

The Influence of Need and Scarcity on the Decision to Purchase Gas LPG 3 Kg at Cv Berkat Keluarga

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Abstract.

This study is entitled "The Influence of Need and Scarcity on Consumer Purchasing Decisions of 3 Kg LPG Gas at CV. Berkat Keluarga". This study was conducted at CV. Berkat Keluarga in Sampit, East Kotawaringin Regency, Central Kalimantan. Based on the results of the hypothesis test in this study, the t-test for the Need variable (X1) is $> t$ table ($2.728 > 2.00324$) and the level of significance ($0.000 < 0.05$) then H_a is accepted and H_0 while for the t-test of the Scarcity variable (X2) the calculated t value $> t$ table ($4.863 > 2.00324$) significant level of $0.000 \leq 0.05$ then H_a is accepted and H_0 is rejected. Then for the f-test has a value of f count $> f$ table ($39.008 > 3.16$) and a significant level of $0.000 < 0.05$ then H_0 is rejected and H_a is accepted which means there is an influence between the variables of Need and Scarcity. Thus it is said that the third hypothesis of Need and Scarcity on the Decision to Purchase 3 Kg LPG Gas at CV. Berkat Keluarga in Sampit. The correlation obtained by the R number of 0.760 indicates that there is a strong relationship between need and scarcity on the decision to purchase 3 Kg LPG Gas at CV. Berkat Keluarga in Sampit. Meanwhile, with the determination analysis (r^2), the R Square (R^2) value was obtained at 0.578, which stated that the two independent variables, namely Needs (X1) and Scarcity (X2), influenced the dependent variable, namely Purchasing Decisions (Y) by 57.8% and the remaining 42.2% ($100 - 57.8$), influenced by other variables such as distribution availability, price, service quality and so on.

Keywords: Needs, Scarcity and Purchasing Decisions.

I. INTRODUCTION

3 kg LPG gas is a basic necessity for the community, especially for the lower-middle class. The government's subsidy program aims to help people meet their household energy needs at an affordable price. However, in practice, 3 kg LPG gas shortages often occur and raise concerns among consumers. This shortage problem is not permanent, but it still impacts the stability of demand and distribution. In addition to scarcity, the continuously increasing level of consumer demand is also a major factor in determining purchasing decisions. Based on the above background, the researcher is interested in further research with the title "The Influence of Need and Scarcity on Purchasing Decisions at CV. Berkat Keluarga in Sampit"

Research Problem Formulation

Based on the background results presented above, it can be formulated as follows:

1. Does need influence purchasing decisions at CV. Berkat Keluarga in Sampit?
2. Does scarcity influence purchasing decisions at CV. Berkat Keluarga in Sampit?
3. Is there an influence of need and scarcity on purchasing decisions at CV. Berkat Keluarga in Sampit?

Research purposes

Based on the existing background and problem formulation, this research was conducted with the following objectives:

1. To determine the needs that influence purchasing decisions at CV. Berkat Keluarga in Sampit.
2. To determine the influence of scarcity on purchasing decisions at CV. Berkat Keluarga in Sampit.
3. To determine the influence of needs and scarcity on purchasing decisions at CV. Berkat Keluarga in Sampit.

II. LITERATURE REVIEW

Theoretical basis

The theoretical basis is a collection of relevant theories as tools or references used to discuss and solve problems raised in writing.

Need

Needs are basic human demands and are higher than the needs we call desires. Human needs are many and varied, not only varied but also continue to increase endlessly in line with the development of civilization and the progress of science, technology and desires. Every person needs everything to maintain and develop their lives, this shows that humans need something to use in their lives, both in the form of goods and services.

Product Quality

According to Syarif et al., (2023) Scarcity or abundance of goods can be caused by human needs. Human needs are unlimited, but the availability of goods and services is limited. Scarcity is an imbalance between the factors of production provided by nature or those available to society. Scarcity often occurs in basic human needs, this is because human needs are always increasing.

Buying decision

According to Kumbara, (2021) The decision to purchase or use goods or services that can fulfill desires and consider the risks that may occur when making a decision to purchase goods or services. The decision to purchase and use goods or services is a decision-making process used to consider the risks involved in using and purchasing the goods or services used.

