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THE IMPACT OF THE COVID-19 PANDEMIC ON ECONOMIC RESILIENCE AND PUBLIC POLICY: AN ANALYSIS FROM THE PERSPECTIVE OF SOCIAL AND ECONOMIC POLICY IN MEDAN CITY

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Abstract. The COVID-19 pandemic has posed significant challenges for public policy in various countries, particularly in terms of economic resilience and the support provided by governments. This study aims to analyze the early impacts of the pandemic on household economic resilience and public policy responses in Medan, Indonesia. The data used in this research were derived from a survey conducted between April 8 and April 20, 2020, covering 867 households. Although the data reflect the initial conditions of the pandemic, the findings indicate gaps in access to social assistance and the unevenness of policy implementation. This article also discusses the role of public policy in mitigating the economic impacts on vulnerable groups. Furthermore, it recommends the need for more inclusive

and responsive public policies to address long-term crises, with an emphasis on more equitable distribution of assistance. This study contributes to updating the existing literature on economic resilience during the pandemic and provides insights for policymakers in designing more adaptive public policies.

Keywords: *public policy, economic resilience, urban community.*
Reikšminiai žodžiai: *Viešoji politika, ekonominis atsparumas, miesto bendruomenė, pasaulinė pandeminė nelaimė.*
JEL classification: A13, E71, H12, I15

1. Introduction

Community economic resilience is an essential area of research during the COVID-19 pandemic, as this global crisis presented substantial economic challenges for people worldwide. Investigating the factors that contribute to community economic resilience can provide valuable insights into how to bolster resilience in the face of crises such as the COVID-19 pandemic. Shammi demonstrates that enhancing the capacity of community economic resilience can mitigate the adverse social and economic impact of the COVID-19 pandemic (Shammi et al. 2020). Similarly, some researchers report that a community's economic resilience is contingent upon factors such as resource accessibility, financial inclusion, and income diversification (Östh et al. 2015; Barajas et al. 2020; Lee et al. 2022).

Exploring the economic resilience of urban communities during the COVID-19 pandemic can provide valuable insights into how cities can effectively navigate major economic crises. In a recent publication, Cui et al. (2022) investigate the economic resilience of urban communities amidst the COVID-19 pandemic. Their research reveals that economic diversification, skill and entrepreneurship development, and access to resources are crucial factors in enhancing the economic resilience of urban communities during pandemics. Hu et al. (2022) illustrate that a city's economic resilience is also contingent upon government support and the implementation of appropriate policies, such as financial assistance and debt restructuring.

Economic resilience has become an increasingly important topic in the era of globalization and complex economic challenges, including pandemics such as COVID-19. The concept of economic resilience refers to the ability of an economic system to survive and recover from economic crises in the short and long term. Through research, factors that influence economic resilience can be identified, including economic policy, technological innovation, and institutional capacity. For instance, Gross and Sampat (2021) found that government policy support and technological innovation can enhance the ability of an industrial sector to withstand an economic crisis. Similarly, Guillán Montero & Le Blanc, (2020) demonstrated that strong institutional capacity can facilitate a swift and effective response to economic crises. Thus, research on economic resilience can significantly contribute to

existing knowledge on how economic systems can survive and recover from economic crises and aid in developing appropriate policies to address future economic challenges.

The COVID-19 pandemic has had a significant impact on the economy of urban communities. The pandemic has caused a decline in income and has hindered the ability of urban residents to meet their basic needs, such as food and clothing (Rasel 2020). This is mainly due to the implementation of social and economic restrictions that have led to a decrease in economic activity in cities. Furthermore, the pandemic has resulted in a notable increase in the unemployment rate in urban areas (Hossain 2021). In addition, the industrial and trade sectors in cities have also been adversely affected, with a significant decline in turnover and profits reported (Açikgöz and Günay 2020). As a result, many urban dwellers are struggling to maintain their employment and earn sufficient income to meet their daily needs.

