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The inflation rate on household business income before and during the COVID-19 pandemic (Case: Klambir Lima Kebun Village)

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Abstract

This study aims to analyze capital and technology response to the inflation rate as a mediation variable for household business before and during the COVID-19 pandemic (Case Study: Klambir Lima Kebun Village). A specific target of this study is to analyze the inflation rate as a mediation variable for the income of household business before and during the COVID-19 pandemic (Case Study: Klambir Village Five Gardens). So that it can show how much the value of the inflation rate affects the income of household business before and during the COVID-19 pandemic in Klambir Lima Kebun Village. This study used secondary data from 2018 to 2021 and primary data from the spread of questionnaires conducted on 144 respondents. The data analysis used in Quantitative Analysis consists of Path Analysis and Different Tests (Sign tests). The results of this study are that capital access variables have a positive influence directly on income, technology response variables have an indirect negative effect on income with inflation variables as mediation variables, and there are differences before and during the COVID-19 pandemic that occur in inflation variables but are not significan.

**Keywords:** Business; Capital; Household; Inflation; Village

1. Introduction

Indonesia was first confirmed positive for COVID-19 on March 2, 2020. This first case is located in Jakarta as the Capital of Indonesia. The spread of COVID-19 has increased very widely. This can be seen from almost all regions of Indonesia there are citizens or communities who are positive for COVID-19 [1]. In addition, many have been victims and even died from this corona virus.

The COVID-19 pandemic has not only impacted public health, but also affected the economic conditions, education and social life of Indonesian people. Based on data from the National Disaster Management Agency, the number of positive patients infected with COVID-19 in Indonesia reached 6,575 people as of April 2020. This pandemic caused several local governments to implement Large-Scale Social Restrictions policies that have implications for restrictions on community activities, including economic activities, educational activities, and other social activities [2].

Data on the development of Corona Virus (COVID-19) patients in North Sumatra Province until May 2020, namely Patients Under Supervision 140 positive 406 Died 41 Recovered [3]. In early 2021, the government began implementing a vaccine recommendation policy to all Indonesians including in North Sumatra Province so that it is expected to reduce the number of patients affected by COVID-19.

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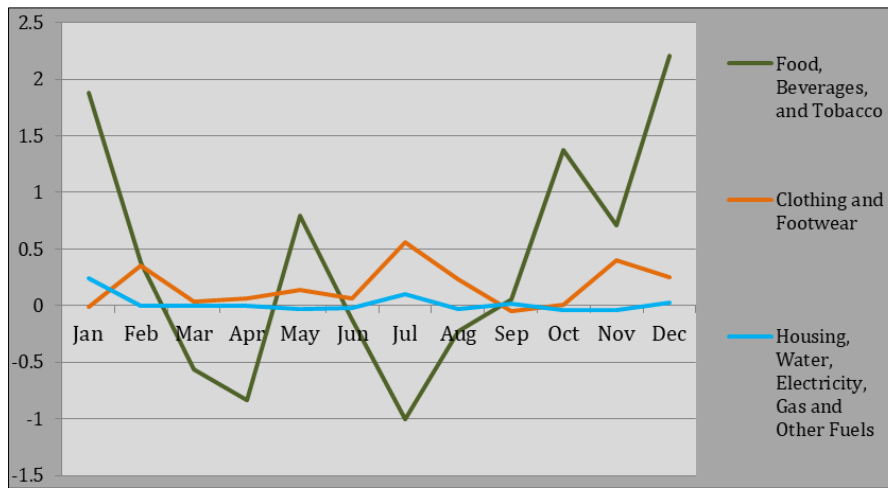
Figure 1 Monthly Inflation Rate of 5 CPI Cities in Sumatera Utara by Expenditure Group (2018=100), 2020

Inflation is an economic phenomenon that is highly considered by all countries in the world, including Indonesia. Inflation is the general increase in prices. This inflation causes people to prefer alternative work activities rather than investing in financial institutions and investments. This happens because inflation results in 3 things, namely (1) weak efficiency and productivity of production (2) increase in capital costs (3) uncertainty of costs and income in the future.

Low national production results in price increases, price increases will make it difficult for people, especially those on low incomes and those on fixed incomes. The same amount of money earned a smaller amount of goods than before.