Previous Research

As reference material for previous research that is considered relevant to what the author is researching Suci Anggraini & Nageeta Tara Rosa (2024) "The Effect of price, Needs and Scarcity on Purchasing Decisions for 3 Kg Lpg Gas Among the People of Bengkalis" e-ISSN : 2987-923X, p-ISSN : 2987-7989

- needs (X1) have a positive and significant influence on purchasing decisions (t-count = 5.304; $p = 0.000 < 0.05$)
- Scarcity (X2) has a positive and significant effect on purchasing decisions (t-count = 3.332; $p = 0.001 < 0.05$).
- The results of the F-test show that price, demand, and scarcity simultaneously have a significant influence on the decision to purchase 3 kg LPG gas (F-count = 40.691; $p = 0.000 < 0.05$).

Conceptual Framework

According to Anggreni (2022), a conceptual framework is derived from a theoretical framework that has been previously developed in the background. It also serves as a visualization of the relationships between various interconnected variables. The conceptual framework should be clear and comprehensive, demonstrating the relationships between the variables to be studied, and assisting researchers in selecting a research design, as described below:

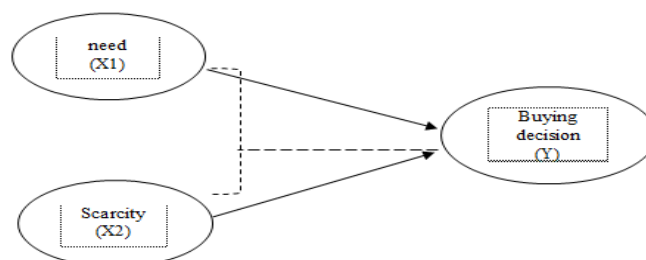
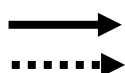


Fig 1 Conceptual framework

Information :



= Partially influential

= Simultaneous effect

Source: data created (2026)**Hypothesis**

Based on the problem formulation and conceptual framework above, the temporary hypothesis of this research is as follows:

H1: It is suspected that demand influenced the purchasing decision of 3 kg LPG gas at CV. Berkah Keluarga in Sampit.

H2: It is suspected that scarcity influenced the purchasing decision of 3 kg LPG gas at CV Berkah Keluarga in Sampit.

H3: It is suspected that demand and scarcity influence the purchasing decision of 3 kg LPG gas at CV. Berkah Keluarga in Sampit.

III. RESEARCH METHODS

According to Sugiyono (2017), a research method is a scientific way to obtain data for a specific purpose and use. A research method is the process of collecting the data needed for research purposes. This study aims to test the hypothesis between the influence of need and scarcity on purchasing decisions at CV. Berkah Keluarga.

Population and Sample Population

A population is a generalization consisting of objects or subjects with certain qualities and characteristics determined by the researcher to be studied and then conclusions drawn. In this study, the population the author took was consumers who purchased 3 kg LPG gas from CV. Berkah Keluarga in Sampit. The exact number of population members in this study is unknown.

Sample

A sample is a portion of the population and its characteristics. Accidental sampling is the sampling technique used to determine the sample. The sample calculation in this study uses the opinion of Hair, JF et al., (2010), namely the number of indicators multiplied by 5-10. Therefore, the results obtained in this study are as follows:

$$n = \text{Number of Indicators} \times (5-10)$$

$$n = 12 \times 5 = 60$$

So based on this formula, the sample used in this study was 60 respondents.

Operational Definition of Research Variables

Sugiyono (2017) defines the operational definition of research variables as: Research variables include dimensions and indicators used to measure these variables. There are two variables in this study: independent variables (free) of needs X1, scarcity X2 and dependent variables (bound) of purchasing decisions.. The operational definition of each of these variables is as follows:

Need

According to Yanuarti (2016), the indicators of needs are:

1. Consumers consume products because the price matches the quality.
2. Consumers consume because their families consume.
3. Make consumers' social life easier
4. Consumers feel happy and satisfied with the product.

Scarcity

According to Soliman (2017) there are four indicators of scarcity, namely:

1. Time Limitation
2. Limited Quantity
3. Out of Stock
4. Product Uniqueness

Buying decision

Kotler and Keller (2016) indicators of purchasing decisions are:

1. The purpose of purchasing a product.
2. Information Search to get to brand selection.

3. Give recommendations to others.
4. Make repeat purchases

IV. ANALYSIS OF RESEARCH RESULTS AND

Discussion

Results of the Validity Test of Research Instruments

According to Sugiyono (2017), validity testing is conducted to determine the validity of the questionnaire instrument used to collect data and whether the items in the questionnaire can truly explain what will be studied. A tool is considered valid only if it can measure what is desired and provide accurate data from the variables being studied. The questionnaire is declared valid if the correlation value is > 0.3 with a significance level of < 0.05 , whereas if the questionnaire is declared invalid the correlation value is < 0.3 with a significance level of > 0.05 . The results of the validity test calculations can be assisted by the SPSS (Statistical program for the social sciences) program with version 20.0.

