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AN ANALYSIS OF UNEQUAL EXCHANGE IN TURKIYE'S INTERNATIONAL TRADE

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Bulent Hoca[1], Elcin Aykaç Alp[2]
[1]Piri Reis University, Department of International Trade and Business, Istanbul, Turkiye.
bhoca@pirireis.edu.tr , ORCID: 0000-0001-9093-9887
[2]Istanbul Ticaret University, Faculty of Business, Department of Economics, Istanbul, Turkiye.
ealp@ticaret.edu.tr , ORCID: 0000-0001-9076-2102

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ABSTRACT

Purpose- In the process of globalization, international trade has increased rapidly compared to national income (Dicken, 2015). Despite the expectation that increasing trade openness will increase economic convergence according to conventional trade and growth theories (Rowthorn, Kozul-Wright, 1998), this expectation about convergence of developing countries to developed countries has not materialized (Munck, 2021). In terms of international political economy, issues such as inequality and dependency remained on the agenda (Kiely, 2012). Alternative trade and industrial policies have been marginalized (Chang, 2002). An important theory that questions the positive expectations of conventional mainstream theories is Emmanuel's theory of "unequal exchange" (Emmanuel, 1972). However, in its original form, the theory has been subjected to various criticisms and tried to be developed. In response to the criticism that the theory is based on price and wage differences (Subasat, 2013), an approach based on international technical/organic composition and productivity differences in a more structural manner has been developed (Carchedi and Roberts, 2021). The aim of this study is to review Turkey's trade relations and point out some problems using this new approach. As the first study to apply this new approach to Turkey to our knowledge, it differs from previous unequal exchange studies (Somel, 2003; Dağıstan, 2015).
Methodology- The data subject to the analysis in the study were obtained by following the methodology applied in the study of Carchedi and Roberts (2021). In the analysis based on Turkey's international trade, five developed countries that are important in Turkey's trade in the long-run were selected and a sample was obtained. In the study, graphical analysis and time series methods were applied as in the study of Carchedi and Roberts (2021).
Findings- As a result of this study, in which five countries that are important in Turkey's long-term international trade are analyzed, the findings indicate that there are important value transfers in Turkey's trade, especially with developed countries. Changes in the terms and conditions of this transfer of value need to be examined and should be one of the crucial factors in considering trade policy.
Conclusion- Discussion about trade policy usually revolve around trade balance. However, trade balance does not appear to be a sufficient criterion when evaluating trade policies because unequal exchange is a different concept than trade balance. Consideration of value transfers through unequal exchange should also be considered. In addition, the findings indicate that the level of technology has a decisive role in unequal exchange relations.

Keywords: International trade, unequal exchange, globalization, technology, international political economy
JEL Codes: D46, F63, F13

1. INTRODUCTION

The experience of the past economic growth of developing countries runs contrary to many economists' expectations: 'That the pattern of economic growth over the twentieth century is one of striking divergence is surprising to economists, for economists expect convergence' (Dowrick ve DeLong, 2003, 194). Especially in the process of globalization, international trade has increased rapidly compared to national income (Dicken, 2015). Despite the expectation that increasing integration will increase economic convergence according to standard trade and growth theories (Rowthorn, Kozul-Wright, 1998), this expectation has not materialized (Munck, 2021). In terms of international political economy, issues such as international inequality and dependency remained on the agenda (Kiely, 2012).

2. LITERATURE REVIEW

As seen in the factor-price equalization theorem derived from Heckscher–Ohlin (HO) theory, the mainstream approach argues that participation in trade and globalization will strengthen the effect of convergence (per capita income or growth rates) between developed and developing countries. The HO theory ignores the differences in technology between countries. The competitive market assumption in neoclassical economics leads to the acceptance of technology as a nonrival public good.

Neoclassical growth theories based on the assumption of diminishing marginal return on capital (Islam, 2003, 314) predict convergence (Barro and Sala-i-Martin, 2004, 18). Even if the later New (Endogenous) Growth Theory brings some differences by adding increasing returns to scale into the analysis, it has also a bias towards convergence and does not predict divergence or structural inequality (Fine, 2003, 211-212; Fine, 2000). Models of diffusion of technology by imitation in endogenous growth theories also support convergence (Barro and Sala-i-Martin, 2004, 20). Moreover, technology is still considered to be freely available public good (Rowthorn, Kozul-Wright, 1998).
The idea of convergence is related to Rostow's theory of modernization based on stages in development economics in the 1960s (Fine, 2003, 202-203). This theory suggests that countries will pass through similar stages and reach the same stage (mass consumption).
However, several studies do not support the convergence hypothesis. For example, Ocampo (2003, 87) denotes that '…the world hierarchy of per capita GDP levels has been remarkably stable over the past century, as demonstrated by the fact that about 60% of current income disparities in the world can be simply explained by the same disparities existing in 1913. This is also reflected in other crucial features of the world economic order: the very high concentration of the generation of core technology in a few countries, and the equally high concentration there of world finance and the headquarters of multinational firms.'
It is observed that globalization did not increase the probability of catching up, even decreased it (Table 1). In fact, one study says that international trade may have led to divergence (Slaughter, 1998).