Table 1 Rate of Consumer Price Inflation per Month by Expenditure Group (2012=100) in North Sumatra Province

	Jan	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**
Foodstuffs	-1.09	-1.83	1.50	4.58	4.23	5.95	2.87	0.63	-7.15	-2.03	-2.54	-1.22
Finished, Water, Electricity and Tobaco	0.02	0.01	0.04	0.05	0.28	0.45	0.08	0.08	0.01	1.12	0.05	0.25
Housing, Water, Electricity, Gas and Fuel	0.21	0.18	-0.03	0.10	0.19	0.22	0.07	0.02	0.39	-0.10	0.11	0.03
Clothing	0.82	0.89	0.43	0.54	0.24	0.03	1.15	0.88	0.73	0.33	-0.29	-0.37
Health	0.23	1.35	0.60	0.22	0.12	0.18	0.23	0.03	0.06	0.36	0.04	-0.09
Education, Recreation and Byraga	0.18	0.19	0.00	0.10	-0.02	0.14	0.72	0.68	0.24	0.01	0.00	-0.01
Transportation, Commutication and Financial Service	1.77	-0.14	-0.50	0.20	0.21	-0.22	-0.19	-0.47	-0.02	0.28	-0.21	0.43
Common	0.20	-0.32	0.30	1.23	1.19	1.63	0.88	0.18	-1.81	-0.28	-0.66	-0.19

Islamic economic thinker Al-Maqrizi classified inflation into two contributing factors, namely natural inflation and human error inflation (inflation caused by human error). Natural inflation is difficult to avoid by humans. According to AlMaqrizi, when a natural disaster or disease outbreak occurs, various foodstuffs and other produce fail to harvest, so the supply of these goods has decreased very drastically and there is scarcity. While the determinant factors of inflation due to human error (human error), namely corruption and poor administration, excessive taxes, and increased

circulation of the fulus currency. Therefore, inflation can be minimized through revamping human error factors such as corruption, and currency circulation.

The pandemic also affected the economic condition of Klambir Lima Kebun Village. Social and physical distancing resulted in reduced household income than usual. Housewives as husband partners take the initiative to start opening small businesses with potty capital both from their own families and or from COVID-19 assistance that has been provided by the government [5]. Business products are promoted door to door that are sold to neighbors around and or close and distant relatives. Limited access to promotions for sales targets is a problem for the household business. This situation is a potential for the implementation of the creative economy through the use of smartphone digital media in facilitating the promotion and sale of household business products in Klambir Lima Kebun Village.

The author felt the need to review and analyze capital access and technology responsiveness at the inflation rate as a mediation variable for the income of household business before and during the COVID-19 pandemic in Klambir Lima Kebun Village. So that it can be a reference material in policy making in local governments related to community welfare both through village officials, namely village heads and village heads also through regents and or heads of camats. To be a reference and information on opportunities to increase the income of rural communities during the COVID-19 pandemic.

2. Research Methods

2.1. Materials

The material in this study uses quantitative material, which is material related to data that describes the components of capital access and technology responsiveness at the rate of inflation as a mediation variable for the income of household business before and during the COVID-19 pandemic in Klambir Lima Kebun Village.

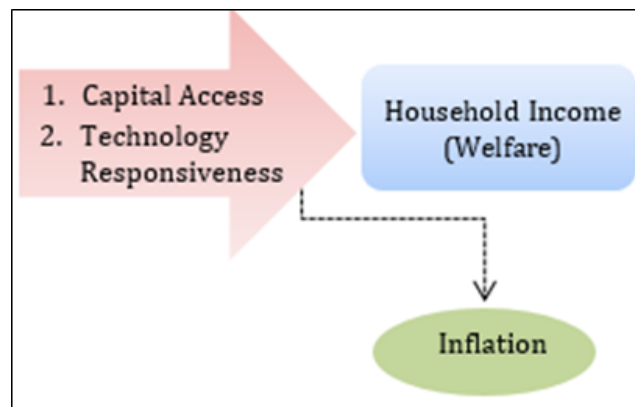The concept of this research can be seen in the following schemes

Figure 2 Research Concepts

2.2. Time and Located

This research was conducted in Klambir Lima Kebun Village of Hamparan Perak District, Deli Serdang Regency, and North Sumatra Province, Indonesia.

2.3. Data Sources

The data sources used in this study are primary and secondary data, namely data obtained from observations, questionnaires, interviews/interviews, literature and related agencies/institutions/organizations that support research related to the problems studied. The details of the data used and the data sources needed in this study can be seen in the following table.

