Socio-Economic Impacts of the Covid-19 Pandemic among Households in Turkey

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Abstract: By March 2019, the globe witnessed a worldwide pandemic called the coronavirus that posed huge challenges to countries. These challenges include impoverishment of vulnerable groups, job loss for both formal and informal employees, and adverse effects on various economic sectors. Like in other countries, the Covid-19 pandemic has hit Turkey's individuals and many economic sectors. The current study investigates the socio-economic impacts of the COVID-19 pandemic among Turkish households. Primary data were collected, and correlation analyses were conducted to investigate the effects of the Covid-19 pandemic on households. The results showed that most Turkish households reside in rented houses in nuclear families, work in public sectors, and therefore have only a monthly wage as a key source of revenue. Additionally, the results showed significant relationships between the number of households who tested positive for the Covid-19 pandemic and those hospitalized and between the number of households who tested positive for COVID-19 and those quarantined and hospitalized. However, the Turkish government has provided various assistance (in-kind & cash assistance) to support the households to cope with the adverse effects of the COVID-19 pandemic.

1. Introduction

At the beginning of 2020, the world witnessed the emergence of a new disease known as coronavirus, which originated in Wuhan, China. As the disease rapidly spread globally, the World Health Organization [21] declared it a global health emergency [23]. By January 31, 2022, the world had recorded approximately 373,229,380 confirmed cases of COVID-19 and around 5,658,702 deaths. The ten most affected countries include the United States (73,531,094 cases), India (41,302,440 cases), Brazil (25,214,622 cases), France (18,574,875 cases), the United Kingdom (16,468,526 cases), the Russian Federation (11,861,077 cases), Turkey (11,525,730 cases), and Italy (10,925,485 cases) [22].

Before the COVID-19 pandemic, Turkey's economy faced challenges following the 2018 economic crisis. According to TURKSTAT [29], approximately 1,190,000 employees had lost their jobs before the pandemic, and Tekgüç et al. [25] highlighted that the COVID-19 crisis further exacerbated the country's economic difficulties. In response, the Turkish

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government implemented various measures, such as a cash transfer program, to help the population cope with the economic shock caused by the pandemic [4]. The government launched an economic stimulus package worth TRY 100 billion under the Economic Stability Shield Program in March 2020, which included tax breaks, credits, and labor incentives [27]. Additionally, the government executed social insurance and assistance programs, along with labor market policies, to support pensioners, vulnerable groups, and employees [15]. For instance, the World Bank [28] reported that the Turkish government provided a one-time cash transfer of 1000 TL in four installments to approximately 6.11 million people.

As restrictions imposed to curb the spread of the pandemic are gradually lifted, vulnerable groups, such as individuals who lost their jobs and low-income individuals, continue to face challenges [1]. While previous studies have explored the impacts of the COVID-19 pandemic on various aspects of Turkish society, including health and the economy, there is a need for further investigation into the socio-economic impacts on Turkish households. This study aims to address this gap by examining the socio-economic impacts of the COVID-19 pandemic on households in Turkey, providing valuable insights for policymakers to develop effective recovery measures and enhance household resilience.

2. Review of Literature

The COVID-19 pandemic has garnered significant attention from multidisciplinary scientists since its onset. The pandemic has had severe and far-reaching effects on various aspects of society, including economic, political, social, and psychological dimensions. Numerous studies have examined the impacts of COVID-19 on economies, particularly the real sector [6]; [7]; [11]; [14], as well as its effects on financial markets [13]; [24];[17];[20].

In the context of Turkey, scholars have investigated the pandemic's short- and long-term impacts on the financial and real sectors. Adıgüzel [3] found that the pandemic crisis could lead to public debt ranging from 400 to 675 TRY billion as a proportion of the country's Gross Domestic Product (GDP). Tengilimoğlu et al. [18] emphasized that the COVID-19 pandemic has adversely affected Turkey's financial sector. Göker et al. [12] noted that the crisis has had a negative impact on sectors such as textile, leather, sports, tourism, and transportation. Torun and Torun [19] observed that the pandemic could lead to demand shocks in the tourism sector, resulting in unemployment and income losses. Contuk [10] analyzed the short- and long-term economic effects of the pandemic on the stock market, finding a significant negative relationship between confirmed COVID-19 cases and stock market trading volume in the short term and a significant relationship at the 5% significance level in the long term [2].

