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Research Article

Analysis of gender-based unemployment hysteria in Turkey

Türkiye'de cinsiyete dayalı işsizlik histerisinin analizi

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Abstract

Unemployment hysteria is when the unemployment rate increases due to economic fluctuation and does not return to its previous level after the fluctuation. The existence of unemployment hysteria is not a favourable situation for the labour market and necessitates regulatory intervention in the market. The study used female and male unemployment rates for January 2005 and May 2022 to investigate gender-based unemployment hysteria in Turkey. The Generalized Dickey-Fuller Unit Root Test, the Fourier Augmented Dickey-Fuller Unit Root Test, and the Phillips Perron Unit Root Test were used to investigate unemployment hysteria. The results from the unit root tests reveal that men have more unemployment hysteria than women in Turkey. Therefore, this situation is suggested to be considered in the regulations to be made in the labour market.

Keywords: Gender Unemployment, Unemployment Hysteria, Labour Market

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Öz

İşsizlik histerisi ekonomik dalgalanma neticesinde işsizlik oranının artması ve dalgalanma geçtikten sonra eski seviyesine inmemesi durumudur. İşsizlik histerisinin bulunması işgücü piyasası açısından olumlu bir durum değildir. İşgücü piyasasında işsizlik histerisi bulunması, piyasaya düzenleyici müdahaleyi gerekli kılmaktadır. Çalışmada Türkiye'de cinsiyete dayalı işsizlik histerisinin araştırılması için Ocak 2005 ve Mayıs 2022 dönemi kadın ve erkek işsizlik oranları kullanılmıştır. İşsizlik histerisinin araştırılması için ise Genelleştirilmiş Dickey-Fuller Birim Kök Testi, Fourier Genelleştirilmiş Dickey-Fuller Birim Kök Testi ve Phillips Perron Birim Kök Testi kullanılmıştır. Birim kök testlerinden elde edilen sonuçlar, Türkiye'de erkeklerin kadınlardan daha fazla işsizlik histerisi etkisi barındırdığını göstermektedir. Dolayısıyla işgücü piyasalarına yapılacak düzenlemelerde bu durumun göz önünde bulundurulması önerilmektedir.

Anahtar Kelimeler: Cinsiyet İşsizliği, İşsizlik Histerisi, İşgücü Piyasası

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Introduction

Unemployment is an essential macro issue at the root of the emotional and chronic problems of the country's economies. In other words, it is a problem that develops in a company with an economic context. Unemployment is an obstacle that prevents economies that adopt production-oriented growth and export policies from achieving their goals. While unemployment, mainly caused by structural problems, can be observed in its natural course, it can also evolve with the effect of hysteria, as in the literature.

Unemployment can be explained as the inability of the individual to meet the demand for fair labour despite their working status and desire, that is, the labour supply. In this case, a ratio between these variables cannot be achieved by examining the demand and supply of labour (Lordoğlu, 1995: 18-25).

Employment and unemployment are considered through gender-based policies in Turkey. It can be pointed out that this situation is caused by inequalities in economic, social and political fields between men and women (Urhan, 2015: 22). The subject of the study is discussed in the context of men and women, as the labour supply differs according to gender.

Under normal conditions, unemployment can show sharp movements due to sudden shocks and crises. If these crises do not return to their pre-crisis rates, the crisis will impact unemployment rates. This situation is explained as unemployment hysteria. Blanchard and Summers (1986), in their first study in the field of unemployment hysteria, aimed to test unemployment hysteria in the UK, the USA, France, and Germany. The study applied DF and ADF unit root tests using the data between 1953 and 1984. While the effect of unemployment hysteria was not found in the USA, the effect of unemployment hysteria was observed in other countries.

If unemployment rates, which show sharp movements after crises and shocks, return to the ordinary course of the market, unemployment exhibits a natural rate (Yılancı, 2009: 324). The hysteria effect after economic shocks may negatively affect savings by reducing the current employment rate. Decreasing savings rates may adversely affect investments and lead to chronic unemployment; in other words, it may pave the way for the formation of the hysteria effect. One of the reasons for the formation of hysteria is the gradual decrease in the added value effects of individuals who have been unemployed for a long time in the context of labour supply.

The individual may become more ineffective over time and may be unemployed for a more extended period. In addition, the exclusion of individuals, who are away from the market by those who are included in the production system in the market, in other words, by those who are employed, also triggers unemployment. Market and wage policies may be determined by those employed, that is, by insiders, and those – outsiders – may be unemployed for a more extended period and experience the effect of unemployment hysteria. All these variables trigger the effects of hysteria after crises and shocks (Blanchard and Summers, 1986: 13 -14; Şak, 2021: 468).