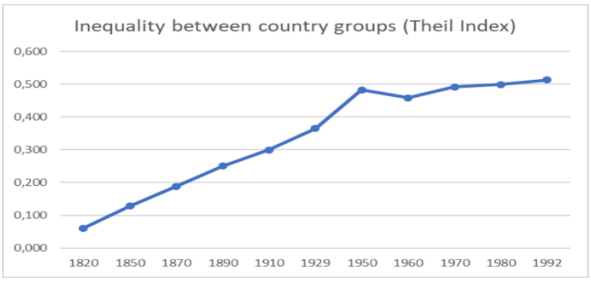
Table 1: Probability of Catch-up with the United States, By Income Group

	Ending position	
Starting position	High income (1950-1980)	High income (1981-2010)
Low income	0.00	0.01
Middle income	0.94	0.81

Source: UNCTAD, 2016, 42.
'Countries are classified in three income groups: low income (with their per capita income below 15 per cent of that of the United States); middle income (15–50 per cent); and high income (more than 50 per cent). Probabilities (ranging between 0 and 1) present the observed relative frequency of a change between income groups within the two considered periods.'

The graph below indicates that the trend towards divergence may be historical and therefore structural.

Figure 1: Inequality between Country Groups



Source: Bourguignon and Christian, 2002, 734

In addition, there are very few countries that can enter the developed country category (especially from East Asia, such as South Korea, Taiwan and Singapore) (UNCTAD, 2016, 51). If there is one thing that can be said in general regarding convergence, it could be that 'The growth rates for developed economies show convergence, but the growth rates between developed and developing economies show considerable divergence' (Pritchett, 1997, 14).

It is debated why there is no convergence but divergence. In fact, Smith's and Ricardo's trade theories did not say anything about which side would benefit from trade gains more. It is reasonable for capital-rich countries to benefit more (Hahnel, 2014, 209).

Actually, it is more scientifically meaningful to try to understand divergence when convergence is such an exception. The existence of some mechanisms/forces leading to divergence should be considered as suggested by Latin American structuralism. Trade may include such a mechanism among other mechanisms (Freeman, 2021).

An important theory that questions the positive expectations of mainstream theories is Emmanuel's theory of "unequal exchange" (Emmanuel, 1972). However, in its original form, the theory has been subjected to various criticisms and tried to be developed. In response to the criticism that the theory is based on price and wage differences (Subasat, 2013), a more structural approach has been developed, based on the tendency to equalize profit rates, and international technical/organic composition and productivity differences (Carchedi and Roberts, 2021). The aim of this study is to review Turkey's trade relations and point out some problems using this new approach. As the first study to apply this new approach to Turkey to our knowledge, it differs from previous unequal exchange studies (Somel, 2003; Dağıstan, 2015).

Following Carchedi and Roberts (2021), we think it is important that the technology gap does not close despite increasing trade and integration. In order to understand this difference caused by technology in trade, we will start from the labor theory of value rather than the subjective marginal theory of value. We can understand the technology difference in terms of the capital-labor ratio, as technology saves labor and increases the capital (assets)/labor (wage) ratio. This is called the technical/organic composition of capital.

3. DATA AND METHODOLOGY

In the study, the rates were calculated for five countries that are Turkey's important foreign trade partners, following the methodology used by Carchedi and Roberts (2021). These countries are the U.S., UK, Germany, France and Italy, which have a significant share in Turkey's foreign trade especially in recent years. For each country, the "unequal exchange" data was calculated based on its foreign trade with Turkey.

All data are taken from Penn world tabels and IMF world statistics. Raw data can be found from their web pages. (PWT 10.01 : <https://www.rug.nl/ggdc/productivity/pwt/>). The data transformation and data calculation for unequal exchange can be recalculated with the following method. The data we used and the methodology Penn offered are based on constant prices. Thus GDP is used with constant prices. For each country, the unequal exchange (UE) in trade between the two countries is derived separately.

UEx = nPPx-MPx

MP= The annual national market price = c+V+S
c= capital used up =c= K* Depreciation ratio
V = GDP − S
S = Capital Stock * Internal rate of return
MPx is calculated for each country. For exports between countries IMF Direction of Trade Statistics are used.
x is export ratio; x = exports/GDP.

Annual national market output value between two countries: MPx = cx + Vx + Sx

For each country nPPx = (cx + Vx) + (cx + Vx)*nRx

The two countries' average rate of profit; nRx = (S1x + S2x)/(c1x + V1x + c2x + V2x)

4. FINDINGS

The unequal exchange rate in trade estimations are given with figures for comparison. The UE graphs are constructed for each country in relation with Türkiye. The five countries are France, Germany, Italy, UK and USA. The comparison is only meaningful if the UE value is given as a ratio of GDP. Each figure shows the transfer of surplus value for Türkiye and the other country.