The COVID-19 pandemic has compelled urban communities to adapt and explore novel approaches to sustain their economic livelihoods. Numerous studies indicate that many urban communities have demonstrated resilience and ingenuity in tackling the economic challenges posed by the pandemic. For instance, Sarker et al. (2022) report that a large number of street vendors in Dhaka, Bangladesh, have resorted to online sales to counter the decline in physical store sales. Furthermore, some urban communities have diversified their economic activities and shifted to new sectors, such as the food and beverage industry and sanitation products, which are in high demand during the pandemic (Memon et al. 2021). In this context, the resourcefulness and creativity of the urban community have proven to be pivotal in sustaining their economic viability during the COVID-19 pandemic.

2. Literature review

2.1. Concept of economic resilience

The concept of economic resilience refers to the ability of a region to withstand and recover from economic, social, and environmental shocks that may occur (Kousky et al. 2018). This concept is important to understand in order to enhance the economic resilience of a region (Bristow 2010). One of several factors that can affect the level of resilience of a region includes investment in sustainable infrastructure (Choguill 1996). This concept encompasses factors such as economic diversification, labor market flexibility, the availability of high-quality human resources, and strong institutional support (Meerow et al. 2016). Investment in sustainable infrastructure is crucial in increasing the resilience of a region, as good infrastructure will affect the region's ability to recover from economic shocks (Briguglio et al. 2009).

2.2. Economic diversification and resilience

Economic diversification also plays a crucial role in increasing the resilience of a region. According to Meerow et al. (2016), economic diversification can help reduce the region's dependence on a particular economic sector, so that when a shock occurs in that sector, the impact on the region is not as significant. The development of a flexible labor market is also an important factor in increasing the resilience of a region. Labor market flexibility allows the region to adapt to changing economic conditions, thereby helping to reduce the impact of economic shocks (Meerow et al. 2016). Effective institutional support is also a crucial factor in increasing the resilience of a region (Bristow 2010).

2.3. Labor market flexibility and resilience

Several studies related to economic resilience indicate that investment in sustainable infrastructure can help increase the resilience of a region (Choguill 1996). Economic diversification and labor market flexibility are also important factors in enhancing regional resilience (Meerow et al. 2016). The importance of economic resilience has been increasingly recognized by policymakers, especially in the context of sustainable urban development (Briguglio et al. 2008). This requires a comprehensive and integrated approach to regional development (Meerow et al. 2016).

2.4. Economic resilience and the COVID-19 pandemic

The COVID-19 pandemic has had significant impacts on the global economy, including increased unemployment rates and decreased economic growth (Baldwin et al. 2020). However, there are several concepts that can help countries and regions to withstand and recover from the pandemic's effects, one of which is the concept of economic resilience. The COVID-19 pandemic has triggered a global crisis that has paralyzed many economic sectors and has prompted a debate about the importance of the concept of economic resilience (Dean et al. 2021). This concept is critical in the context of the pandemic because it has shown that a country's level of economic resilience can affect its ability to recover from unexpected shocks and crises (Dean et al. 2021).

2.5. Institutional support and resilience

Several studies have shown that factors such as economic diversification, innovation, and appropriate fiscal policies can help increase a country's level of economic resilience in facing the pandemic (Tian et al. 2022). Investments in sustainable infrastructure and strong institutions are also essential factors in improving economic resilience (Choguill 1996). However, the implementation of the concept of economic resilience is not easy and requires integrated efforts from the government, businesses, and society (Meerow et al.

2016). This includes efforts to develop policies and programs that support economic diversification, labor market flexibility, quality human resources, as well as the building of cooperation among sectors and regions. The importance of economic resilience in the context of the COVID-19 pandemic highlights the need for an integrated strategy to build and maintain it, both at the national and international levels (Meerow et al. 2016). This requires cooperation and collaboration among countries and sectors, as well as strong policy and institutional support (Tian et al. 2022).

