| **RESEARCH ARTICLE**

Comparative Analysis of Employment and Foreign Trade Data of Russia and Turkey by Year

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| **ABSTRACT**

This research aimed to compare the relationships between unemployment rates and foreign trade data of Türkiye and Russia. In the research, unemployment and foreign trade data from the Country Reports provided by the World Bank for Turkey and Russia were used for the years 2002-2023. Descriptive scanning and relational scanning analyses of the data were performed. The unemployment rate in Turkey had a 10.91 ± 1.30 mean with a 9.21-14.03 range. In Russia, the unemployment rate mean was 5.99 ± 1.41 with a 3.08-8.30 range. The export rate in Russia was significantly higher than Türkiye ($p < 0.05$). Unemployment and import mean values were significantly higher in Türkiye ($p < 0.05$). The correlation between unemployment and foreign trade was insignificant in Türkiye ($p > 0.05$). The correlation between unemployment with export ($r = 0.554$; $p < 0.01$) and import ($r = 0.609$; $p < 0.01$) was significant for Russia. Although foreign trade is not directly associated with employment due to its relationship with finance and other sectors, foreign trade positively affects unemployment in Russia. In Turkey, unemployment is not significantly related to foreign trade.

1. Introduction

Employment and foreign trade are the two most important economic issues in a country. In today's global economies, it is expected that the country's foreign trade will create employment and make a positive contribution to the workforce (Dao et al., 2023; Li and Whalley, 2021; Anetor et al., 2020; Fajgelbaum, 2020; Tavas et al., 2016). In this way, foreign trade also increases the economic levels and welfare of individuals (Wolfmayr et al., 2024; Martins et al., 2022; Alessandria et al., 2021). However, this does not mean that foreign trade that does not create employment is economically useless. Directly or indirectly, the transformation of foreign trade into employment allows individuals to live in a more prosperous way within the country.

In addition to policies aimed at achieving the objective of economic growth, the main economic policies include policies aimed at the labor market, ensuring external balance, and controlling inflation. Economic policies implemented specifically for economic growth are also expected to affect employment and inflation. Since economic growth is based on increased production, increased production will lead to an expansion of supply in the market, so it is supported to prevent supply-related price increases in the market (Akcan and Azazi, 2022).

This research aims to make a comparative analysis of the employment and foreign trade data of Turkey, an important transit point between Europe and Asia, and Russia, one of the leading countries in the world, over the years.

2. Methods
The following headings give information on the research model, data set, and statistical methods used in the research.

2.1. Model of the research
Research was conducted on descriptive scanning and relational scanning methods as mix method. The unemployment, export, and import rates of the two countries were compared using statistical data and methods.

2.2. Data set
In the research, unemployment and foreign trade data from the Country Reports provided by the World Bank for Turkey and Russia were used for the years 2002-2023. Indicators used in the study are given below:

- UNEMP: Unemployment, total (% of total labor force) (national estimate)
- EXP: Exports of goods and services (% of GDP)
- IMP: Imports of goods and services (% of GDP)

2.3. Statistical methods
The research series were defined with mean, standard deviation, minimum and maximum values. Before the difference analysis, normality analysis was performed with the Kolmogorov Smirnov test. Independent Sample t-test was performed for normally distributed parameters, and Mann Whitney U test was performed for undistributed parameters. In the relational screening model, Spearman's rho correlation analysis was performed due to linearization deviations (Yılmaz and Turanlı, 2023; Yılmaz and Turanlı, 2022). SPSS 25.0 for Windows was used in all analyses.

3. Results
The unemployment rate in Turkey had a 10.91±1.30 mean with a 9.21-14.03 range. In Russia, the unemployment rate mean was 5.99±1.41 with a 3.08-8.30 range. The export rate in Russia was significantly higher than Türkiye ($p<0.05$). Unemployment and import mean values were significantly higher in Türkiye ($p<0.05$) (Table 1).

Table 1. Employment, export and import level of countries and differences

Countries	Türkiye				Rusya				p vaue
	Mean	**Std. Deviation**	**Minimum**	**Maximum**	**Mean**	**Std. Deviation**	**Minimum**	**Maximum**	
UNEMP	10.9158	1.30187	9.21	14.03	5.9937	1.41153	3.08	8.30	0.000[a]
EXP	26.1845	4.90456	21.19	38.58	29.3926	3.53057	23.08	35.25	0.017[a]
IMP	28.5334	4.70034	22.88	42.59	20.8242	1.74691	15.23	24.43	0.000[b]

a. Independent Samples t-test, b. Mann Whitney U test. UNEMP: Unemployment, total (% of total labor force) (national estimate), EXP: Exports of goods and services (% of GDP), IMP: Imports of goods and services (% of GDP)

According to Figure 1, it was seen that Russia has lower unemployment rates than Türkiye. Trends in both countries were similar (Figure 1).

Figure 1. Unemployment change in Türkiye and Russia

Spearman's rho correlation analysis results between unemployment and foreign trade showed that the correlation between unemployment and foreign trade was insignificant in Türkiye (p>0.05). The correlation between unemployment with export (r=0.554; p<0.01) and import (r=0.609; p<0.01) was significant for Russia (Table 2).

Table 2. Spearman's rho correlation analysis results between unemployment and foreign trade

UNEMP	Türkiye		Russia	
	r	p	r	p
EXP	0.130	0.563	0.554[**]	0.007
IMP	-0.042	0.852	0.609[**]	0.003

UNEMP: Unemployment, total (% of total labor force) (national estimate), EXP: Exports of goods and services (% of GDP), IMP: Imports of goods and services (% of GDP)

4. Discussion

In this research, the relationship between import and export and employment for Turkey and Russia was examined, and it was revealed that there was no significant relationship with employment for Turkey, but for Russia, both import and export reduced employment.

Free zone entities that are located within the political borders of a country but remain outside the customs borders of that country in terms of implementing foreign trade, tax, and customs legislation, where the legal and administrative rules in force in the country do not apply or are partially applied, and where intensive commercial activity is carried out, stand out for the advantages they offer. Special economic zones come to the fore. These entities, created on the basis of encouraging exports and, as a result, promoting industrialization, are innovative policies for the strategy of industrialization based on exports. In fact, the policy of export-oriented industrialization allows the elimination of non-tariff barriers and allows domestic companies to diversify their business in foreign markets (Ateş et al., 2023).

According to the difference analysis, Russia has a lower unemployment rate and import value compared to Turkey. This situation is seen as the share of its production in GDP is more domestic than in Turkey. Russia's high arms exports and dependence on foreign sources for some consumables may have an effect on this result.

5. Conclusion

The results obtained in the research showed that for Russia, foreign trade has a structure that reduces employment and increases unemployment. This situation shows that Russia does not exercise sufficient control over the domestic market in the export and import of products and services. Although imports and exports do not increase unemployment in Turkey, they do not contribute to increasing employment either. The economic and especially military developments in Russia in recent years have caused the country to face serious problems in both production and economic terms. Despite the reduction in employment in foreign trade, these figures can be seen as a result. The banking sector also has an important place for international trade as traditional and participation banks (Coşkun et al., 2024; Yılmaz and Turanlı, 2022).

Although foreign trade does not make a positive contribution to employment for Turkey and Russia, this issue is important, especially in terms of the direct impact of economic activities on the level of welfare. It would be beneficial to examine with further research how to increase the unemployment of imports and exports for Russia and the employment effects for Turkey.

Conflicts of Interest: The authors declare no conflict of interest.
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