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Does Food Inflation Cause Suicide in Turkey?

Gıda Enflasyonu Türkiye'de İntihara mı Yol Açıyor?

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Abstract: This study focuses on the relationship between the suicide rate and food inflation using a panel dataset in 26 NUTS-2 regions in Turkey during 2008-2019. We also analyse the effects of several socioeconomic factors, including the unemployment rate, real GDP per capita, the divorce rate, the proportion of low-educated individuals, and the number of physicians. Our estimated results show that food inflation affects the suicide rate of males and females differently. An increase in food inflation decreases the female suicide rate while it leads to a rise in the male suicide rate. A possible explanation for this finding may be that Turkish society's social roles attributed to females and males are entirely different. While an increased divorce rate hurts the male suicide rate, a rise in real GDP per capita decreases the female suicide rate. These findings are consistent with Durkheim's theory of suicide and are thought to guide future economic and social policies.

Keywords: Suicide, Inflation, Food Price, Panel Data Analysis

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Öz: Bu çalışma, 2008-2019 döneminde Türkiye'de 26 NUTS-2 bölgesinde bir panel veri seti kullanarak intihar oranı ve gıda enflasyonu arasındaki ilişkiye odaklanmaktadır. Ayrıca işsizlik oranı, kişi başına düşen reel GSYİH, boşanma oranı, düşük eğitimli bireylerin oranı ve doktor sayısı gibi çeşitli sosyoekonomik faktörlerin etkilerini de analiz ediyoruz. Tahmini sonuçlarımız, gıda enflasyonunun kadın ve erkeklerin intihar oranını farklı şekilde etkilediğini göstermektedir. Gıda enflasyonundaki artış kadın intihar oranını düşürürken erkek intihar oranını artırmaktadır. Bu bulgunun olası bir açıklaması, Türk toplumunun kadın ve erkeğe atfedilen toplumsal rollerinin tamamen farklı olması olabilir. Artan boşanma oranı erkek intihar oranını olumsuz etkilerken, kişi başına düşen reel GSYİH'deki artış kadın intihar oranını azaltmaktadır. Bu bulgular Durkheim'ın intihar teorisi ile tutarlıdır ve gelecekteki ekonomik ve sosyal politikalara rehberlik edeceği düşünülmektedir.

Anahtar Kelimeler: İntihar, Enflasyon, Gıda Fiyatları, Panel Veri Analizi

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1. Introduction

Suicide is one of the serious health problems throughout the world since almost 700,000 people put an end to their own lives every year (World Health Organisation, 2021). Several factors such as sociological, psychological, physical disorders, and economic stress lead individuals to commit suicide. Therefore, World Health Organisation (WHO) pays attention to this issue by including the reduction of suicide mortality as an indicator of Sustainable Development Goals (SGD).

Parallel to global statistics, the number of people who committed suicide in Turkey in the last decade has reached approximately 34,500. In other words, an average of 4 out of 100,000 people in Turkey end their lives by committing suicide every year. Although this number seems trivial compared with other causes of death, it shows an increasing trend year by year. Hence, understanding the underlying causes of suicide is a crucial issue to prevent more adverse outcomes. For a comprehensive analysis, when we look at the gender distribution of suicides, it can be seen that males have a higher tendency to commit suicide. More than 75% of all suicides and intentional harm have been committed by males in recent years. For this reason, we examine the determinants of male and female suicides separately. Additionally, many studies suggest different gender roles are attributed to males and females in Turkish society due to the effects of traditional and conservative cultural norms (Fortin, 2005; Uray & Burnaz, 2003). Therefore, separate analyses provide better insight and understanding in the study.