3. Research methods

This study collected household data from Medan, the third-largest urban center in Indonesia, which accounts for 3% of the country's COVID-19 cases. Despite this seemingly modest figure, Medan ranks among the top three most populous cities in Indonesia, with 0.98% of the national population and a density 3.86 times higher than the national average. The city's high prevalence of COVID-19 is further influenced by its role as a hub for international travel through its airport. To ensure sample representativeness in this voluntary survey, descriptive statistical tests were conducted.

The research examines household economic resilience in response to government-mandated physical distancing measures during the COVID-19 pandemic. Data was collected via an electronic survey targeting diverse respondents. While electronic questionnaires may introduce response bias, their practicality under constraints of time, space, and resources is well-documented (Cooper et al. 2006). Widespread smartphone ownership mitigates accessibility concerns (Puspitasari and Ishii 2016). To reduce bias, the questionnaire focused on household-level information and accounted for economic class disparities through family income data.

The survey instrument was adapted from Alinovi et al. (2008) to fit the Medan context, with additional questions on family size, income sources, physical distancing patterns, and economic resilience (Alinovi et al. 2008). Anonymity and voluntary participation were ensured (Cooper et al. 2006).

The data encompassed nominal, ordinal, and interval categories, collected via Google Forms and distributed through social media. After rigorous screening, 867 valid responses from Medan residents were analyzed using descriptive statistics, analysis of variance (ANOVA), Kruskal–Wallis testing, and Spearman's rank correlation (Siegel 1956). ANOVA assessed group differences in ratio/interval data, while Kruskal–Wallis addressed ordinal/nominal data. These non-parametric tests, free from parametric assumptions, offered key insights into urban household economic resilience during the pandemic.

4. Results and discussions

The data analysis conducted in this study encompassed ANOVA, Kruskal–Wallis, and Spearman's rank correlation (Siegel 1956; Field 2009). Tables 1.a., 1.b., and 1.c. display data indicating that the majority of respondents adhered to moderate or strict levels of physical distancing, with a negligible proportion failing to comply. Concerning the main source of family income, nearly half of the respondents were salaried individuals, including civil servants, military personnel, police officers, pensioners, and private employees, with the remainder dispersed across other groups such as entrepreneurs, daily/uncertain wage workers, weekly wage earners, and project-based income earners. This distribution is noteworthy, as it effectively divides the respondents into two broad categories, namely employees and non-employees. With respect to estimating the duration of economic resilience amid physical distancing measures, the sample exhibited an even distribution across the proposed schemes, including those below 2 weeks, 2–4 weeks, 4–12 weeks, and over 12 weeks.

Table 1.a. Descriptive statistics of characteristics of respondents based on a pattern of physical distancing

		Pattern of physical distancing					
		Implement social distancing strictly (N = 248)		**Social/physical distancing with outdoor/ outside activity (N = 594)**		**Do not apply social distancing (N = 25)**	
		N	**%**	**N**	**%**	**N**	**%**
Gender	Male	81	32.7	260	43.8	11	44.0
	Female	167	67.3	334	56.2	14	56.0
Age		Mean = 31.45	SD = 11.59	Mean = 32.40	SD = 11.61	Mean = 29.24	SD = 10.03
Marital status	Married with a child/ children	49	19.8	111	18.7	4	16.0
	Married	87	35.1	203	34.2	8	32.0
	Single	109	44.0	266	44.8	11	44.0
	Widow/widower	0	0.0	3	0.5	2	8.0
	Widow/widower with a child/children	3	1.2	11	1.9	0	0.0

Educational background	Primary school	0	0.0	12	2.0	1	4.0
	Junior high school	3	1.2	15	2.5	3	12.0
	Senior high school	98	39.5	146	41.4	12	48.0
	Diploma/bachelor's degree	92	20.6	226	38.0	7	28.0
	Master's degree	51	20.6	87	14.6	2	8.0
	Doctorate	4	1.6	8	1.3	0	0.0

Source: Rahmadana (2020)

Table 1.b. Descriptive statistics of the characteristics of respondents based on economic resilience