The study's objective is to discuss and explain unemployment hysteria in the context of gender in Turkey. Although hysteria is a 'natural rate' disorder encountered in economies, particularly during crisis periods, whether the phenomenon differs in terms of gender constitutes the problem of the study.

The Generalized Dickey-Fuller Unit Root Test and the Phillips Perron Unit Root Test were used to investigate gender-based unemployment hysteria. The model established in the study is based on the results of similar studies in the literature. However, in this case, the study's literature review was created in light of studies on Turkey.

While some studies in the literature concluded that there was unemployment hysteria in women, in this study, which was prepared with more recent data, it was concluded that unemployment hysteria was more common in men.

Literature review

The study by Şak (2021) aimed to examine unemployment hysteria in Turkey in general terms and the context of gender. In the study, using the data between 1988 and 2018 in Turkey, the Fourier Kruse unit root test was applied. As a result, it was concluded that there was a hysteria effect on female unemployment. In this regard, it was revealed that male unemployment was less affected and recovered more quickly in sudden economic shocks.

The study of Çiçen (2020) aimed to test unemployment hysteria in Turkey after 2008 regarding gender and marital status. In the study, Fourier KPSS stationarity analysis was performed using the 3-month

data from 2005-2014, and it was concluded that unemployment hysteria was compelling in married women and single men.

Akcan (2019) aimed to test Turkey's general and youth unemployment hysteria. In the study, DF and PP tests were applied using the monthly data for the years between 2005:1 and 2017:6. The analysis concluded that youth unemployment was more sensitive to the hysteria effect than general unemployment.

The study by Tekin (2018) aimed to compare the natural unemployment rates and the hysteria effect on the Turkish economy. Therefore, Fourier unit root and standard ADF stationary root analyses were performed in the study using the monthly data between 2005 and 2017. As a result, it was concluded that there was unemployment hysteria in Turkey.

In their study, Kahyaoğlu, Tüzün, Ceylan, and Ekinci (2016) aimed to test the existence of unemployment hysteria in Turkey and European Union countries. In the study, Fourier, ADF, and Fourier IPS analyses were carried out using the quarterly series belonging to the period between 2001: January and 2015: March. As a result, it was concluded that there was unemployment hysteria.

The study by Erbay (2016) aimed to investigate the effects of unemployment hysteria on different age groups in Turkey. In the study, further stagnation analyses were used for the period between 2005 and 2014 in Turkey, and it was concluded that there was a hysteria effect.

Özkan and Altınsoy (2015) examined the validity of the hysteria effect on the data on employment and unemployment in Turkey. In the study, ADF analysis was made using the data from the period between 1988 and 2014, and it was concluded that the gender and age variables were affected by unemployment hysteria.

The study by Saraç (2014) aimed to explain unemployment hysteria and articulate whether unemployment hysteria could be calculated by conducting an empirical study in Turkey. The unit root test was applied by using the data of the period between January 2005 and July 2013. The study concluded that unemployment rates could be used to measure unemployment hysteria in Turkey.

In their study, Bayat, Kayhan and Koçyiğit (2013) aimed to explain the asymmetrical behaviour of unemployment in the Turkish economy. The study established the Markov regime-switching model using 1923 and 2011. In the model they established, they concluded that there was asymmetric behaviour between 1923 and 1950 and that solid trends in unemployment were observed in the following periods.

Güloğlu and İspir (2011) aimed to explain whether unemployment was a natural unemployment rate or a hysterical and permanent rate in the sectoral context. In this context, a panel data set was created using the data between 1988 and 2008 for nine sectors in Turkey. They concluded that the unemployment rates of the sectors could be explained by a particular type of natural unemployment hypothesis.

The study by Yılancı (2009) aimed to investigate whether there was unemployment hysteria in Turkey. In the study, Perron, Zivot-Andrews (ZA), and Lumsdaine-Papell (LP) unit root tests were applied using the years between 1923 and 2007. Data concluded that shocks were one of the permanent factors of unemployment in the Turkish economy from the past to the present.

Blanchard and Summers (1986), in their first study on unemployment hysteria, aimed to test unemployment hysteria in the UK, the USA, France, and Germany. In the study, using the data between 1953 and 1984, the DF and ADF unit root tests were applied. In the study, while the effect of unemployment hysteria was not found in the USA, the effect of unemployment hysteria was observed in other countries.