Further studies have explored the effects of economic conditions on COVID-19, with a specific focus on household economic structures. Manavgat et al. [16] reported that household expenditures in Turkey declined by approximately 5.3% in 2020 due to the pandemic, pushing around 1.35 million people into poverty. Additionally, 103,000 to 758,000 individuals could experience a deterioration in their health expenditures, and it is estimated that 82,000 to 153,000 people might be impoverished due to financing their healthcare needs.

Overall, the literature indicates that the COVID-19 pandemic has significantly affected Turkey's economy, financial sector, and households. While much attention has been given to the immediate impacts, the ongoing nature of the pandemic suggests that these effects are likely to continue, necessitating further research into the socio-economic implications for Turkish households. This study aims to fill this gap by providing a comprehensive analysis of the socio-economic impacts of the COVID-19 pandemic on households in Turkey, offering insights for policymakers to develop targeted strategies to mitigate these effects.

3. Methodological approach

The study adopts a descriptive research design to explore the socio-economic impacts of the COVID-19 pandemic on Turkish households. This design is chosen because it provides a comprehensive overview of the current conditions, experiences, and challenges households face during the pandemic. The descriptive approach allows for a detailed examination of the variables under study, enabling the researchers to identify and report the significant patterns and trends that have emerged due to the pandemic.

Convenience sampling was used in this study. This convenient non-probability sampling method was chosen due to the difficulty of performing research during a pandemic. The selection of the participants was detailed, following ethical guidelines and in a manner that gave access to potential data needed for completeness. While this approach has the benefit of collecting data at an effective rate, it is worth mentioning that due to the characteristics of voluntary attitudes, samples taken from a non-probabilistic method, such as online surveys, may have limited generalizability.

Data were collected through an online survey, a method necessitated by the restrictions and safety concerns associated with face-to-face data collection during the COVID-19 pandemic. The survey was distributed via various online platforms, targeting

households across different regions of Turkey. A total of 200 households participated in the survey. The survey instrument included questions designed to capture a wide range of information, including socio-demographic characteristics, economic conditions, employment status, health status related to COVID-19, and the types of assistance received during the pandemic.

The unique collected data were analyzed using SPSS Version 24, which performed descriptive and inferential statistical analyses. Categorical variables for possible socio-demographic confounders and economic conditions during the pandemic were defined, with frequency and percentage distribution used as main descriptive statistics to summarize them. Similarly, Pearson correlation coefficients were calculated to investigate the relationships with some socio-economic variables (e.g., the number of people who tested positive for COVID-19, hospitalized individuals, those in quarantine, and job loss). These analyses gave a comprehensive idea about the associations of variables and the holistic impact on households due to the pandemic.

Ethical considerations were carefully observed throughout the study. Participants were fully informed about the purpose of the research, their rights, confidentiality, and the voluntary nature of their participation. All data collected were anonymized and securely stored to protect the privacy of the respondents. The study also acknowledges its limitations, particularly the convenience sampling technique and the reliance on self-reported data, which may introduce bias. Additionally, the non-random sampling method may affect the generalizability of the findings to the entire population of Turkey.

This methodology guarantees that the findings of this survey provide valuable information about the socio-economic repercussions on Turkish households attributable to COVID-19. The analysis of this online survey data by high-quality statistical methods allows the reader interested in some kind to find significant patterns and responses, which may help policy-making as well as support generally our understanding of the broader context that COVID-19 brings.