		If physical distancing continues to apply, how long will you and your family survive economically?							
		< 2 weeks (N = 190)		**2–4 Weeks (N = 282)**		**4–12 Weeks (N = 204)**		**> 12 Weeks (N = 191)**	
		N	**%**	**N**	**%**	**N**	**%**	**N**	**%**
Gender	Male	62	32.6	113	40.1	94	46.1	83	43.5
	Female	128	67.4	169	59.5	110	53.9	108	56.5
Age		Mean = 31.90	SD = 11.59	Mean = 31.89	SD = 11.89	Mean = 31.48	SD = 10.87	Mean = 33.00	SD = 11.82
Marital status	Married with a child/children	31	16.8	43	15.2	40	19.6	49	25.7
	Married	71	37.4	99	35.1	71	34.8	57	29.8
	Single	82	43.2	135	47.9	88	43.1	81	42.4
	Widow/widower	4	1.6	1	0.4	0	0	1	0.5
	Widow/widower with a child/ children	2	1.1	4	1.9	5	2.5	3	1.6
Educational background	Primary school	4	2.1	7	2.5	1	0,5	1	0.5
	Junior high school	10	5.3	9	3.2	1	0.5	1	0,5
	Senior high school	96	50.5	131	46.5	67	32.8	62	32.5
	Diploma/bachelor's degree	68	35.8	98	34.8	93	45.6	66	34.6
	Master's degree	11	5.8	36	12.8	38	18.6	55	28.8
	Doctorate	1	0.5	1	0.4	4	2.0	6	3.1

Source: Rahmadana (2020)

Table 1.c. Descriptive statistics of the characteristics of respondents based on the source of the family's main income

		Source of the family's main income									
		Monthly salary as a civil servant, military, police, pensioner, or private employee (N = 467)		**Business or entrepreneurship (N = 144)**		**Workers with daily/uncertain income (informal workers) (N = 170**		**Workers with a weekly income (N = 41)**		**Workers with project-based income (N = 45)**	
		N	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**
Gender	Male	187	40.0	56	38.9	71	41.8	17	41.5	21	46.7
	Female	280	60.0	88	61.1	99	58.2	24	58.5	24	53.3
Age		Mean = 32.68	SD = 11.07	Mean = 28.20	SD = 9.83	Mean = 34.25	SD = 13.55	Mean = 31.00	SD = 12.37	Mean = 30.29	SD = 10.05
Marital status	Married with a child/ children	101	21.6	22	15.3	30	17.6	7	17.1	4	8.9
	Married	161	34.5	45	31.3	61	35.9	15	36.6	16	35.6
	Single	199	42.6	73	50.7	74	43.5	16	39.0	24	53.3
	Widow/ widower	1	0.2	2	1.4	1	0.6	1	2.4	0	0.0
	Widow/ widower with a child/ children	5	1.1	2	1.4	4	2.4	2	4.9	1	2.2
Educational background	Primary school	2	0.4	1	0.7	7	4.1	3	7.3	0	0.0
	Junior high school	4	0.9	1	0.7	11	6.5	4	9.8	1	2.2
	Senior high school	125	26.8	82	56.9	105	61.8	28	68.3	16	35.6
	Diploma/ bachelor's degree	203	43.5	51	35.4	45	26.5	5	12.2	21	46.7
	Master's degree	123	26.3	8	5.6	2	1.2	0	0.0	7	15.6
	Doctorate	10	2.1	1	0.7	0	0.0	1	2.4	0	0.0

Source: Rahmadana (2020)

Tables 2.a., 2.b., 2.c., 2.d., and 2.e. present the disparities in responses across the resilience variables examined within the group of respondents. The significance of the differences was determined by the number of p-values that were less than 0.05. ANOVA and Kruskal–Wallis tests were employed to analyze the data (Siegel 1956). Based on the p-values of each item, the data indicates that respondents who practiced physical distancing in a strict or moderate manner, as well as those who did not comply with physical distancing measures, did not differ significantly in terms of income and food accessibility, access to basic services, social safety nets, and assets. However, there were variations observed in adaptive capacity and stability for some items (Rahmadana 2020).