Durkheim (1897) stated that the existing social factors in society provide a constant suicide rate and that dramatic social changes can increase this fixed rate by causing alienation. The starting point of this approach is that solid social ties lead to a low suicide rate. On the other hand, it is known that social transformation, economic crisis, and wars cause social turmoil. In the case of anomie, defined as the disappearance of normative boundaries, it is claimed that the resulting social deterioration increases the suicidal tendency in societies. In other words, such suicides, which Durkheim classifies as anomic suicide, can occur during economic crises and conjuncture fluctuations. In addition, anomic suicides are not only based on financial reasons but may also occur due to family relationships that have deteriorated due to divorce (Marks, 1974; Durkheim, 1897). While Durkheim emphasised social factors in his studies on suicide, Shneidman (2001) focused on individual characteristics. He argues that when individuals are faced with an unsolvable problem, they will tend to solve the situation with suicide. Such suicides are escape suicides (Smith, Mercy, and Warren, 1985; Baechler, 1979).

Although suicide seems to be based on sociological and psychological factors, the cause of sociological and psychological destruction may be based on economic problems. Although the study of Durkheim and other researchers seems to emphasise economic factors, the problem of suicide was not a topic of interest in the economic literature until research by Hamermesh and Soss (1974). Hamermesh and Soss developed the economic theory about suicide by modelling individual lifetime utility function with age and permanent income. Their findings suggest that there exists a positive relationship between age and the suicide rate, while the reverse relation holds for income. Following Hamermesh and Soss, researchers have conducted many studies to investigate the socioeconomic determinants of suicide.

Botha (2012), focusing on the relationship between economic performance and suicide in South Africa, found that increased inflation triggers suicides and that suicide is more common among young males and highly educated individuals. Coope et al. (2014) investigated the suicidal tendencies of demographic groups affected by the 2008 crisis in England and Wales by performing a joinpoint analysis. The study's findings show no correlation between recession and suicide in women but that financial distress, such as debt, is a significant factor influencing young male suicides. At the same time, unemployment in middleaged men leads to suicide. Among recent studies, Rambotti (2020) examined the relationship between welfare state policies and suicided the US in the context of Supplementary Nutrition Assistance Program (SNAP) and Earned Income Tax Credit (EITC) policies. The findings show that increased participation in the abovementioned approaches reduces male suicides. Additionally, the results showed that household

size increases overall suicide rates. Examining the relationship between economic strain and suicide from a different perspective, Gertner, Rotter, and Shafer (2019) found that increasing the minimum wage level positively impacts suicide rates in the US. The study revealed that female suicides are not associated with economic factors. This means that males are more sensitive than females to situations such as unemployment, financial losses, and the inability to make a living due to their dominant identities. Therefore, it can be deduced that financial concerns can trigger male suicidal behaviours. Examining the impact of human capabilities on global suicide rates by considering the female labour force participation rate and the human development index, Chen, Chen, Lui, and Yip (2017) found that the increase in the female labour force participation rate in countries with a high level of human development reduces suicides, while in countries with a low level of human development, this relationship is the opposite.

Contrary to the international literature, suicide studies in Turkey are very limited. Alptekin, Alptekin, and Uysal (2010) found that unemployment in Turkey is one of the determinants of suicide. Altinanahtar and Halicioglu (2009) examined the factors determining suicide in Turkey using per capita real income, divorce rate, urbanisation, and liquidation. The findings revealed that urbanisation has the most significant factor in deciding suicidal behaviour; real income per capita and liquidation follow it. Akyuz, Karul, and Nazlioglu (2020) investigated whether shocks affect suicides permanently or temporarily according to sex and cause. The findings suggested that shocks to economic problems and business failures permanently impact female suicides. Therefore, necessary policies should be implemented efficiently to prevent suicides, especially among females.

In the literature, studies generally investigate the relationship between inflation and suicide, while no study directly examines the effect of food inflation on the suicide rate. Food inflation is an economic phenomenon whose impact can be felt, especially by poor households. Hence, relevant works generally focus on poverty. One is the study of Kidane and Woldemichael (2020), which examined the relationship between food inflation and child mortality in Ethiopia. They revealed that malnutrition resulting from increased monthly food inflation leads to a rise in infant mortality.