Table 1. Results of the Validity Test of the Research Instrument

Validity	Correlation	Significant	Note
X1.1 requirements	$0.825 > 0.3$	$0.000 < 0.05$	Valid
X1.2 requirements	$0.900 > 0.3$	$0.000 < 0.05$	Valid
X1.3 requirements	$0.751 > 0.3$	$0.000 < 0.05$	Valid
X1.4 requirements	$0.730 > 0.3$	$0.000 < 0.05$	Valid
X2.1 scarcity	$0.887 > 0.3$	$0.000 < 0.05$	Valid
X2.2 scarcity	$0.887 > 0.3$	$0.000 < 0.05$	Valid
X2.3 scarcity	$0.826 > 0.3$	$0.000 < 0.05$	Valid
X2.4 rarity	$0.779 > 0.3$	$0.000 < 0.05$	Valid
Y.1 purchasing decision	$0.875 > 0.3$	$0.000 < 0.05$	Valid
Y.2 purchasing decisions	$0.958 > 0.3$	$0.000 < 0.05$	Valid
Y.3 purchasing decisions	$0.794 > 0.3$	$0.000 < 0.05$	Valid
Y.4 purchasing decisions	$0.850 > 0.3$	$0.000 < 0.05$	Valid

Source: SPSS Output Version 20.0 Attachment

Data processed in 2026

Based on the results of all the validity tests of the research instruments in the table above, it can be seen that all question items have a correlation coefficient (r count) greater than 0.3 and all the statements above are declared valid. Furthermore, the answer items to the questions above have a significance level < 0.05 . Thus, it can be concluded that each question item used is appropriate and reliable for collecting data for this study.

Results of the Reliability Test of Research Instruments

According to Sugiyono (2017), reliability is defined as a set of measurements or measuring instruments that are consistent when repeated measurements are taken. The results of the instrument reliability test in this study, which involved 30 respondents, are as follows:

The results of the questionnaire can be declared reliable if the value of Cronbach's Alpha (α) > 0.6 and the results of the Cronbach's Alpha (α) questionnaire < 0.6 are declared unreliable. The results of the reliability test calculations can be assisted by the SPSS (Statistical program for the social sciences) program with version 20.0.

Table 2 Results of the Reliability Test of Research Instruments

Variables	N	Cronbach's Alpha (α)	Information
Needs (X1)	30	$0.811 > 0.6$	Reliable
Scarcity (X2)	30	$0.867 > 0.6$	Reliable
Purchase decision (Y)	30	$0.869 > 0.6$	Reliable

Source: SPSS Output Data Version 20.0

Data processed, 2025

Based on the results of the reliability test of the research instrument above, it shows that the three variables, namely needs (X1), scarcity (X2) and purchasing decisions (Y) are declared reliable because the

Cronbach's Alpha value is $(\alpha) > 0.6$, thus it can be concluded that the questionnaire used as a data measurement tool in this study is appropriate and all statements for the variables can be used to collect the data needed in the study.

Results of Multiple Linear Regression Analysis

According to Sugiyono (2017), researchers use multiple linear regression analysis to predict how the condition of the dependent variable will change if two or more independent variables function as predictor factors and their values are changed between increasing or decreasing their values (manipulation) of the linear relationship between the independent variables (X_1 , X_2) and the dependent variable (Y).

The statistical calculations in multiple linear regression in this study were carried out using the SPSS (Statistical Program for the Social Sciences) for Windows version 20.0 as shown in the table below.

Table 3. Multiple Linear Regression Test Results

Variables	B	Beta	T	Sig
Constant	2,822		1,903	0.062
Needs (X_1)	0.328	0.300	2,728	0.008
Scarcity (X_2)	0.494	0.536	4,863	0,000

Source: SPSS Output Data Version 20.0

Data processed in 2026

Based on the table above, the coefficients and constants can be seen as follows:

$$a = 2,822$$

$$b_1 = 0.328$$

$$b_2 = 0.494$$

Then the multiple linear regression equation is:

$$Y = a + b_1X_1 + b_2X_2 + e$$

$$Y = 2,822 + 0.328(X_1) + 0.494(X_2)$$

Where:

X_1 = Needs Variable

X_2 = Scarcity Variable

Y = Purchase Decision

e = Standard Error

From the multiple linear regression equation above, it can be explained as follows:

$$1. \quad \alpha = 2,822$$

The constant value (α) shows that if there is no increase in the need and scarcity variables, then the value of the purchasing decision is 2,822.

$$2. \quad b_1 = 0.328$$

The coefficient value of the Need variable (X_1) of 0.328 indicates that if the need variable increases by one unit with the assumption that the scarcity variable (X_2) remains constant, it will increase the purchasing decision by 0.328 units, and conversely, if the need variable decreases by one unit, it will result in a decrease in the purchasing decision by 0.328.

$$3. \quad b_2 = 0.494$$

The coefficient value of the Scarcity variable (X_2) of 0.494 indicates that if the Scarcity variable increases by one unit with the assumption that the Need variable (X_1) remains constant, it will increase the Purchase Decision by 0.494 units, and vice versa, if the Scarcity variable decreases by one unit, it will result in a decrease in the Purchase Decision by 0.494.

Correlation Coefficient Analysis (r)

Table 4. Results of Correlation Coefficient (r) and Determination (R^2) Model Summary

Model	R	R Square	Adjusted R Square	Standard Error of the Estimate
1	.760a	.578	.563	.969

a. Predictors: (Constant), Needs

X_1 , Rarity X_2

b. Dependent Variable: Purchase Decision (Y)

Source: SPSS Output Version 20.0 Attachment

Data processed in 2026

Based on the table above, it can be seen that the value of the correlation coefficient (R) is 0.760, meaning that Need (X1), Scarcity (X2) together have a strong relationship with the decision to purchase 3 Kg LPG Gas at CV. Berkat Keluarga in Sampit. This is in accordance with the value criteria based on Sugiyono (2016), namely 0.60 to 0.799, so the relationship between X and Y is strong.

Analysis of the Coefficient of Determination (R²)

Based on the table above, the R Square (R²) value is 0.578, which states that the two independent variables, namely Needs (X1) and Scarcity (X2), influence the dependent variable, namely Purchasing Decisions (Y) by 57.8% and the remaining 42.2% (100%–57.8%). is influenced by other variables such as distribution availability, price, service quality, and so on.

Hypothesis Test Results

The results of the hypothesis test that can be presented are as follows:

Partial Test Results (t-Test)

From the calculation results using SPSS (Statistical Program for the Social Sciences) for Windows version 20.0, the results of the t-test in this study can be seen in the table below:

Table 5. Results of the t-test Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	2,822	1,483		1,903	.062
X1 Requirement	.328	.120	.300	2,728	.008
X2 Rarity	.494	.102	.536	4,863	.000

1. Based on the results of the t-test, the Needs are 2.728 and the significance level is 0.008. The t-table value can be obtained using the formula $df = nk - 1 = 60 - 3 - 1 = 56$ with $\alpha = 0.05 : 2 = 0.025$ (2-sided test). Thus, the t-table is obtained (t-table attachment). For the Needs variable, the t-value is $> t\text{-table}$ ($2.728 > 2.00324$) and a significance level of $0.008 < 0.05$, then H_0 is rejected and H_a is accepted, meaning there is an influence of Needs on Purchasing Decisions. Thus, the hypothesis stating that there is an influence between Needs on Purchasing Decisions for 3 Kg LPG Gas at CV. Berkat Keluarga in Sampit is proven.
2. Based on the results of the t-test of the Scarcity variable, it is 4.863 and the significance level is 0.000. The t-table value can be obtained using the formula $df = nk - 1 = 60 - 3 - 1 = 56$ with $\alpha = 0.05 : 2 = 0.025$ (2-sided test). So the t-table value is obtained as follows: 2.00324 (seen from the attached t-table). for the Scarcity variable, the calculated t-value is $> t\text{-table}$ ($4.863 > 2.00324$) significance level $0.000 < 0.05$ then H_a is accepted and H_0 is rejected. Thus, it is said that the second hypothesis which states that there is an influence between Scarcity on the Purchase Decision of 3 Kg LPG Gas at CV. Berkat Keluarga in Sampit is proven.

Simultaneous Test (f-Test)

The f-test (simultaneous) is conducted to determine the effect of independent variables simultaneously on the dependent variable. The following are the results of the f-test calculations obtained using the SPSS (Statistical Program for the Social Sciences) program for Windows version 20.0.