The findings of this study provide valuable insights into the relationship between physical distancing measures and economic security. The findings of this study also add to the growing body of research on the impact of physical distancing measures on economic security during the COVID-19 pandemic. Several studies have examined the relationship between physical distancing measures and various aspects of economic security, including income, employment, and access to basic needs. Several previous studies have explored this relationship and found similar results. A study by Blundell examined the impact of COVID-19 on household finances in the United Kingdom and found that while income had decreased for many households, social safety nets and government support programs had helped mitigate these effects (Blundell et al. 2020). This finding is consistent with the current study's results, which suggest that income and social safety nets were not significantly different between respondents who practiced physical distancing and those who did not.

Similarly, a study by Bonaccorsi explored the relationship between physical distancing measures and economic activity in Italy and found that while there were short-term negative impacts on economic activity, these effects were mitigated by government support programs and the eventual lifting of physical distancing measures (Bonaccorsi et al. 2020). This finding is also consistent with the current study's results, which suggest that economic stability was not significantly different between respondents who practiced physical distancing and those who did not.

A study by Brouard explored the impact of COVID-19 on social and economic inequalities in France and found that while there were initial concerns about increased inequality due to physical distancing measures, government support programs and social safety nets helped mitigate these effects (Brouard et al. 2020). This finding is, again, consistent with the current study's results, which suggest that social safety nets were not significantly different between respondents who practiced physical distancing and those who did not.

Other studies have explored the impact of physical distancing measures on specific industries or populations. For example, a study by Králiková examined the impact of COVID-19 on the hotel industry in China and found that while there were initial negative impacts on the industry, government support programs helped mitigate these effects (Králiková et al. 2022). Similarly, a study by Jesline explored the impact of physical distancing measures on migrant workers in India and found that while there were initial concerns about their economic security, government support programs and social safety nets helped

mitigate these effects (Jesline et al. 2021).

A study by Singh and Adhikari found that strict physical distancing measures were associated with reduced income and employment, particularly for low-income individuals (Singh and Adhikari 2020). However, a study by Tarr found that compliance with physical distancing measures was positively associated with economic resilience and the ability to adapt to changing circumstances (Tarr et al. 2022).

In terms of access to basic services, a study by Chakraborty and Maity found that physical distancing measures can disrupt supply chains and impact the availability of essential goods and services (Chakraborty and Maity 2020). However, a study by van der Auwera found that the implementation of social safety nets can help mitigate these effects and promote economic security (van der Auwera et al. 2021).

Other studies have examined the impact of physical distancing measures on specific populations, such as migrant workers and older adults. These studies have found that physical distancing measures can exacerbate existing economic disparities and increase social isolation (Buffel et al. 2020; Zhang et al. 2021).

Overall, these studies suggest that while physical distancing measures can have negative economic impacts, government support programs and social safety nets can help mitigate these effects. The current study's results add to this body of research by suggesting that income, social safety nets, and economic stability were not significantly different between respondents who practiced physical distancing and those who did not, but that there were variations in adaptive capacity and stability for some items.

The following findings indicate that groups of respondents distinguished by the main source of income and the estimated duration of economic resilience exhibited significant differences in almost all items, including income and food accessibility, access to basic services, social safety nets, assets, adaptive capacity, and stability. Notably, increases in water bills, access to aid, and the number of families did not show any significant differences among respondents who were categorized based on physical distancing patterns, sources of income, and the estimated duration of economic resilience.

The results of the study indicate that the groups of respondents distinguished by the main source of income and the estimated duration of economic resilience exhibited significant differences in almost all items, which is consistent with previous research in the field of economics and social sciences (Groh et al. 2016; Xue et al. 2021). These differences include income and food accessibility, access to basic services, social safety nets, assets, adaptive capacity, and stability, which are all key indicators of economic resilience and well-being (Aldrich 2012; Yuan et al. 2017).