4. Results

4.1. Socio-demographic profiles of the respondents

The current study has tried to assess the socio-economic impact among Turkey households. Table 1 presents the socio-economic and demographic details of the respondents, socio-demographic details, economic profiles, work status, and supportive systems of the households. Table 1 shows that 45% of the respondents are under the age group of 31- 40 years old, and most of them are women (55 percent), married, 47%, and 49.00% were unmarried. Additionally, 43% of the respondents live in rented houses and with nuclear families (64%). The study has further revealed that 88.00% of the respondents have a university degree and 44% of their work in the public sector, but most of them worked from home (86%) during the COVID-19 pandemic based on their type of work.

Table 1: Socio-demographic profile of the respondents

Variables		Frequency (n)	Percentage (%)
Gender	Male	90.00	45.00
	Female	110.00	55.00
Age	18-30	64.00	32.00
	31-40	90.00	45.00
	41-65	45.00	22.50
	More than 65	1.00	0.50
Educational level	Primary school	2.00	1.00
	Secondary school	2.00	1.00
	High School	20.00	10.00
	University	176.00	88.00
Marital status	Single	98.00	49.00
	Married	94.00	47.00
	Divorced	7.00	3.50
	Widow	1.00	0.50
Living areas	Urban area	193.00	96.50
	Semi-urban area	7.00	3.50
Employment status	Unemployed	27.00	13.50
	Public sector	88.00	44.00
	Private sector	73.00	36.50
	Self-employee	12.00	6.00

Work environment	Out of home	28.00	14.00
	From home	172.00	86.00
Type of residence	Family property	42.00	21.00
	Own home	71.00	35.50
	Rent	87.00	43.50
Family structure	Nuclear family	181.00	90.50
	Extended family	19.00	9.50
Number of individuals living in the household	1-3 persons	128.00	64.00
	4-6	68.00	34.00
	More than 6 persons	4.00	2.00

4.2. Household health and economic status and the Covid-19 pandemic

Table 2 presents the economic status of the respondents due to COVID-19. About 60.5% had a monthly income of 4000-10000 TRY, but 53% had a monthly expenditure of more than 5000 TRY. Accordingly, most families do not have any extra income sources other than a monthly wage from their employees. In contrast, most (61%) had members who tested positive for Covid-19, and 54.5% were quarantined.

Table 2: Household health and economic status and the Covid-19 pandemic

Variables		Frequency (n)	Percentage (%)
Household monthly income	1000-4000 TRY	20	10.00
	4001-7000 TRY	67	33.50
	7001-10000 TRY	54	27.00
	More than 10000 TRY	59	29.50
Household monthly expenditure	Less than- 3000 TRY	57	28.50
	3000-5000TRY	37	18.50
	More than 5000 TRY	106	53.00
Households' other sources of income	None	167	83.50
	Rent	26	13.00
	Agricultural activities	6	3.00
	Rent and agricultural activities	1	0.50
Members of individuals who tested positive for Covid-19 per household	None	122	61.00
	1-3 persons	68	34.00
	4-6 persons	8	4.00
	More than 6 persons	2	1.00
Members of individuals quarantined due to the Covid-19 per household	None	109	54.50
	1-2 persons	52	26.00
	3-4 persons	27	13.50
	More than 4 persons	12	6.00
Members of individuals hospitalized due to Covid-19 per household	None	191	95.50
	1-2 persons	7	3.50
	8 persons	1	0.50
	9 persons	1	0.50
Members of individuals who died due to Covid-19 per household	None	194	97.00
	1 person	5	2.50
	3 persons	1	0.50

TRY states for Turkish Lira

## 4.3. Households' economic status and the effects of the Covid-19 pandemic

Table 3 presents the relationships between the economic status of the households and the effects of the Covid-19 pandemic. The results of the correlation analysis showed the existence of a positive and significant relationship between the number of individuals in the household who tested positive for Covid-19 and the number of individuals hospitalized (0.2732**), the number of individuals in the household quarantined, and those tested positive for Covid-19 (0.7383**). It showed that the number of individuals the household tested positive for COVID-19 and those who died from COVID-19 (0.2077**), the number

of individuals quarantined per household and those hospitalized due to the coronavirus (0.1829**), the number of individuals of the household who died due to the coronavirus and those hospitalized per household (0.2138**).