In this paper, we aim to investigate the relationship between suicide and food inflation by using panel data in 26 regions for the period 2008-2019 in Turkey. The consumer price index for food and nonalcoholic beverages has increased exponentially and more than tripled from 2008 to 2019 in Turkey. This situation points to a severe financial problem with decreasing purchasing power, especially for the low-income segment, which allocates a significant part of their budget to essential needs such as food and nonalcoholic beverages in Turkey.

We consider the change in food prices instead of including the inflation-related CPI or PPI variables because the price increase in food and non-alcoholic beverages creates a more serious psychological pressure on poor households. Limited access to food is considered a psychologically damaging trigger. For this reason, the financial distress experienced by households with restricted access to food and nonalcoholic beverages because of food inflation may lead to weakening family ties and psychological depression that leads to suicide (Greenglass et al., 2014). In addition, the hypothesis that food inflation is included in the reasons for suicide by creating psychological pressure is also related to the concept of food insecurity. Anderson (1990) defined food insecurity as limited or uncertain availability of nutritionally adequate and safe foods or limited or uncertain ability to acquire acceptable foods in socially acceptable ways. Food insecurity can lead to increased suicidality through malnutrition, stress from limited access to food, and fear of hunger. On the other hand, especially in societies such as Turkey, where the family structure can be expressed more traditionally, the parents' or spouses' concerns about not being able to meet the adequate food needs of other household members may increase the suicide risk of these individuals. Some studies found a relationship between food insecurity and suicidal ideation and suicide attempts (Jones, 2017; Shayo & Lawala, 2019; Davison and Kaplan, 2015; Koyanagi et al., 2019; Pirrie et al., 2020; Smith et al., 2022). According to the definition of food insecurity by Anderson (1990), food insecurity arises due to "limited resources" or "poverty". In this study, we act on the assumption that

one of the reasons for food insecurity stemming from poverty may be food inflation. On the other hand, how food inflation will affect poverty is somewhat complicated because it may benefit rural farmers by increasing their income. At the same time, food inflation is likely to severely damage the urban poor (Easterly & Fischer, 2001). Therefore, using the NUTS-2 data set and panel data analysis method in this study means that the relationship between food inflation and suicide is examined from a perspective that includes regional differences. Within the framework of the hypotheses described so far, we consider food inflation and examine its relationship with suicide.

The main contribution of this paper to the literature is that it addresses the research gap in this area. Although multiple studies scrutinised the determinants of suicide in several contexts, the number of papers examining the association between suicide and inflation is quite limited (Solano et al., 2011; Botha, 2012). To our knowledge, there has not yet been any study examining this relationship for the Turkey case. Therefore, we aim to address this literature gap by conducting a detailed analysis. On the other hand, this paper conducted a panel data analysis to capture the regional effects of food inflation on suicide. Previous suicide studies in Turkey mainly used time series data and investigated the causality between different variables and suicide in Turkey.

The outline of the study proceeds as follows. Section 2 summarises the data and methodology employed in the analysis. Section 3 provides the results. Finally, in Section 4, the findings are discussed in the context of empirical and theoretical approaches in the literature.

2. Data and Methodology

In this study, we use annual panel data for the period 2008-2019 in 26 NUTS2 regions in Turkey. All data are obtained from the TURKSTAT website, which is publicly available. Since suicide statistics began to be published in 2008, the time horizon is limited to that period. The main aim of the study is to examine the relationship between the suicide rate and the consumer price index for food and non-alcoholic beverages in Turkey. We included only the consumer price index for food and non-alcoholic beverages instead of the overall CPI, because of the hypothesis that the increase in food prices may have a devastating effect, especially on poor households, and cause suicide. We also added control variables for the unemployment rate, real GDP per capita in dollar terms, crude divorce rate (per thousand), the proportion of people with less than a high school degree, and the number of total physicians per 1,000 population.