Table 2 Research Variable Data Sources

Variable	Description	Data Type
Capital Access	Ability of household business in obtaining funds as business capital.	Primary
Technology Responsiveness	How business respond to and or respond to the role of the presence of technology as a medium in the promotion and sales targets of home business products ladder.	Primary
Inflation	National and/or provincial inflation rate based on calculations made by Statistic in a certain period and declared in percent units.	Secondary
Income	The profit or profit obtained by each household business group in Klambir Lima Kebun Village in a certain period and expressed in rupiah units.	Primary

2.4. Population and Sample

The population in this study is the number of household who as business amount to ± 250 people. How to take samples in this study using the formula Slovin as follows [6]:

$$n = \frac{N}{1+(N(e)^2)} \dots\dots (1)$$

where:

n = sample
N = population
e = error rate (5% = 0.05)

Here are the sample calculations:

$$n = \frac{250}{1 + (250(0.05)^2)}$$

$$n = \frac{250}{1(250)(0.0025)}$$

$$n = \frac{250}{1 + (0.625)}$$

$$n = \frac{250}{1.625}$$

$$n = 153.85 \dots\dots (2)$$

Based on the calculations above, so the respondents in this study are 153.85 people. So, from 153.85 samples can be selected based on the criteria of as many as 154 household business in Klambir Lima Kebun Village.

2.5. Technique of Data Collection

Data collection techniques used in the form of primary data and secondary data. Primary data is obtained from live interviews from respondents with the help of questionnaires that have been prepared. Secondary data is obtained from related agencies, such as Village and Sub-District Halls and other relevant sources.

The data that has been collected from the questionnaire is then tested for validity and reliability. Here's the test:

Validity Test

Test the strength of the relationship (correlation) between the score of the item and the total score of the variable by using the correlation of the product moment, if the correlation is significant then the item / item of the question is valid. This construction valiity test is carried out with a one-way approach (singletrial) [7].

Reliability Test

To find out the concentration or confidence of measuring results that contain the accuracy of measurements, a reliability test is carried out. Reliability measurements in this study were carried out in a one-shot (one-time measurement). A construct or variable is said to be reliable if it gives a Cronbach Alpha value of > 0.600 [8].

2.6. Data Analysis Methods

2.6.1. Path Analysis

The path analysis technique developed by Sewal Wright in 1934, is actually a development of correlations that are broken down into several interpretations of the consequences. This technique is also known as cause-and-effect modeling. The basic assumption of this model is that some variables actually have a very close relationship with each other [9].

This test was conducted for capital access and technology responsiveness at the inflation rate as a mediation variable for household business income before and during the COVID-19 pandemic in Klambir Lima Kebun Village.
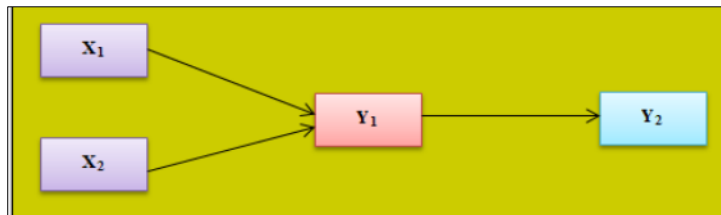
Path analysis with the formula

Substructure equation 1: $Y_1 = PY_1X_1 + PY_1X_2 + PY_1X_3 + e_1$**............**[3]

Substructure equation 2: $Y_1 = PY_2X_1 + PY_2X_2 + PY_2X_3 + e_2$ [4]

Where:

X_1 : Capital access
X_2 : Technology responsiveness
Y_1 : Inflation
Y_2 : Income
E : error term

The conceptual framework of research using path analysis can be shown in Figure below

Source: Author, 2022

Figure 3 The Conceptual of Path Analysis

2.6.2. Sign Test

According to [10] sign testing uses paired and related sample data in the form of ordinal in the form of positive and negative signs. In the sign test (sign- test) is divided into 2, namely: First, the sign test with a small sample (< 25) and second, the sign test with a large sample (> 25). In this study using a sample of 100, thus the researcher used a second procedure, a sign test with a large sample.