Table 2.a. Comparative analysis related to the pattern of physical distancing, the source of the main income, and economic resilience

		Income and food access				
		Income	**Number of family members**	**Income per-capita**	**Shopping patterns in accommo-dating daily food needs under normal circumstances**	**Shopping patterns during physical distancing**
Pattern of social/ physical distance	F-test; Chi-Square	0.462	1.242	2.561	2.581	20.213
	Sig	0.630	0.289	0.078	0.275	0.000**
Source of the family's main income	F-test; Chi-Square	4.238	13.367	223.092	47.581	46.926
	Sig	0.002**	0.000**	0.000**	0.000**	0.000**
If physical distan-cing continues to apply, how long will you and your family survive economically?	F-test; Chi-Square	14.249	0.794	21.247	16.174	42.387
	Sig	0.000**	0.497	0.000**	0.001**	0.000**

*** Significant at the 0.01 level; * Significant at the 0.05 level*

Source: Rahmadana (2020)

Table 2.b. Comparative analysis related to the pattern of physical distancing, the source of the main income, and economic resilience

		Access to basic services								
		Type of health services	**Quality of health services**	**Quality of the education system**	**Mobility disrupted during physical distancing**	**Transportation restrictions during physical distancing**	**Access to clean water during physical distancing**	**Ability to pay water bills during physical distancing**	**Increasing water bills during physical distancing**	**Getting a water bill subsidy during physical distancing**
Pattern of social/physical distance	F-test; Chi-Square	3.639	8.674	4.568	4.006	18.661	2.538	6.768	2.619	0.660
	Sig	0.162	0.013*	0.102	0.135	0.000**	0.281	0.034	0.270	0.719
Source of the family's main income	F-test; Chi-Square	76.363	42.787	47.639	27.471	10.917	13.915	111.489	4.851	18.920
	Sig	0.000**	0.000**	0.000**	0.000**	0.028*	0.008**	0.000**	0.303	0.001**
If physical distancing continues to apply, how long will you and your family survive economically?	F-test; Chi-Square	41.27	17.523	8.002	10.253	5.309	9.274	111.291	1.322	7.001
	Sig	0.000**	0.001**	0.046*	0.017*	0.151	0.026*	0.000**	0.724	0.072

Access to electricity during physical distancing		Access to basic services								
		Ability to pay electricity bills during physical distancing	Increasing electricity bills during physical distancing	Getting an electricity bill subsidy during physical distancing	Access to the internet during physical distancing	Ability to pay internet bills during physical distancing	Increasing internet bill during physical distancing	Getting an internet bill subsidy during physical distancing		
Pattern of social/physical distance	F-test; Chi-Square	5.118	2.513	6.568	1.120	0.480	1.117	5.424	2.288	
	Sig	0.077	0.285	0.037*	0.571	0.786	0.572	0.066	0.319	
Source of the family's main income	F-test; Chi-Square	7.391	104.385	16.113	15.667	45.059	86.062	1.045	11.208	
	Sig	0.117	0.000**	0.003**	0.004**	0.000**	0.000**	0.903	0.024*	
If physical distancing continues to apply, how long will you and your family survive economically?	F-test; Chi-Square	34.339	123.387	7.221	10.462	44.569	106.94	9.771	7.003	
	Sig	0.000**	0.000**	0.065	0.015*	0.000**	0.000**	0.021*	0.072	

*** Significant at the 0.01 level; * Significant at the 0.05 level*

Source: Rahmadana (2020)

Table 2.c. Comparative analysis related to the pattern of physical distancing, the source of the main income, and economic resilience

		Having a side job during physical distancing	Additional income from a side job that is able to meet the needs of a family
Pattern of social/physical distance	F-test; Chi-Square	0.501	1.833
	Sig	0.779	0.400
Source of the family's main income	F-test; Chi-Square	17.115	12.849
	Sig	0.002**	0.012*
If physical distancing continues to apply, how long will you and your family survive economically?	F-test; Chi-Square	10.061	9.098
	Sig	0.018*	0.028*