Table 3: Economic status-effect of the COVID-19 pandemic on households

	MI	COV	HOS	Qua	Dead	WI	Ljo	GS
MI	1							
COV	0.0288	1						
HOS	-0.0265	**0.2732****	1					
Qua	0.1042	**0.7383****	**0.1829****	1				
Dead	-0.0545	**0.2077****	**0.2138****	0.069	1			
WI	-0.1171	0.0086	0.0189	0.069	-0.0272	1		
Ljo	-0.1063	0.0231	-0.0203	0.0065	-0.0057	**0.5991****	1	
GS	-0.0186	-0.0716	-0.0324	-0.0592	0.0291	-0.0105	0.0008	**1**
SNG	0.0249	**-0.2467****	-0.0691	-0.1761	0.0108	-0.1241	0.0193	**0.3722***

In addition, the results of the correlation analysis showed a positive relationship between the number of individuals in the household who lost their jobs and those who were confronted with problems in the workplace due to the Covid-19 pandemic (0.5991**) but a negative relationship between the support provided by the NGOs and the number of individuals of the household tested positive for Covid-19 (-0.2467**). However, the correlation analysis revealed a positive relationship between non-government support and government support delivered to the household during the COVID-19 pandemic (0.3722**) (Figure 1).
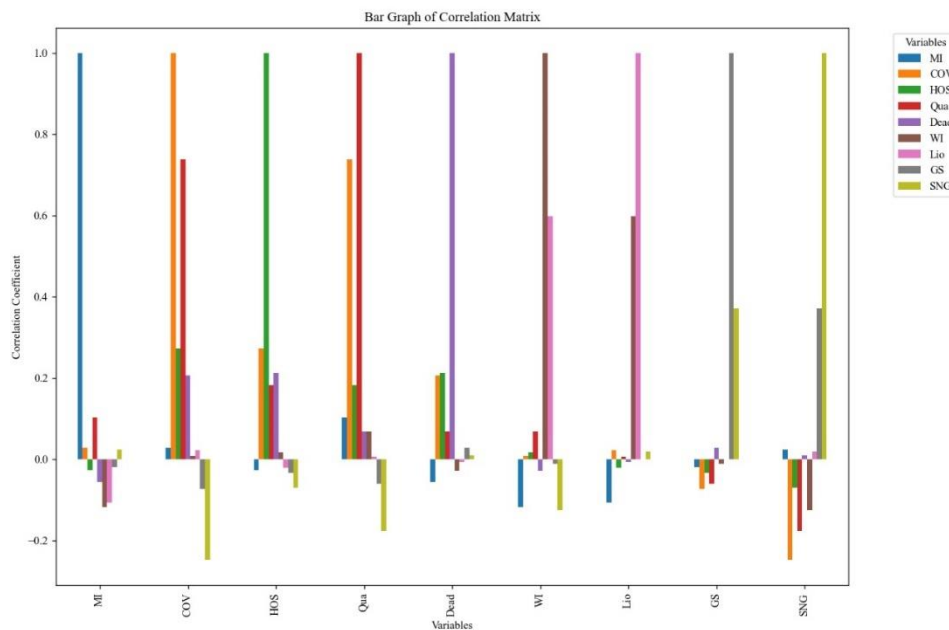
Figure 1: Correlation Matrix Economic status of COVID-19 on households

The symbols COV, HOS, Qua, Dead, Loj, GS, and SNG state for the number of persons who tested positive for COVID, number of persons hospitalized due to the coronavirus, number of persons quarantined due to the coronavirus, number of persons who died due to the coronavirus, number of persons who lost their job due to the Covid-19 pandemic, government support, and non-government support respectively. In addition, the symbol ** refers to the significance level of 0.01

5. Discussion

The findings of this study reveal significant socio-economic impacts of the COVID-19 pandemic on Turkish households, highlighting several key areas of concern. The results indicate that most Turkish households experienced considerable economic

strain during the pandemic, primarily due to their reliance on monthly wages from public sector employment as the primary source of income. The high proportion of households living in rented homes further exacerbated their vulnerability, leaving them financially exposed during widespread economic instability. These findings are consistent with those of Çelik, [9], who reported that the pandemic likely increased unemployment rates, inequality, and poverty levels across Turkey.

