority of the respondents strongly agree that the value of equity investments in d.light limited has increased due to demand-pull inflation. The table finally show that 41(41.8%) of the respondents strongly agree that equity financing options for d.light limited have improved as a result of demand-pull inflation, 40(40.8%) of them agree, whereas 12(12.1%) of them were undecided to this assertion, 3(3.1%) of the disagree and 2(2.1%) of them strongly disagree. This with the mean and standard deviation of 1.87 $\pm$ 1.00 implies that majority of the respondents strongly agree that equity financing options for d.light limited have improved as a result of demand-pull inflation.

4.2 Testing of Hypotheses

Hypothesis One

H_1: Cost-push inflation does have significant effect on debt financing of d.light limited, Lagos Nigeria

Ho: Cost-push inflation does not have significant effect on debt financing of d.light limited, Lagos Nigeria

Table 4.2.1 Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.776[a]	.603	.598	.75717	.628

Source: SPSS Version 26

a. Predictors: (Constant), Debt financing

b. Dependent Variable: Cost-push inflation

Table 4.2.2 ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	83.462	1	83.462	145.580	.000[b]
	Residual	55.038	96	.573		
	Total	138.500	97			

Source: SPSS Version 26

a. Dependent Variable: Cost-push inflation

b. Predictors: (Constant), Debt financing

Table 4.2.3 Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.071	.183		.388	.699
	Debt financing	1.120	.093	.776	12.066	.000

Source: SPSS Version 26

a. Dependent Variable: Cost-push inflation

Result Summary

R = .776, R^2 = .603, F = 145.580, T = 12.066, DW = .628

Interpretation of the Result

A linear regression analysis was conducted to determine the effect of cost-push inflation on debt financing of d.light limited, Lagos Nigeria. (Table 4.2.1 – 4.2.3) shows that there is strong positive relationship between cost-push inflation and debt financing of d.light limited (R- coefficient = .776). The R square, the coefficient of determination, shows that only 60.3% of the variation in debt financing of d.light limited can be explained by cost-push inflation with no autocorrelation as Durbin-Watson (0.628) is less than 2. With the linear regression model, the error of estimate is low, with a value of about .75717. The regression sum of the square 83.462 is more than the residual sum of the square 55.038 indicating that the variation is due to chance. The F-statistics = 145.580 shows that the model is significant. The extent to which cost-push inflation impact debt financing of d.light limited with .776 value indicates a positive significance relationship between cost-push inflation and debt financing of d.light limited which is statistically significant (with t = 12.066) and p = .100 > 0.05.

Decision Rule

Reject null hypothesis (Ho) if P-Value < 0.05 and do not reject Ho if otherwise

Decision

Since the P-Value .100 > 0.05, we do not reject the null hypothesis (Ho) and then conclude that cost-push inflation does have significant effect on debt financing of d.light limited, Lagos Nigeria.

Hypothesis Two

H_1: Demand-pull inflation does have significant effect on equity financing of d.light limited, Lagos Nigeria.

Ho: Demand-pull inflation does not have significant effect on equity financing of d.light limited, Lagos Nigeria.

Table 4.2.4 Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.932[a]	.869	.868	.30999	.706

Source: SPSS Version 26

a. Predictors: (Constant), Equity financing

b. Dependent Variable: Demand-pull inflation

Table 4.2.5 ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	61.193	1	61.193	636.792	.000[b]
	Residual	9.225	96	.096		
	Total	70.418	97			

Source: SPSS Version 26

a. Dependent Variable: Demand-pull inflation

b. Predictors: (Constant), Equity financing

Table 4.2.6 Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	.223	.067		3.352	.001
	Equity financing	.793	.031	.932	25.235	.000

Source: SPSS Version 26

a. Dependent Variable: Demand-pull inflation

Result Summary

R = .932, R^2 = .869, F = 636.792, T = 25.235, DW = .706

Interpretation of the Result

A linear regression analysis was conducted to ascertain the effect of demand-pull inflation on equity financing of d.light limited, Lagos Nigeria. . (Table 4.2.4 – 4.2.6) shows that there is strong positive relationship between demand-pull inflation and equity financing of d.light limited (R- coefficient = .932). The R square, the coefficient of determination, shows that only 86.9% of the variation in equity financing of d.light limited can be explained by demand-pull inflation with no autocorrelation as Durbin-Watson (.706) is less than 2. With the linear regression model, the error of estimate is low, with a value of about .30999. The regression sum of the square 61.193 is more

than the residual sum of the square 9.225 indicating that the variation is due to chance. The F-statistics = 636.792 shows that the model is significant. The extent to which demand-pull inflation impact equity financing of d.light limited with .932 value indicates a positive significance relationship between demand-pull inflation and equity financing of d.light limited which is statistically significant (with t = 25.235) and p = .100 > 0.05.

Decision Rule

Reject null hypothesis (Ho) if P-Value < 0.05 and do not reject Ho if otherwise

Decision

Since the P-Value .100 > 0.05, we do not reject the null hypothesis (Ho) and then conclude that demand-pull inflation does have significant effect on equity financing of d.light limited, Lagos Nigeria.

5.1 Summary of findings

i. Cost-push inflation does have significant effect on debt financing of d.light limited, Lagos Nigeria
ii. Demand-pull inflation does have significant effect on equity financing of d.light limited, Lagos Nigeria

5.2 Conclusion

The findings of the study reveal that cost-push inflation has a significant impact on the debt financing of d.light Limited in Lagos, Nigeria. This suggests that as inflation increases the cost of production, it becomes more challenging for the company to service its debt obligations. On the other hand, demand-pull inflation has a notable effect on equity financing for d.light Limited. This indicates that as consumer demand increases due to inflation, the company may find it easier to attract equity financing to support its operations and expansion.

In conclusion, the study demonstrates that inflation, whether cost-push or demand-pull, plays a crucial role in shaping the financing options for solar energy companies such as d.light Limited in Lagos, Nigeria. Understanding these effects is essential for the company's financial planning and decision-making processes.

5.3 Recommendations

i. Given the significant effect of cost-push inflation on debt financing of d.light limited, Lagos Nigeria, it is recommended that the company adopts a proactive approach to managing its debt financing in the face of inflationary pressures. This could involve exploring hedging strategies to mitigate the impact of rising costs on debt servicing. Additionally, d.light limited should consider diversifying its sources of debt financing to include instruments that are less susceptible to the effects of inflation.
ii. In light of the significant effect of demand-pull inflation on equity financing of d.light limited, Lagos Nigeria, it is recommended that the company focuses on strengthening its market position and enhancing its product demand. This could involve strategic marketing initiatives, product innovation, and expanding its customer base. By bolstering its market presence, d.light limited can potentially mitigate the adverse impact of demand-pull inflation on its equity financing.

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