Econometric application

Research methodology

Before performing an econometric model analysis, the stationarity test of variables should be conducted. This test aims to determine whether there is stationarity in the series because taking the differences of the series containing unit-roots will help the study reach healthier results.

Unemployment hysteria is investigated econometrically with unit root tests. It is concluded that if a series is not stationary, in other words, if it contains a unit root, it has the effect of hysteria. For this reason, the Generalized Dickey-Fuller Unit Root Test, which entered the literature in 1979 and was revised in 1981, was used as the first of the unit root tests widely used in the literature analysis of gender-based unemployment hysteria in Turkey.

Dickey-Fuller Unit Root Test models using three different models are as follows (Taş, Alptekin and Yılmaz, 2017: 270-271):

$$\Delta Y_t = \lambda Y_{t-1} + \mu_t \quad (1)$$

$$\Delta Y_t = \alpha_0 + \lambda Y_{t-1} + \mu_t \quad (2)$$

$$\Delta Y_t = \alpha_0 + \alpha_1 t + \lambda Y_{t-1} + \mu_t \quad (3)$$

Model 1 is commonly used when the trend and equation constant term effect is not included among variables. However, in cases where a constant effect is observed, both the constant term and the trend effect are required to use Model 2 and Model 3.

In addition, P. Phillips and P. Perron developed a different unit root test sensitive to correlation and variable variance in error terms in 1988. Equation 4 is established in this context as follows (Çiçek, Gözegir and Çevik, 2010: 148).

$$\tau_\delta = t\delta \left(\frac{\gamma 0}{f0}\right)^{1/2} - \frac{T\,(f0 - \gamma 0)\,(se(\hat{S}))}{2\sqrt{f}\,s} \quad (4)$$

In this equation, $\hat{S}$ represents the coefficient estimate, whereas $se(\hat{S})$ represents the standard error of δ.

The Generalized Dickey-Fuller Unit Root Test is based on testing two hypotheses in three different models. These three models can be defined as the model without the effect of trend and constant term, the model with only trend effect, and the model with both constant term and trend effect. The established hypotheses, which are listed as H_0 (Empty) hypothesis and Ha (alternative) hypothesis, are as follows:

H_0 = The series is not stationary and contains a unit root.

H_a = The series is stationary and contains a unit root.

According to the probability value obtained from the Generalized Dickey-Fuller Unit Root Test applied, it is understood whether there is unemployment hysteria. If the probability value is less than 0.05, the H_0 hypothesis is rejected, and the Ha hypothesis is accepted. It is understood that the unemployment hysteria effect is present in case the series contains a unit root.

In addition, to the Generalized Dickey-Fuller Unit Root Test, the Phillips Perron Unit Root Test was also used in the study to investigate unemployment hysteria more deeply. The Phillips Perron Unit Root Test works similarly to the Generalized Dickey-Fuller Unit Root Test. In other words, in the Phillips Perron Unit Root Test, there are three different models: the model without the effect of trend and constant term, the model with only the trend effect, and the model with both constant term and trend effect. The hypotheses for these models are the same. These hypotheses are:

H_0 = The series is not stationary and contains a unit root.

H_a = The series is stationary and contains a unit root.

Testing of hypotheses is also based on the probability value. For example, in the Phillips Perron Unit Root Test, if the probability value is less than 0.05, the H_0 hypothesis is rejected, and the Ha hypothesis is accepted.

The sources and notations of the variables used are shown in the table below.

Findings

Table 1: Information regarding Variables

Variable	Notation	Source
Male Unemployment Rate	EİO	Turkish Statistical Institute
Female Unemployment Rate	KİO	Turkish Statistical Institute

The test values of the Generalized Dickey-Fuller Unit Root Test and the Phillips Perron Unit Root Test are shown in the tables below.

Table 2: Values of Variables Obtained from Generalized Dickey-Fuller Unit Root Test

Variable / Model	EİO	KİO
Model with Constant Term		
1% Critical Value	-3,507394	-3,504727
%5 Critical Value	-2,895109	-2,893956
%10 Critical Value	-2,584738	-2,584126
Test Statistics Value	-1,659636	-1,686331
Probability Value	0,4481	0,4347
Model with Trend and Constant Term		
%1 Critical Value		
%5 Critical Value	-4,066981	-4,064453
%10 Critical Value	-3,462292	-3,461094
Test Statistics Value	-3,157475	-3,156776
Probability Value	-2,214248	-3,269766
	0,4756	0,0781
Model Without Trend and Constant Term		
%1 Critical Value	-2,591813	-2,590910
%5 Critical Value	-1,944574	-1,944445
%10 Critical Value	-1,614315	-1,614392
Test Statistics Value	-0,035019	1,177444
Probability Value	0,6684	0,9377

When the results of the Generalized Unit Root Test are evaluated, the unemployment rates of both women and men include the unit root. Another analysis result is that men have more unemployment hysteria than women in the model with constant term and the model with both constant term and trend effect. However, in the model with no constant term and trend effect, women have more hysteria effects than men.