For large samples (>25) can be tested Chi Quadratic, the formula of which is [11]:

$$X^2 = \frac{[(n_1 - n_2) - 1)]^2}{n_1 + n_1} \ldots\ldots\ldots (5)$$

Where:

- $n1$: Lost of positive data

- n2 : Lost of negative data

Based on the explanation above, the following hypothesis is obtained [11]:

- If Exact. Sig. (2-tailed) ≥ α; then H0 was accepted and Ha was rejected.
- If Exact. Sig. (2-tailed) < α; then H0 was rejected and Ha was accepted.

3. Results

3.1. Description of the Research Area

Klambir Lima Kebun Village is one of the villages located in Hamparan Perak District, Deli Serdang Regency, and North Sumatra Province. Administratively, the location of the village is located on the border of Medan City and Deli Serdang Regency. The number of residents of Klambir Lima Kebun village is recorded at ± 18,000 people (Survey, 2021) which has an area of 2,323 Ha. Klambir Lima Kebun Village has XXI (twenty-one) hamlets and ± 7,000 family heads (KK). About 75% of the population is livelihoods as factory workers, settlements are located in plantation and factory areas that are the border between municipalities and regencies.

Figure 4 Location of Klambir Village Five Gardens

Figure 5 The Household Business at Klambir Lima Kebun Village as Respondent

Based on the table below, it can be seen that all respondents are female. This is because the research target is a business managed by housewives in Klambir Lima Kebun Village. The characteristics of respondents based on age are stated that housewives in Klambir Lima Kebun Village are at a productive age and can still be improved performance, namely the majority of respondents trying to be 30-35 years old. The characteristics of respondents based on overall education can then be stated that housewives in Klambir Lima Kebun Village are considered to have good insight, namely junior high school education. Characteristics respondents based on the type of business as a whole, it can be stated that respondents, namely household business in Klambir Lima Kebun Village, are well-produced to get additional income from businesses that are run, such as culinary, fashion, agribusiness and others. The characteristics of respondents based on the number of dependents in this case are the number of child dependents can be concluded that respondents in Klambir Lima Kebun Village have a number of dependents > 2.

Table 3 The Characteristics of Respondents

According to	Characteristic	Frequency	Percent
Gender	Male	-	-
	Famale	144	100.0%
	Total	144	100.0%
Age	30 – 35 years old	45	31.3%
	36 – 40 years old	40	27.8%
	41 – 45 years old	35	24.3%
	46 – 50 years old	15	10.4%
	>50 years ols	9	6.3%
	Total	144	100.0%
Education	Not school	11	7.6%
	Basic management	34	23.6%
	Junior high school	60	41.7%
	High school	33	22.9%
	Bachelor	6	4.2%
	Total	144	100.0%
Type of Business	Culinary	45	31.3%
	Fashion	17	11.8%
	Agribusiness	30	20.8%
	Other	52	36.1%
	Total	144	100.0%
Number of Dependents	1	18	12.5%
	2	52	36.1%
	3	41	28.5%
	4	20	13.9%
	>4	13	9.0%
	Total	144	100.0%

Source: SPSS v. 20, data processed, 2022

3.2. Validity and Reliability Test

Table below shows that all indicators have a correlation coefficient value (r) > 0.30 and a Sig < value of 0.05. This means that all questions in the questionnaire used for all respondents who have been targeted > are declared valid and feasible. Thus, the results of this study are declared reliable.

Table 4 Results of Validity and Reliability test of Variables

Variables	Indicators	Value		Information	Cronbach's Alpha Value	Information
		Correlation (r)	Sig			
Capital Access (X₁)	Am1	0.480	0.000	Valid		
	Am2	0.639	0.000	Valid	0.634 > 0.60	Reliable
	Am3	0.769	0.000	Valid		
	Am4	0.655	0.000	Valid		
Technology Responsiveness (X₂)	Tt1	0.639	0.000	Valid		
	Tt2	0.705	0.000	Valid	0.668 > 0.60	Reliable
	Tt3	0.650	0.000	Valid		
	Tt4	0.605	0.000	Valid		
Income (Y₂)	Pen1	0.650	0.000	Valid		
	Pen2	0.712	0.000	Valid	0.680 > 0.60	Reliable
	Pen3	0.791	0.000	Valid		
	Pen4	0.709	0.000	Valid		