*** Significant at the 0.01 level; * Significant at the 0.05 level*

Source: Rahmadana (2020)

Table 2.d. Comparative analysis related to the pattern of physical distancing, the source of the main income, and economic resilience

		Valuable assets (gold and silver)	Immovable assets (land and buildings)	Vehicle for daily activities (motorbikes or cars)
Pattern of social/physical distance	F-test; Chi-Square	2.551	6.553	15.312
	Sig	0.279	0.038*	0.000**
Source of the family's main income	F-test; Chi-Square	53.159	16.259	12.348
	Sig	0.000**	0.003**	0.015*
If physical distancing continues to apply, how long will you and your family survive economically?	F-test; Chi-Square	45.532	44.653	12.526
	Sig	0.000**	0.000**	0.006**

*** Significant at the 0.01 level; * Significant at the 0.05 level*

Source: Rahmadana (2020)

Table 2.e. Comparative analysis related to the pattern of physical distancing, the source of the main income, and economic resilience

		Stability							
		Number of family members who worked before physical distancing	Number of family members who lost their jobs/ income during physical distancing	Income condition during physical distancing	Spending conditions during physical distancing	Having health insurance	Having insurance for assets (motorbike, car, house, and others)	Having debts	One of your family members has a credit card
Pattern of social/physical distance	F-test; Chi-Square	1.444	1.753	1.042	8.338	25.675	7.092	6.133	1.200
	Sig	0.237	0.174	0.594	0.015*	0.000**	0.029*	0.047*	0.549
Source of the family's main income	F-test; Chi-Square	2.332	15.981	133.333	20.420	92.300	43.222	18.843	31.741
	Sig	0.054	0.000**	0.000**	0.000**	0.000**	0.000**	0.001**	0.000**
If physical distancing continues to apply, how long will you and your family survive economically?	F-test; Chi-Square	1.701	11.085	53.791	0.635	65.661	15.568	10.418	26.016
	Sig	0.165	0.000**	0.000**	0.888	0.000**	0.001**	0.015	0.000**

*** Significant at the 0.01 level; * Significant at the 0.05 level.*

Source: Rahmadana (2020)

Some researchers have argued that the relationship between income and economic resilience is complex and nuanced, and that other factors, such as education, social networks, and access to credit, can also play a critical role in shaping an individual or community's ability to withstand economic shocks (De et al. 2022; Yuan et al. 2017). Furthermore, the lack of significant differences observed in the items related to water bills, access to aid, and the number of families suggests that these factors may not be as salient in determining economic resilience during a pandemic compared to other factors, such as income stability and access to social safety nets (Lahey and de Villota 2013; Lin and Chang 2020).

Overall, the findings of this study contribute to the growing body of literature on economic resilience during the COVID-19 pandemic and underscore the importance of considering multiple dimensions of well-being and resilience when designing policies and programs aimed at supporting vulnerable individuals and communities (Cutter et al. 2008; Yuan et al. 2017).

This research also indicates that water consumption patterns tend to remain consistent across different community conditions. While aid or loans may not be a critical aspect for all sample categories, other expertise that can yield economic benefits is an essential consideration.

Finally, the number of families did not serve as a distinguishing factor, possibly due to the large number of family members, coupled with a considerable proportion of economically productive families. The data highlights the patterns and characteristics that render the Medan community attractive in terms of its economic resilience.

The study's finding that the number of families did not distinguish respondents is in line with a study on the economic impact of COVID-19 in Indonesia, which found that households with more family members had higher economic resilience due to the sharing of resources (Deloitte 2020). Another study conducted in Indonesia also found that households with higher levels of education and larger family sizes have greater resilience in times of economic hardship (Susilowati 2020).

The study's focus on economic resilience is relevant to the context of Indonesia, which is prone to economic shocks due to its reliance on commodity exports and susceptibility to natural disasters. A study on the economic resilience of Indonesian households found that households with higher incomes, greater education levels, and access to financial services have greater economic resilience (UNICEF et al. 2022).

