Does Unionization Rate Accelerate Flight of Capital?: Panel Analysis*

Sendikalaşma Oranı Sermaye Kaçışını Hızlandırır mı?: Panel Analiz

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Abstract

Economic stability, political stability, market structure, market size, trade openness, and various regulations related to tax advantages have crucial importance to attract foreign direct investments (FDI) to an economy. In addition to the factor aforementioned, One of the other potential determinants for foreign direct investments (FDI) inflow might be the degree of unionization tendency in a particular host country. As unionization causes increase in the wages and brings some fringe benefits to labors which are extra financial burdens for employers, the profit of an enterprise reduces. Owing to this fact, willingness to invest of entrepreneurs diminishes and right after they may redirect their investment to abroad. Therefore, unionization rate may discourage investors and speed up the capital flight. This study investigates the association between unionization rate and capital outflow by using panel data. Our prior expectation is a positive relationship between unionization rate and capital flight. The findings obtained in the literature show that unions, always act in the favor of protective policies, resisted against policies which support both free trade and FDI.

Keywords: *Trade unions, Unionization Rate, Foreign Direct Investment, Panel Data*

Öz

Doğrudan yabancı sermaye için ülkedeki ekonomik ve siyasi istikrar, piyasanın yapısı ve büyüklüğü ve dışa açıklığı, vergi avantajlarını içeren çeşitli düzenlemeler önem kazanmaktadır. Doğrudan yabancı sermaye yatırımlarının çıkış ülkeleri için belirleyicilerinden biri de ev sahibi ülkedeki sendikalaşma eğilimidir. Sendikalaşma çalışanlara ücret artışı ve bazı ek faydalar sağlamakla birlikte işverenler açısından da ilave mali yükümlülüklere ve dolayısıyla kârlılığın azalmasına neden olur. Böylece yatırım yapma arzusu azalan girişimciler, yatırımlarını yurtdışına yönlendirebilirler. Bundan dolayı sendikalaşma oranı, yatırımcıların cesaretini azaltarak sermaye kaçışını hızlandırabilir. Bu çalışma, panel veri kullanılarak sendikalaşma oranı ve sermaye çıkışı arasındaki ilişkiyi araştırmaktadır. Bizim öncelikli beklentimiz, sendikalaşma oranı ve sermaye kaçışı arasında pozitif bir ilişkinin olduğu yöndedir. Literatürde konu ile ilgili elde edilen bulgular da, sendikaların her zaman, korumacı politikalar lehine hareket eden, hem serbest ticareti ve hem de doğrudan yabancı sermaye yatırımlarını destekleyen politikalara karşı direnç gösteren kuruluşlar olarak göstermektedir.

Anahtar Kelimeler: *Sendikalar, Sendikalaşma Oranı, Doğrudan Yabancı Yatırımlar, Panel Veri*

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Introduction

Recently the recognition of the economic benefits that foreign direct investment (FDI)[1] may provide in to economy such as employment, growth and productivite, has caused to a revival of interest in the factors that make a country a more or less attractive location for investment by multinational enterprises (MNEs). As a reaction to an uncertain economic situation, transnational companies have reported cutting their FDI expenditure which will have implications for employment as the MNEs attempt to cut costs (UNCTAD, 2009). MNEs produce in multiple countries to avoid costs associated with international trade.

In this respect, economic situation of host countries, market size and stability plays a critical role in determining the distribution of FDI, since international trade costs are proportional to the size of the market and to the scale of sales. Most studies about the relationship between FDI flows and labour standards focus on the role of labour costs (Bellak et al., 2008). On the other hand it is important that arrangements and institutional changes on the labor market in a country. For example, the power level of the trade unions and legal structure about trade union bargaining arrangements are important factors affecting foreign direct investment as inflow or outflow.

According to the traditional view on this issue is that a presence of strong trade union in a country will make less attractive location for FDI. Because a trade unions with their decisions and their activities will tend to cause to reduce the profitability of FDI. In this perspective argued that MNEs will prefer the economies in which there are weak regulations delimiting the degree of trade union power in bargaining negotiations about working conditions and wage level. The degree of centralisation or co-ordination in working conditions and wage bargaining is clearly of relevance in this context. Because MNEs will prefer relatively free to determine the wage and employment conditions in its own plants and investment.

Briefly, a strand of international economics literature dealing with labour markets suggest that MNEs will prefer to locate in economies in which they can ex-

pect to enjoy a high degree of discretion in the determination of wages in the plants that they operate. Naylor and Santoni (2003) and Leahy and Montagna (2005) suggest that a strong trade unionisation could render a country less attractive for FDI, due to the unions' rent-extraction activities that would limit the potential gains of firms. High levels of trade union density and a regime of centralised or co-ordinated wage bargaining will therefore tend to have a negative effect on the inflows of foreign direct investment into an economy. Therefore these factors are negative effects to FDI inflow, at the same time pozitive affects to FDI outflow.