Figure 2: Unequal Exchange in Trade calculations for France and Germany with Turkiye

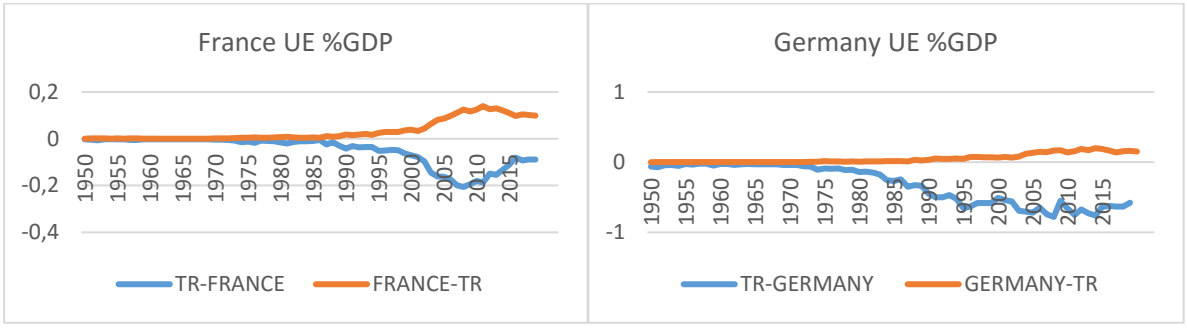


Figure 2 Shows the transfer of surplus value for the Türkiye - France and Türkiye - Germany. In both figures, it is seen that the transfer is against Türkiye and is quite high.

Figure 3: Unequal Exchange in Trade Calculations for Italy and UK with Turkiye

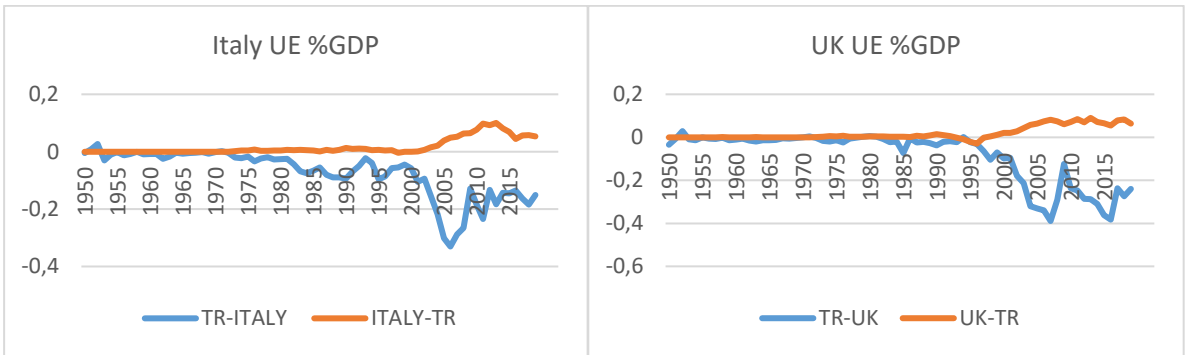


Figure 3 Shows the transfer of surplus value for the Türkiye - Italy and Türkiye - UK. In both figures, like Germany and France, the transfer is against Türkiye but it is observed that the rate of increase in transfer of value increased after the 2000s.

Figure 4: Unequal Exchange in Trade Calculations for USA with Turkiye

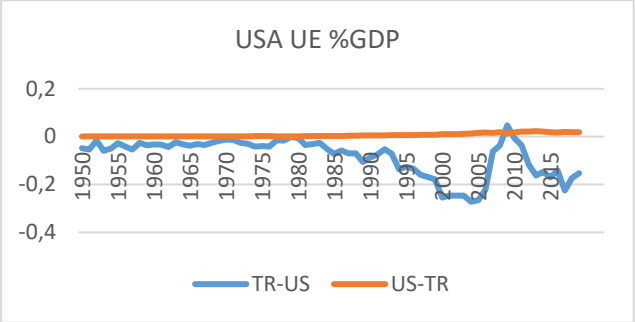


Figure 4 Shows the transfer of surplus value for the Türkiye - USA. Again the transfer is against Türkiye except 2009. The rate of increase in transfer of surplus increased after the 1980. We think that the exceptional situation in 2009 was due to the 2008 recession and the temporary change in the product component in foreign trade.

5. CONCLUSION

Discussion about trade usually revolve around trade balance. However, trade balance does not appear to be a sufficient criterion when evaluating trade policies because unequal exchange is a different concept than trade balance. Transfers of value through unequal exchange should also be considered. In addition, the findings indicate that the level of technology has a decisive role in unequal exchange relations. Technological progress is more important than one might think. However, alternative trade and industrial policies are marginalized (Chang, 2002). While efforts to positively change trade balance are important, technological development plays a key role in increasing resources if the current level of integration is not to be reversed.

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