The study's findings on the impact of physical distancing patterns and sources of income on economic resilience are also relevant to the Indonesian context. A study on the impact of COVID-19 on the Indonesian economy found that strict physical distancing measures had a greater impact on low-income households and those in the informal sector (Habir and Wardana 2020). Another study on the impact of COVID-19 on the Indonesian economy found that workers in the informal sector, who make up a significant proportion of the workforce, were most affected by the pandemic (IBCWE 2020).

In conclusion, the study's findings on the economic resilience of the Medan community provide valuable insights for policymakers and researchers interested in understanding the

factors that contribute to economic resilience in Indonesia. The study highlights the importance of education, income, and access to financial services for economic resilience and the need to consider the impact of physical distancing measures on vulnerable households.

5. Conclusions

The COVID-19 pandemic has deeply impacted household economic resilience, particularly for informal workers and those in the tourism sector. While government social assistance policies offered some relief, uneven implementation and misalignment with societal needs underscore the need for policy improvements. Current policies favor the formal sector and large corporations, leaving the informal workforce—Indonesia's largest employment segment—struggling to access support. Inclusive policies focusing on equitable aid distribution are critical for protecting the most vulnerable groups. Key policy recommendations include improving access to and efficiency in social assistance distribution by refining administrative systems, updating beneficiary databases to include informal workers, and ensuring aid reaches underserved areas. Tailored programs for the informal sector, such as fiscal incentives or job-based social assistance, can better address the needs of this critical workforce. Transparency and accountability are essential for public trust and effective policy implementation. Transparency platforms can enable public monitoring and feedback, ensuring fair and efficient aid distribution. Beyond immediate relief, long-term strategies are vital for building economic resilience. These include holistic social protection reforms, skill development initiatives, financial support for small businesses, and labor capacity-building programs to foster sustainable growth and prepare for future shocks. By addressing short-term challenges and focusing on long-term recovery, these policies aim to create a more inclusive, resilient, and sustainable economic future.

Supplementary materials

Supplementary material associated with this article can be found in the online version at https://data.mendeley.com/datasets/2jtn5dcnvd/1.

Author contributions

All authors were involved in the research design and contributed to writing the manuscript.

Disclosure statement

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COVID – 19 PANDEMIJOS POVEIKIS EKONOMINIAM ATSPARUMUI IR VIEŠAJAI POLITIKAI: MEDANO MIESTO SOCIALINĖS IR EKONOMINĖS POLITKOS ANALIZĖ

Anotacija. COVID-19 pandemija sukėlė didelių iššūkių įvairių šalių viešajai politikai, ypač ekonominio atsparumo ir vyriausybių teikiamos paramos atžvilgiu. Šiuo tyrimu siekiama išanalizuoti ankstyvą pandemijos poveikį namų ūkių ekonominiam atsparumui ir viešosios politikos atsakams Medano mieste, Indonezijoje. Šiame tyrime naudojami duomenys gauti iš 2020 m. balandžio 8 d. iki balandžio 20 d. atliktos apklausos, kurioje dalyvavo 867 namų ūkiai. Nors duomenys atspindi pradines pandemijos sąlygas, išvados rodo prieigos prie socialinės paramos spragas ir politikos įgyvendinimo netolygumą. Šiame straipsnyje taip pat aptariamas viešosios politikos vaidmuo mažinant ekonominį poveikį pažeidžiamoms grupėms. Be to, joje rekomenduojama, kad ilgalaikėms krizėms spręsti reikia labiau įtraukiančios ir labiau reaguojančios viešosios politikos, pabrėžiant teisingesnį paramos paskirstymą. Šis tyrimas padeda atnaujinti esamą literatūrą apie ekonominį atsparumą pandemijos metu ir suteikia politikos formuotojams įžvalgų kuriant labiau prisitaikančią viešąją politiką.

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