Source: SPSS v. 20, data processed, 2022

3.3. Path Analysis

Table 5 The Estimate of Parameter Model

Type	Standardized Coefficients Beta	t	Sig.	R^2	Correlations	Sig.
Persamaan Sub Struktur 1					$X_1 X_2 \rightarrow$ 0.023 0.143	
$X_1 = PY_1X_1$	-0.025	-0.169	0.559	0.033		
$X_2 = PY_1X_2$	-0.131	-0.883	0.401			
Persamaan Sub Struktur 2						
$X_1 = PY_2X_1$	0.064	0.442	0.503			
$X_2 = PY_2X_2$	-0.116	-0.810	0.484	0.078		
$Y = PY_1Y_2$	-0.105	-0.740	0.615			

Source: SPSS v. 20, data processed, 2022

3.3.1. Substructure Path 1

Based on Table of substructure path 1 obtained the relationship between the variable akasea capital and the variable inflation. The value t of the calculation results shows that there is a linear relationship between the capital access variable and the inflation variable is -0.169 < 0.2845 with a sig greater than 0.05 (0.559 > 0.05). Thus H_0 is accepted and H_1 is rejected. This means that there is no significant linear relationship between the capital access variable and the inflation variable. Because there is no relationship between the two variables, the capital access variable does not affect the inflation variable.

Relationship between Technology Responsive Variables and Inflas Variables. The value t of the calculation results shows that there is a linear relationship between the technological response variable and the inflation variable is -0.883 < 0.2845 and a sig greater than 0.05 (0.401>0.05). Thus H_0 is accepted and H_1 is rejected. This means that there is no significant linear relationship between the technological response variable and the inflation variable. Because there is no relationship between the two variables, the technology response variable does not affect the inflation variable.

3.3.2. Substructure Path 2

In the path of substructure 2 obtained the relationship between the variable akasea capital and the income variable. The value t of the calculation results contained in the t column in the Cofficients table above to indicate the linear relationship between the capital access variable and the income variable is 0.442 > 0.2845 and a sig greater than 0.05 (0.503>0.05). Thus H_0 is rejected and H_1 is accepted. This means that there is an insignificant linear relationship between the capital access variable and the income variable. Because of the relationship between the two variables, the capital access variable affects the income variable.

Relationship between Technology Responsive Variables and Income Variables. The value t of the calculation results contained in column t in the Cofficients table above to indicate the linear relationship between the technology response variable and the income variable is -0.810 < 0.2845 and significantly greater than 0.05 (0.484>0.05). Thus H_0 is accepted and H_1 is rejected. This means that there is no insignificant linear relationship between the technology responsive variable and the income variable. Because there is no relationship between the two variables, the technology response variable does not affect the income variable.

The Relationship between Variable Inflation and Income Variable. The value t of the calculation results contained in the t column in the Cofficients table above to indicate the linear relationship between the inflation variable and the income variable is -0.749 < 0.2845 and a sig greater than 0.05 (0.615>0.05). Thus H_0 is accepted and H_1 is rejected. This means that there is no insignificant linear relationship between the inflation variable and the income variable. Because there is no relationship between the two variables, the inflation variable does not affect the income variable.

Interpretation of the results of the path analysis can be seen in the following figure.
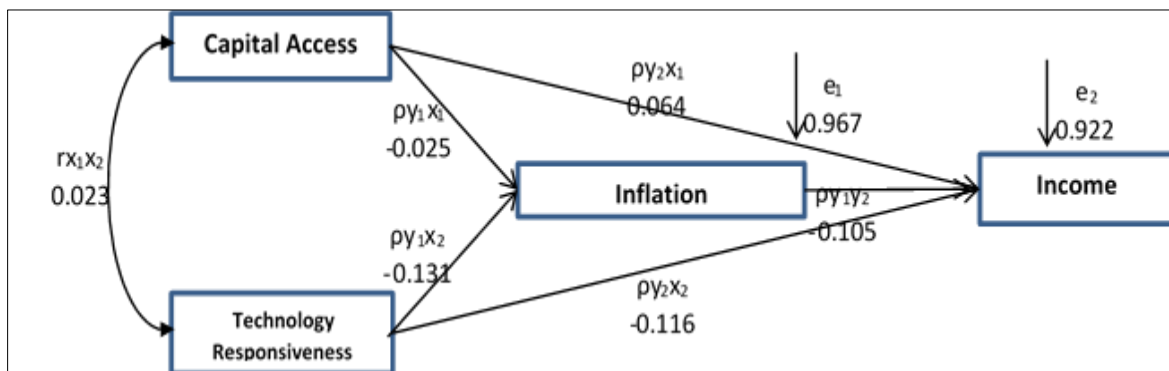
Source: SPSS v. 20, data processed, 2022