Table 3: Values of Variables Obtained from Phillips Perron Unit Root Test

Variable / Model	EİO	KİO
Model with Constant Term		
%1 Critical Value	-3,504727	-3,504812
%5 Critical Value	-2,893956	-2,893956
%10 Critical Value	-2,584126	-2,584126
Test Statistics Value	-1,718053	-1,754812
Probability Value	0,4188	0,4005
Model with Trend and Constant Term		
%1 Critical Value		
%5 Critical Value	-4,063233	-4,063233
%10 Critical Value	-3,460516	-3,460516
Test Statistics Value	-3,156439	-3,156439
Probability Value	-2,231310	-2,554320
	0,4665	0,3021
Model Without Trend and Constant Term		
%1 Critical Value	-2,590910	-2,590910
%5 Critical Value	-1,944445	-1,944445
%10 Critical Value	-1,614392	-1,614392
Test Statistics Value	-1,614392	1,027343
Probability Value	0,7768	0,9191

When the Phillips Perron Unit Root Test results are examined, similar results are obtained with the Generalized Dickey-Fuller Unit Root Test. According to all three models, it is seen that both male and female unemployment rates have a hysterical effect. However, in the model with constant term and the model with both constant term and trend effect, the male unemployment rate has more hysterical effects than the female unemployment rate. In addition, in the model with no constant term and trend effect, the hysteria effect of the female unemployment rate is more potent than that of the male unemployment rate.

Discussion and conclusion

Sudden currency shocks trigger crises and negatively affect production costs. Due to increasing input prices, the country's economies try to reduce costs by reducing the demand for labour. In particular, the type of unemployment, which occurs at the source of cyclical fluctuations, is the type of unemployment that has the most negative impact on markets. Unemployment, which increases due to sudden price shocks and is fuelled by supply-based inflation, is the type of unemployment that is felt most by households and has the most impact on markets. As a result of these shocks, some of the country's economies are under the effect of unemployment hysteria. The study's introduction mentioned the main reasons for the hysteria effect. However, although the main triggering shocks are sudden shocks, knowing their causes also enables the construction of struggle strategies.

Countries that produce, grow and are export-dependent on imports are particularly sensitive to exchange rate shocks. In addition, currency shocks and crises can occur due to regional events, political disagreements or global adversities. The event that might set the best example for this situation in recent times is the COVID-19 pandemic and the negativity it has created in the market. This process has triggered cost-oriented inflation and has also affected the Turkish economy.

Crises and shocks cause cost-oriented processes, which impact employment, one of the production inputs. Therefore, knowing the cost-oriented inflation problem of the Turkish economy is an essential factor in the research of unemployment hysteria.

In the literature, the effect of hysteria has been extensively investigated on the general unemployment rate of the country's economy. In order to lay the groundwork for differentiation in the literature, different studies have also analysed the demographic characteristics of employees. This study attempted to analyse the effect of hysteria on different aspects of the unemployed in light of current data. Since it is known that the employment structure varies in the country's economy, these differences should be considered separately. In such a case, different areas and groups where unemployment hysteria is most effective might be determined, and more accurate policies might be applied to the right labour group.

Different studies in the literature used to focus on testing unemployment hysteria in general. However, different demographic characteristics of the labour supply have also started to be the subject of hysteria studies on unemployment. Age and gender are some of them.

While some studies in the literature concluded that there was unemployment hysteria in women, in this study, in which more recent data were employed, it was concluded that unemployment hysteria was more common in men. However, the research on unemployment hysteria was examined in terms of age groups, another variable in the literature, and discussed in the context of youth unemployment.

The study used female and male unemployment rates between January 2005 and May 2022 to investigate gender-based unemployment hysteria in Turkey. In addition, the Generalized Dickey-Fuller Unit Root Test and the Phillips Perron Unit Root Test were used to investigate unemployment hysteria. The results from the unit root tests reveal that men have more unemployment hysteria than women in Turkey. It is therefore suggested that more emphasis should be placed on policies aimed at men in the regulations to be made in the labour market.

Future studies may focus on unemployment hysteria in terms of gender, and unemployment hysteria in young women and men can be addressed by combining it with age groups. In addition, future studies may focus on comparing country groups with different levels of development.