We used an age-standardized suicide rate. The consumer price index for food and non-alcoholic beverages stands for food inflation. For scaling, we take the natural logarithm of food inflation. Economic theory states that poor people spend most of their income on basic needs, including food. Hence, increased food prices lead to a decline in the purchasing power of those. Moreover, we include the unemployment rate and the natural logarithm of real GDP per cap to capture the overall economic conditions. As mentioned above, sociological factors are the most important determinants of suicidal behaviour. Therefore, we control for the divorce rate and the ratio of low-educated people, which partially shows dynamics in the family and society, respectively. And our final control variable is the number of total physicians. Since every suicide attempt does not end with death, we include this variable to control the supply part of the health system in Turkey.

Table 1 and Graph 1 indicate the descriptive statistics and time trends of each variable from 2008 to 2019, respectively. The total number of observations is 312. As we can see from the figures, suicide is more common among males than females. The standardised suicide rate for males is, on average, 6.07 and 2.35 for females. While the male suicide rate has remained stable over time, except in 2011, the female suicide rate shows a gradual decline. Food inflation has more than tripled in the analysed time horizon. For this reason, we take the natural logarithm to scale it. The logarithm of food inflation displays an increasing trend. The male and female unemployment rates were very close in 2008; however, they have diverged over time. The mean of the female unemployment rate, 11.63%, becomes higher than the mean of male one, 9.76%. As food inflation, we take the natural logarithm of real GDP per capita in dollar terms, on

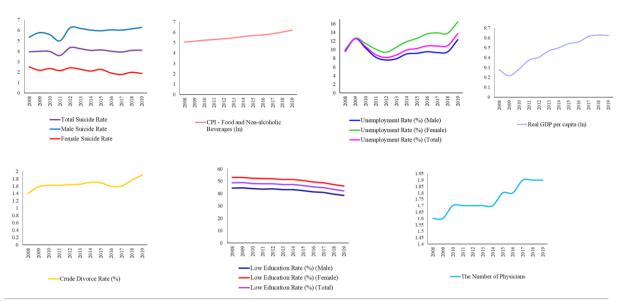
average, 9.03\$ over 12 years in Turkey. In 2009, it showed a sharp decline due to global financial crises; yet, it recovered rapidly and increased until 2019. The average crude divorce rate is approximately 1.48% over the time horizon. Especially in the last years, it displayed an increasing trend. While 64% of the male population has less than a high school education on average, this proportion is higher among females with 73%. Nevertheless, the low education trend of both gender is similar and decreasing. Lastly, the mean value of the number of physicians per 1,000 population is 1.6. It showed an increase in some years, following a stable trend. All these statistics support that there are substantial differences between females and males in terms of their socio-economic conditions as well as individual-level characteristics.

Table 1. Descriptive Statistics

Variable	Mean	St. Deviation	Minimum	Maximum
Total suicide rate	4.21	0.92	2.57	8.05
Male suicide rate	6.07	1.60	2.49	13.05
Female suicide rate	2.35	0.88	0.79	6.59
Consumer Price Index (ln)	5.56	0.35	4.98	6.29
Total unemployment rate	10.42	4.50	3.40	31.00
Male unemployment rate	9.76	4.53	3.20	27.10
Female unemployment rate	11.63	5.85	0.90	42.10
Real GDP per capita (ln)	9.03	0.38	8.12	9.95
Crude Divorce Rate	1.48	0.65	0.15	2.97
Proportion of Low Educated People	68.86	6.46	48.14	79.78
Proportion of Low Educated Males	64.41	6.18	44.64	75.89
Proportion of Low Educated Females	73.34	6.92	51.55	85.04
Number of Physicians per 1,000	1.61	0.47	0.80	3.90

Note: Data source is TURKSTAT's databases from 2008 to 2019. And the number of observations in the data set used is 312.

Graph1. Time Trends



Note: Data source is TURKSTAT's databases from 2008 to 2019.