Figure 6 Capital Access FlowChart, Technology Response and Inflation to Income

3.3.3. Direct Effect and Indirect Effect

Table 6 Summary of Direct and Indirect Influence Analysis Results

Variables	*Direct*	*Indirect*	Total	Criterion	Conclusion
Capital Access	0.064	0.002625	-0.130	*direct effect > indirect effect =* *mediating*	Inflation is not a mediation variable
Technology Responsiveness	-0.116	0.013755	-0.236	*direct effect < indirect effect =* tidak *mediating*	Inflation as a mediation variable

Source: SPSS v. 20, data processed, 2022

Based on the table summary of the results of direct and indirect influences, it can be seen that, there is an indirect influence of the capital access variable (X_1) on the income variable (Y_2) through the inflation variable (Y_1) of 0.064. Hypothesis 1 was rejected. That is, the variable access to capital has no effect on income through the inflation variable as a mediation variable.

Then there is the direct influence of the technology response variable (X_2) on the income variable (Y_2) through the inflation variable (Y_1) of -0.116. Hypothesis 2 is accepted. That is, technology responsiveness variables affect income variables through inflation variables as mediation variables.

3.3.1 Sign Test

This different test method is carried out on the inflation variable of Deli Serdang Regency for the period January to December 2018 to January to December 2021. This method is used to look at the comparison of two groups of interconnected data samples.

Table 7 Inflation Variable Test Results Before and During COVID-19 Deli Serdang Regency

		N	Exact Sig. (2 – tailed)
Inflation During COVID-19	Negative Difference a	14	
Inflation Before COVID-19	Positive Difference b	10	
	Ties c	0	0.541
	Total	24	
a. Inflation During COVID-19 < Inflation Before COVID-19			
b. Inflation During COVID-19 > Inflation Before COVID-19			
c. Inflation During COVID-19 = Inflation Before COVID-19			

Source: SPSS v. 20, data processed, 2022

Based on the table above, there are many signs for the ranking difference. It can be seen that there are 14 data with negative differences, 10 data with positive differences and 0 data with data differences of 0 (data pairs equal to ties values) from the number of data as many as 24.

Then it can be seen that in the Exact Sig column. (2-tailed) or significant for the two-way test obtained a value of 0.541 which means α = 0.541 > 0.05. So H0 is accepted and H1 is rejected. This shows that there are differences in inflation variable data before and during COVID-19 but not significant in Deli Serdang Regency. Hypothesis 3 is accepted.

4. Discussion

4.1. The Effect of Capital Access Variables on Income Variables

Based on the results of research shows that access to capital has a positive influence directly on the business income of Housewives of Klambir Lima Kebun Village. However, this is not significant, because the sig value is greater than the specified significant level. Some respondents stated that the access to capital obtained had an influence on the income from the business owned by housewives in Klambir Lima Kebun Village. This shows that the ease of obtaining information related to loan funds or business capital from various parties or financial institutions can have a good impact on the business being run. Because the greater the capital issued will increase the income of a business.

This is in accordance with research conducted by [12], [13] and [14] which states that capital has a positive effect on income. The study also stated that one way to increase income is to increase capital.

4.2. Influence of Capital Access Variables on Income Variables with Inflation Variables as Mediation Variables

Inflation in this research model was stated not to mediate the relationship between capital accesses to the business income of Klambir Lima Kebun Village Housewives. Variable inflation does not result in capital access variables affecting income variables indirectly. This is shown from the value of the indirect influence of capital access to the business income of housewives through the variable inflation value is smaller than the value of the direct influence of the capital access variable on the business income of housewives in Klambir Lima Kebun Village.

4.3. The Effect of Technology Responsiveness Variables on Income Variables with Inflation Variables as Mediation Variables

Based on the results of research shows that technological responsiveness has a negative influence indirectly on the business income of Housewives of Klambir Lima Kebun Village. And this result is not significant, because the sig value is greater than the specified significant level. The more sophisticated the technology and the more technologically savvy used it will increase the productivity of the results and increase production, in which implied the conclusion that the community will get a higher income or income [15].

However, in this study the inflation variable was stated to mediate the relationship between technological responsiveness to the business income of Klambir Lima Kebun Village Housewives. This is shown from the value of the indirect influence of technological response to the business income of Housewives through the variable inflation value is greater than the value of the direct influence of the variable of capital access to the business income of housewives in Klambir Lima Kebun Village.