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References

Akcan, A. T. (2019). Türkiye'de gençlerin işsizlik histerisi. Kastamonu Üniversitesi İktisadi ve İdari Bilimler Fakültesi Dergisi, 21(1), 31–47.

Bayat, T., Kayhan, S., & Koçyiğit, A. (2013). Türkiye'de işsizliğin asimetrik davranışının rejim değişim modeliyle incelenmesi. Business and Economics Research Journal, 4(2), 79 90.

Blanchard, O. & Lawrence S. (1986). Hysteresis and the european unemployment problem. NBER Working Paper Series, Working Paper No: 1950, 1-78.

Çiçek, H., Gözegir, S. Çevik, E. (2010),. Bir maliye politikası aracı olarak borçlanma ve ekonomik büyüme ilişkisi: türkiye örneği. Cumhuriyet Üniversitesi İktisadi ve İdari Bilimler Dergisi, 11(1), 141-155.

Çiçen, Y. B. (2020). Global krizde cinsiyet ve medeni duruma göre işsizlik histerisi: türkiye için fourier durağanlık analizi. Akademik Hassasiyetler, 7(13), 505–525.

Dickey, D. & Fuller, W. (1979). Distribution of the estimators for autoregressive time series with a unit root. Journal Of The American Statistical Association, 74, 427 – 431.

Dickey, D. & Fuller, W. (1981). Likelihood ratio statistics for autoregressive time series with a unit root. Econometrica, 49(4), 1057-1072.

Erbay, T. (2016). Türkiye'de işsizliğin histeri etkisi. İstanbul Ticaret Üniversitesi Dış Ticaret Enstitüsü Tartışma Metinleri, WPS No 38, 1–12.

Güloğlu, B. & İspir, M. (2011). Doğal işsizlik oranı mı? işsizlik histerisi mi?" türkiye için sektörel panel birim kök sınaması analizi. Ege Akademik Bakış Dergisi, 11(2), 205–215.

Kahyaoğlu H., Tüzün O., Ceylan F., & Ekinci R. (2016). İşsizlik histerisinin geçerliliği: türkiye ve seçilmiş ab ülkeleri üzerine bir uygulama. MCBÜ Sosyal Bilimler Dergisi, 14(4), 103–128.

Lordoğlu, K. (1995). Çalışma ekonomisi. İstanbul: Beta Yayınları 2. Basım.

Özkan, Y., &Altınsoy, A (2015). İşsizlik ve istihdamda histeri etkisi (Türkiye, 1988-2014). Siyaset, Ekonomi ve Yönetim Araştırmaları Dergisi, 16. Çalışma Ekonomisi ve Endüstri İlişkileri Kongresi Özel Sayısı, 123–130.

Phillips, P. C., & Perron, P. (1988). Testing for a unit root in time series regression. Biometrika", 75(2), 335-346.

Saraç, T. (2014). İşsizlikte histeri etkisi: türkiye örneği. Ege Akademik Bakış, 14(3), 335–344.

Şak, N. (2021). Türkiye'de işsizlik histerisi: kadın ve erkek işsizliğine bir bakış. Ömer Halisdemir Üniversitesi İktisadi ve İdari Bilimler Fakültesi Dergisi, Yıl: 2021 Cilt-Sayı: 14 (2) ss: 467 –477.

Taş, T., Alptekin, V., & Yılmaz, K. Ç. (2017). The stability of money demand under the structural breaks in turkey. Journal of Current Researches on Business And Economics, 7(1), 265-280.

Tekin, İ. (2018), Türkiye'de işsizlik histerisi: fourier fonksiyonlu durağanlık sınamaları. Dokuz Eylül Üniversitesi İktisadi ve İdari Bilimler Fakültesi Dergisi, 33(1), 97–127.

TÜİK, https://data.tuik.gov.tr/Bulten/Index?p=%C4%B0%C5%9Fg%C3%BCc%C3%BC-%C4%B0statistikleri-Ekim-2021-37491&dil=1 Erişim:12.2021).

Urhan, B. (2015). Toplumsal cinsiyete dayalı işbölümü ve işçi sendikalarında izdüşümleri. Türk Tabipleri Derneği Mesleki Sağlık ve Güvenlik Dergisi, Nisan-Mayıs-Haziran.

Yılancı, V. (2009). Yapısal kırılmalar altında Türkiye İçin İşsizlik Histerisinin Sınanması". Doğuş Üniversitesi Dergisi, 10(2), 324–335.