In the methodology, we use panel data random effects analysis in 26 NUTS-2 regions in Turkey for 12 years from 2008 to 2019 to investigate the impact of food and non-alcoholic beverages inflation on suicide rates. The estimated regressions are conducted separately for the whole sample, males and females. Three variables, the suicide rate, unemployment rate, and the proportion of low-educated people, change according to gender. The most detailed specification is:

$$SUICD_{rt} = \alpha + \beta ln(CPI_{rt}) + \gamma E_{rt} + \theta S_{rt} + \tau P_{rt} + \varepsilon_{rt}$$

where $SUICD_{rt}$ is the standardised suicide rate in region r, at time t. $lnCPI_{rt}$ is the logarithm of consumer price index for food and non-alcoholic beverages, while β is our main variable of interest. E_{tt} stands for economic variables, which are the unemployment rate and natural logarithm of the GDP per capita in dollar terms. Since suicide is highly related to sociocultural determinants, we include the proportion of low-educated people and the crude divorce rate, denoted as Srt. Finally, Prt refers to the number of physicians per 1,000 population.

Before obtaining estimated results, we check the regression assumptions for panel data and as sure that the results are robust and consistent.³ This implies that our coefficient of β is an unbiased estimator.

3. Results

We obtain our estimates of the determinants of suicide in Table 2 for the whole sample. In each table, three different specifications are used that differ according to the control variables included in the model. In column (1), we provide the estimates of the baseline specification with economic variables: food inflation, real GDP per cap, and the unemployment rate. In addition to these variables, column (2) also

³ Driscoll-Kraay Standard Errors are used because our models do not provide autocorrelation (Baltagi-Wu's LBI statistics), heteroscedasticity (Brown-Forsythe and Levene's tests), and cross-section dependency (Frees' test) assumptions. An assumption of normality (D'Agostino's K-Squared test) is provided for all models. Also, the models do not have multicollinearity. According to the results of LR tests, there is a unit effect in our models and no time effect. The Hausman test for each model estimation indicates that the random-effects model is efficient.

includes variables standing for sociocultural factors, which are the divorce rate and the proportion of low-educated people. Finally, column (3) shows the results of the most detailed specification, which contains the number of physicians as well. Since our most detailed specification is represented in column (3), we mainly focus on the results of this model.

Table 2. The Estimated Results for the Whole Sample

Variables	(1)	(2)	(3)
Constant	3.821	6.536	6.649*
Constant	(2.769)	(4.269)	(4.009)
Food inflation (ln)	0.093	-0.014	-0.005
	(0.104)	(0.190)	(0.165)
Unemployment rate	-0.006	-0.014	-0.014
	(0.009)	(0.010)	(0.010)
Real GDP per cap (ln)	-0.007	-0.440	-0.343
	(0.291)	(0.321)	(0.322)
Divorce rate		0.743***	0.779***
		(0.279)	(0.303)
Ratio of low educated		0.011	0.002
		(0.021)	(0.021)
# of physicians			-0.303
			(0.199)
Wald Statistics	1.07	1212**	14.09**
\mathbb{R}^2	0.028	0.209	0.206

Note: *, ** and *** indicate significance at the %10, %5, and %1 levels, respectively. Robust standard errors are given in parentheses.

The estimated results in Table 2 show that all variables but the divorce rate do not significantly affect the suicide rate. A 1 percentage point rise in the crude divorce rate increases the suicide rate by 0.78 percentage points. The positive association is consistent with the findings of Yip, Yousuf, Chen, Yung, and Wu (2015) that the adverse effects of divorce are more likely seen in conventional societies like Turkish society. Additionally, it proves that family bond is an important indicator of the sociocultural structure in society. Economic factors, the ratio of low educated people in society, and the number of physicians have no significant impact on suicidal acts; however, it should be considered that suicide is a complex phenomenon affected by various elements for which we cannot control. Additionally, these elements can differ according to gender due to both psychological and biological differences between males and females (Nolen-Hoeksema & Hilt, 2009). Hence, conducting the analysis separately for both genders is critical to obtain credible results.