The study also found strong correlations between household health outcomes and economic conditions during the pandemic. Significant relationships were found in the number of household-level cases among people with COVID-19 and those who then went on to be hospitalized or quarantined. This aligns with the Turkish Ministry of Health's [30] assertion that quarantine has been an essential method for controlling the spread of the virus, particularly during the early waves of the pandemic. During this time, households that faced such health-related challenges were also more likely to report greater economic hardships as an after-effect of the pandemic.

Moreover, the study identified a significant negative relationship between non-governmental organization (NGO) support and the number of individuals testing positive for Covid-19. This indicates that households receiving less support were likelier to have members infected with the virus. This could imply that the resources provided by NGOs, such as food, medical supplies, and hygiene products, played a critical role in enabling households to adhere to public health guidelines and protect themselves from infection. Kılıç et al. [8] also emphasized the importance of governmental and non-governmental support during the pandemic in mitigating the socio-economic impacts on vulnerable populations.

The analysis revealed a robust and positive relationship between government support and household economic well-being throughout the pandemic. Thus, the state is the pivotal social structure that directs cash transfers to various social insurance systems and helps maintain households. The Economic Stability Shield Program of the Turkish government and other social protection measures put in place to help households cope with pandemic-induced loss have taken a huge toll on economic well-being. These results are consistent with those of Aldan et al. [1], who drew attention to the success of social protection in crisis management.

However, many households remained economically vulnerable despite the extensive support mechanisms. The study's results show a pronounced correlation between job loss and workplace difficulties due to the pandemic, reflecting the broader disruptions in Turkey's labor market. This supports the findings of Yüksel [26], who reported severe impacts on employment, leading to widespread job losses and underemployment, further intensifying the economic difficulties many households face. Additionally, Akkaya-Kalayci et al. [5] estimated a significant decline in household expenditures and increased poverty rates, reinforcing that the pandemic's economic effects were profound and far-reaching.

Overall, the findings highlight an intricate balance of health and economic determinants to one another during the COVID-19 pandemic among the Turkish population. The results underscore the importance of robust care systems spanning urgent health challenges and enduring economic security. Given the strong links observed in this work between health outcomes and economic conditions, our results suggest that efforts to protect households from fragility should be implemented by combining public health measures with economic support. In the future, policymakers could use these insights to design policies that can provide short-term redress and, more importantly, support Turkish households' recovery and resilience in the medium- to long-run. Future studies might investigate the longer-term socio-economic consequences of COVID-19 and evaluate existing efforts for recovery.

6. Conclusion

As a result of the COVID-19 pandemic outbreak, several vulnerable groups in Turkey may experience a variety of difficulties. This includes locating new employment opportunities for those who have lost their occupations because of the epidemic and providing for the most basic of living necessities, particularly for those with low-income levels. Investigating the socioeconomic consequences of the COVID-19 pandemic could assist country authorities in putting in place other measures to assist residents in coping with the disease's negative consequences. In the current study, households in Turkey are being investigated to determine the socio-economic impact of the Covid-19 epidemic.

Accordingly, the study's results revealed that most Turkish households reside in rented houses in nuclear families and earn their living as public servants from the monthly wage as the primary source of income. Additionally, the results revealed the existence of statistically significant relationships between the number of individuals in the households who tested positive for the COVID-19 pandemic and those hospitalized, as well as between the numbers of individuals in the households who tested positive for the COVID-19 and those quarantined and hospitalized due to the coronavirus. On the other hand, the Turkish government has provided various aid to assist households in coping with the detrimental impacts of the COVID-19 pandemic.

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