Table 6
F-Test Results (Anova)

ANOVA					
Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	73,230	2	36,615	39,008	.000b
Residual	53,503	57	.939		
Total	126,733	59			

a. Dependent Variable: Purchase Decision Y

b. Predictors: (Constant), Scarcity X2, Need X1

Source: SPSS Output Version 20.0 Attachment

Data processed in 2025

Based on the results of the table above, it is known that the f-count value is 39.008 and the significance level is 0.000. The f-table value can be obtained with the formula $df1 = (\text{number of variables}-1) = 3-1 = 2$ and $df2 = nk-1 = 60-3-1 = 56$ with $\alpha = 0.05$ is (3.16) (seen from the attached table f). The f-count value > f-table ($39.008 > 3.16$) and the significance level is $0.000 < 0.05$, so H_0 is rejected and H_a is accepted, which means there is an influence between the variables Need and Scarcity. Thus, it is said that the third hypothesis of Need and Scarcity on the Decision to Purchase 3 Kg LPG Gas at CV. Berkat Keluarga in Sampit is proven.

V. CONCLUSION AND SUGGESTIONS

Conclusion

Based on the analysis of the discussion that has been carried out in the previous chapter, the following conclusions can be drawn:

1. That the Needs Variable (X1) has an influence on the Purchasing Decision (Y) on CV. Family Blessings in Sampit. This is proven by $t_{hitung} > t_{tabel}$ ($2.728 > 2.00324$) and the significance level is $0.008 < 0.05$ then H_0 is rejected and H_a is accepted, meaning there is an influence between Needs on Purchasing Decisions of CV. Berkat Keluarga in Sampit.
2. That the Scarcity Variable (X2) has an influence on Purchasing Decisions (Y) CV. Family Blessings in Sampit. This is proven by $t_{hitung} > t_{tabel}$ ($4.863 > 2.00324$) significance level $0.000 < 0.05$ then H_a is accepted and H_0 is rejected. This means that scarcity has a significant influence on purchasing decisions. CV. Family Blessings in Sampit.
3. Based on the F-test, It is known that the calculated f value > f table ($39.008 > 3.16$) and the significance level is $0.000 < 0.05$, so H_0 is rejected and H_a is accepted, which means there is an influence between the variables Need and Scarcity. Thus, it is said that the third hypothesis is Need (X1) and Scarcity (X2) on Purchasing Decisions. has a simultaneous effect on the dependent variable, namely the Purchase Decision (Y). The correlation coefficient (R) is 0.760, meaning that Need (X1) and Scarcity (X2) together have a strong relationship with the decision to purchase 3 kg LPG gas at CV. Berkat Keluarga in Sampit. This is in accordance with Sugiyono (2017) who stated that the correlation position is in position (0.60 to 0.799) shows that there is a strong influence between Need (X1) and Scarcity (X2) on Purchasing Decisions (Y) on CV. Family Blessings in Sampit. Meanwhile, the R Square (R^2) determination analysis is 0.578, which states that the two independent variables, namely Needs (X1) and Scarcity (X2), influence the dependent variable, namely Purchasing Decisions (Y) by 57.8% and the remainder by 42.2% ($100\% - 57.8\%$). influenced by other variables not included in this study, such as distribution availability, price, quality of service and so on.

Suggestion

Based on the results of the research that has been carried out, the suggestions that the author can provide are as follows:

Suggestions For CV. Berkat Keluarga in Sampit

1. Regarding needs, it is recommended to pay closer attention to consumer demand patterns by maintaining LPG stock availability to meet demand. Regular mapping of community needs is crucial to ensure more accurate distribution and prevent shortages. Furthermore, good communication with consumers, such as providing delivery schedules and stock availability, is essential to build trust and satisfaction. By understanding and adapting services to community needs, CV. Berkat Keluarga can increase effectiveness in meeting demand and maintaining customer loyalty.
2. Regarding shortages, it is recommended to address the issue by limiting the quantity purchased per consumer to prevent hoarding and ensure more equitable distribution. The distribution system also needs to be improved to ensure fairer and more targeted distribution. Furthermore, regular stock monitoring is crucial to ensure gas availability meets consumer needs. Consistent delivery schedules from the main distributor must be maintained to ensure supply is not delayed.

For Further Researchers

1. Research certainly has its own advantages and disadvantages. Likewise, this study only looked at the needs and requirements for purchasing decisions. Therefore, further research is expected on how to improve purchasing decisions. This is at CV. Berkat Keluarga in Sampit.
2. This study focused on only two variables: need and scarcity. Future researchers are advised to add other variables that could potentially influence purchasing decisions, such as distribution availability, price, service quality, and so on.

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