4.4. Development of Inflation Rate Before and During COVID-19 Pandemic Deli Serdang Regency

The results of the study stated in Table 8 that there was a difference in the rate of inflation between before and during the COVID-19 pandemic, but the difference was not significant. This is because at the beginning of the treatment of PSBB in the March 2020 period, not a few people panic buying in responding to the COVID-19 incident. At first, people bought food in the market to be used as stock in meeting needs during the Period of Large-Scale Social Restrictions. The phenomenon of panic buying causes the price of goods / services in the market to become erratic fluctuations, thus pushing the price of goods / services at first to rise significantly.

5. Conclusion

Based on the results of the analysis that has been done, it can be concluded as follows:

- In substructure I, the variable of capital access has a positive influence directly on the business income of The Housewife of Klambir Lima Kebun Village.
- In substructure II, the technology response variable has an indirect negative influence on the business income of the housewife of klambir village five gardens with inflation variables as mediation variables.
- The results of the estimated test are different (sign test) that there are differences before and during the COVID-19 pandemic that occur in inflation variables, but are not significant.

Based on the conclusions that have been stated above, suggestions can be submitted in the study:

- There needs to be support from various parties such as the government or private and state academic institutions that provide a forum and understanding, especially Housewives who have potential in entrepreneurship.
- Housewives must be more technologically literate to develop a business amid the increasing global flow of technology

Compliance with ethical standards

Disclosure of conflict of interest

The authors declare that there is no conflict of interest regarding the publication of this document.

Statement of informed consent

This case studies informed consent of household business as respondent at Klambir Lima Kebun Village before and during the COVID-19 pandemic.

References

[1] Ferdi. DAMPAK PANDEMI COVID-19 TERHADAP AKTIVITAS EKONOMI MASYARAKAT DI DESA SALUMPAGA, KECAMATAN TOLITOLI UTARA, GEOSEE. 2020; 1(2): 37–43.

[2] SRI. Studi Dampak Sosial-Ekonomi Pandemi COVID-19 di Indonesia, SMERU Research Institute. 2020.

[3] BPBDProvSU, Update Data Covid-19 di Sumatera Utara, BPBD Provinsi Sumatera Utara. 2020.

[4] Sumatra, S of N. Statistic of North Sumatra, 2021. Medan: Statistic of North Sumatra. 2021.

[5] Rangkuty, DM. Survey. 2021; 1(1).

[6] Kurniawan, A. Metode Riset untuk Ekonomi & Bisnis. Bandung: ALFABETA. 2014.

[7] Arikunto, S. Metode Penelitian Kualitatif. Jakarta: Bumi Aksara. 2006.

[8] Ghozali, I. Aplikasi Analisis Multivariate dengan SPSS. Semarang: Badan Penerbit UNDIP. 2005.

[9] Sarwono, J. Analisis Jalur untuk Riset Bisnis dengan SPSS. Yogyakarta: Penerbit ANDI. 2012.

[10] Sunyoto, D. Metodologi Penelitian Akuntansi. Bandung: Refika Aditama. 2013.

[11] Suliyanto. STATISTIKA NON PARAMETRIK dalam Aplikasi Penelitian, Yogyakarta. Penerbit ANDI. 2014.

[12] Atun, NI. Pengaruh Modal, Lokasi, dan Jenis Dagangan terhadap Pendapatan Pedagang Pasar Prambanan Kabupaten Sleman, Universitas Negeri Yogyakarta. 2016.

[13] Pratama, AS. Analisis Faktor-Faktor yang Mempengaruhi Pendapatan Pedagang Pasar Setelah Relokasi Di Pasar Purwoyoso Kecamatan Ngaliyan Semarang, Universitas Negeri Semarang. 2013.

[14] Utami, SS. and Wibowo, E. Pengaruh Modal Kerja Terhadap Pendapatan dengan Lama Usaha sebagai Variabel Moderasi (Survei pada Pedagang Pasar Klithikan Notoharjo Surakarta), J. Ekon. dan Kewirausahaan. 2013; 13(1): 175–179.

[15] Arliman, M. Pengaruh Modal, Jam Kerja, Pengalaman Kerja dan Teknologi terhadap Pendapatan Nelayan Tangkap di Desa Tamasaju Kecamatan Galesong Utara Kabupaten Takalar, Universitas Hasanuddin. 2013.