Table 3. The Estimated Results for Female Sample

	(4)	(2)	(0)
Variables	(1)	(2)	(3)
Constant	12.959***	16.081**	16.411**
	(1.694)	(5.221)	(5.430)
Food inflation (ln)	-0.618***	-0.783***	-0.788***
	(0.109)	(0.246)	(0.246)
Female unemployment rate	-0.019*	-0.019*	-0.019*
	(0.009)	(0.009)	(0.009)
Real GDP per cap (ln)	-0.771*	-0.831***	-0.741***
	(0.163)	(0.206)	(0.166)
Divorce rate		-0.106	-0.087
		(0.349)	(0.333)
			, ,
Low Educated Females		-0.020	-0.030
		(0.033)	(0.042)
# of physicians			-0.280
# or priysicians			(0.306)
Wald Statistics	85.12***	90.98***	105.77***
\mathbb{R}^2	0.299	0.298	0.289

Note: *, ** and *** indicates the significance at the %10, %5, and %1 levels, respectively. Robust standard errors are given in parentheses.

Table 3 shows the effect of several factors on the suicide of females in Turkey. It is seen that economic factors, which are food inflation, the female unemployment rate, and real GDP per cap have a negative impact on the suicide rate. For females, a one percentage point increase in the unemployment rate decreases their suicide rate by 0.019 percentage points. Moreover, a 1% increase in food inflation and real GDP per capita leads to a decrease in the suicide rate by 0.008 and 0.007 percentage points, respectively. The crude divorce rate, the proportion of low-educated females, and the number of physicians do not affect the suicidality of females significantly. The reverse relationship between inflation and the unemployment rate and the suicide rate can be an unexpected result. However, one possible explanation for this finding can be that in addition to physical and psychological distinctions, the economic role of females and males in the family differ significantly in Turkey (Atasoy, 2017; Goksel, 2013). According to Survey on Income and Living Conditions conducted by TURKSTAT in 2015, 81.8% of household heads who are responsible for the livelihood of the family are male. Additionally, female labour force participation has been very low in Turkey, around 30% for years, according to World Bank statistics. Therefore, the economic burden of families falls mainly on males, and females generally do not suffer economic distress. Hence, in line with the findings of Coope et al. (2014) and Gertner et al. (2019), we can deduce that economic problems do not drive females into pessimism, accordingly suicide. The reason for this may be that they mostly bear family responsibilities rather than financial issues.

Table 4. The Estimated Results for Male Sample

Variables	(1)	(2)	(3)
Constant	-4.431	-1.828	-1.697
Constant	(4.856)	(6.073)	(6.056)
Food Inflation (ln)	0.850***	0.820***	0.822***
,	(0.167)	(0.282)	(0.276)
Male unemployment rate	0.001	-0.022	-0.021
	(0.017)	(0.020)	(0.020)
Real GDP per cap (ln)	0.639 (0.485)	-0.253 (0.533)	-0.177 (0.543)
	(31.32)		
Divorce rate		1.646*** (0.381)	1.671*** (0.388)
Low Educated Males		0.053*	0.045
Low Educated Males		(0.026)	(0.028)
# of physicians			-0.231
1 2			(0.295)
Wald Statistics	27.29***	63.16***	62.24***
\mathbb{R}^2	0.116	0.411	0.413

Note: *, ** and *** indicates the significance at the %10, %5, and %1 levels, respectively. Robust standard errors are given in parentheses.

Table 4 displays the estimated results for males. Both food inflation and crude divorce rate are significant at the 1% level in all models, while the ratio of low-educated males is significant at the 10% level only in the second model. The remaining variables do not show a meaningful relationship between the male suicide rate.

The main finding of this table is that a %1 increase in food inflation leads to a 0.008 percentage points rise in the suicide rate of males. The mechanism can operate in the following way: an increase in the consumer price index decreases the purchasing power of families, which eventually creates economic oppression for males since they are usually the breadwinners of their families in Turkey. Although the experience of financial hardship is a factor in decreasing the female suicide rate, it has a triggering effect on male suicides (Coope et al., 2014; Stack, 2000; Watanabe, Furukawa, Nakamura, and Ogura, 2006). Hence, we can deduct that financial distress has a psychologically adverse impact on males in Turkish households.

While the crude divorce rate does not affect the female suicides significantly, it increases the suicide rate of males. A one percentage point rise in the crude divorce rate increases the male suicide rate by 1.67 percentage points. The different effects of the divorce rate on females and males may be sourced from males in the family and positive discrimination of women by the legal system in Turkey. According to TURKSTAT's Life Satisfaction Survey (2020), 74.9% of males mention that their families are the main source of happiness, while this ratio is 64.5% for females. Therefore, divorce may cause psychological destruction and pessimism for males since they perceive the family as a source of happiness (Albrecht, 1980; Stack, 1992).

Durkheim (1897) reached the conclusion that males than females, singles than married individuals, and parents than individuals without kids have more tendency to commit suicide. When we evaluate this finding in the context of Turkish society, our findings are in line with the study of Durkheim. Male suicides are more common than female ones every year, and divorce is a triggering effect on the suicide of males. Yet, we cannot find any evidence regarding the impact of having a child on suicide due to a lack of data.

4. Conclusion and Discussion

This study models the suicide event, which is a multifaceted and complex phenomenon, according to gender for Turkey, and also examines the socio-economic variables for the period 2008-2019. Data reveal the large differences in the suicide rate between males and females. In some years, the male suicide rate is three times as high as the suicide rate of females. Additionally, the consumer price index for food and nonalcoholic beverages has more than tripled in the period analysed. Hence, the association between these two variables could be crucial to develop future economic and social policies coherently in Turkey.

Our results highlight that the relationship between food inflation and suicide rates differs by gender. A possible explanation for this finding may be that the social roles attributed to females and males are completely different in Turkish society. Males are usually household heads and the breadwinners of their families, so economic responsibilities mostly fall on their shoulders. On the other hand, females are generally housewives responsible for housing issues and childcare. Therefore, it is an expected result that financial hardship affects males more severely, which is evident for the negative impact of food inflation on the male suicide rate. This is a striking finding that deserves further investigation. In future studies, the source of this relationship and necessary precautions can be investigated by in-depth interviews with males and females who attempted suicide. Especially suicidal behaviours triggered by financial difficulties can be seen as a public problem, and it is clear that there is a need to focus on this issue.

The negative correlation between real GDP per capita and female suicides implies that economic expansion provides better psychological and biological conditions. There is also suggestive evidence that an increase in the female unemployment rate decreases the suicide rate, an acceptable finding in Turkish society. When we look at the estimated results for males, a significant indication is that an increased divorce rate has a negative effect on the male suicide rate. It proves that males generally attribute an affective meaning to family; hence, they are radically affected by breaking family bonds. According to the violence against women research conducted by Yuksel Kaptanoglu, Çavlin, and Akadlı Ergöçmen (2015), it is known that 4 out of 10 married women in Turkey are exposed to physical violence by their husbands or intimate partners. This situation can be interpreted as women who have been subjected to violence during marriage seeing divorce as salvation. Therefore, the absence of a significant relationship between female suicide rates and the divorce rate is not an unexpected finding. On the other hand, the difference in the effect of divorce rates on men and women may be because of the legal system in Turkey's positive discrimination against women.

Although we conducted the analysis systematically and found consistent results with the theories in this discipline, the main limitation of this study is that conducting a detailed analysis and obtaining further implications regarding suicides in Turkey is not possible due to a lack of data. Additionally, since every suicide attempt does not end with death, the number of suicides is generally underestimated and not a good indicator; however, data for suicide attempts is also not available. In future studies, these difficulties can be overcome by applying qualitative methods, especially through in-depth interviews. The economic, psychological, and sociological dimensions of suicides in Turkey can be presented in more detail. However, we hope that revealing the relationship between economic variables and female and male suicides in the findings will guide on shaping future economic and social policies.

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