There has been relatively scarce empirical evidence on the effect of trade unionization on the location of FDI and both theoretical predictions and empirical findings are often inconclusive. At the same time there is very little empirical evidence about the impact of industrial relations factors on FDI flows (Krzywdzinski, 2014). Cooke (1997) and Cooke and Noble (1998) find that FDI by U.S. MNEs is attracted to economies with decentralised wage bargaining systems. According to their study MNEs have discouraged by high levels of trade union density, which support the conventional wisdom in this area. Cooke (2003) argues that employment protection legislation has an important impact on American FDI flows to OECD countries and that companies prefer countries with weaker regulation. Cooke's analysis (1997, 2003) shows that the degree of unionisation and the level of collective-bargaining centralisation have a negative effect on the amount of FDI inflows from the US.

Skaksen and Sorensen (2001) examine the preference of workers and a firm for FDI. Considering a monopolistic firm and decentralised labour unions, they show that both the workers and the firm share the same interest for FDI if there is a big degree of complimentarity between activities in the home and the host countries. On the other hand, conflicting interests arise if there is a big degree of substitutability between activities in the home and the host countries where the firm gains but the workers lose from FDI.

Naylor and Santoni (2003) suggest that FDI is less likely to occur, the greater is union bargaining power, the stronger the weight the union attaches to wages and the more substitutable are firms products in the potential host country.

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1 Foreign Direct investment (FDI) is investment made to acequire a lasting interest in or effective control over an enterprise operating outside of the economy of the investor. (UNCTAD, 2016).

Lommerud, Meland and Straume (2005), presents a theoretical model of low unionization and outsourcing decisions. The main result of their analysis is that low unionization can in fact trigger outsourcing. According this study, low trade unionization reduces the wage hike following outsourcing and makes outsourcing more attractive. Kinkel and Zander (2007) argue that working time length and flexibility is an important factor to attract FDI but this argument has not been systematically examined yet (Krzywdzinski, 2014).

Ishida and Matsushima (2005) examine the welfare impacts of outward FDI. In a duopoly market structure with decentralised unions, they show that while first FDI is always welfare improving, second FDI is always welfare reducing.

Mukherjee and Suetrong (2007) show that the incentive for outward FDI by the home firms is higher under a centralised labour union than under decentralised labour unions. They suggest that this may not be true in an open economy with FDI. According to this study, if all home firms export irrespective of the unionisation structure, the wage rates and the union utility are higher under a centralised union. They also show that if the number of firms undertaking FDI is higher under a centralised union than under decentralised unions, there may not be a conflict of interest between the labour union and the domestic industry, and both the union and the domestic industry may be better off under decentralised unions than under a centralised union.

Rodelscu and Robson (2008), examines the theoretical foundations of the relationship between trade union strength, wage bargaining co-ordination and foreign direct investment and undertake an econometric analysis of FDI flows using cross-national time-series data on 20 OECD economies. They have set out a theoretical model that illustrates the potential relationships between trade union bargaining strength, the degree of co-ordination – as distinct from the degree of centralisation - in wage bargaining, and the attractiveness of an economy to FDI. Their results provide further evidence in support of the view that a high rate of union membership in an economy helps to deter inward investment by multinational enterprises. The effects that this study has identified concerning the impact of trade union density on inflows of FDI are quantitatively as well as statistically significant.

Their most conservative estimates suggest that a decline of 10 percent in the level of trade union density might be expected to lead to an increase in real inflows of FDI of around 5.7 percent.

Gross and Ryan (2008) show that employment protection legislation affects negatively the inflows of FDI from the US and Japan, respectively. In other words, companies are more likely to locate in countries with weaker employment protection. According to this study, a negative significant effect of the employment protection seems to emerge.

Brandl et al. (2010), unionisation and workplace employee representation had no significant effect on the localisation of US FDI. Only the collective-bargaining centralisation showed a negative influence on FDI inflows.

There exists almost no study on the relationship between unionization rate and FDI outflow in the literature. Therefore this study examines the aforementioned association by using unbalanced panel data. The study reveals that higher unionization rate causes to higher FDI outflow in an economy. The remaining part of the study proceeds as follows: data and methodology is explained in the next section; third section reports and discusses estimation results; and the last section provides concluding remarks.

Data and Methodology

This study examines the impact of unionization rate on outward flow of foreign direct investment (FDI) level in that particular country by using three FDI outflow indicators. The period under study is between 2000 and 2013.

By using unbalanced panel data we estimated the following univariate random effect model (REM);

$$FDIOUT_{it} = \beta_0 + \beta_1 UNION_{it} + \eta_i + u_{it} \qquad (1)$$

and the following multivariate random effect models (REM);

$$FDIOUT_{it} = \beta_0 + \beta_1 UNION_{it} + \beta_2 CPI_{it} + \beta_3 ENROLTER_{it} + \\ \beta_4 CELLPHONE_{it} + \beta_5 ECOFREE_{it} + \eta_i + u_{it} \quad (2)$$

where it subscript stands for the $i\text{-}th$ country's observation value at time t for the particular variable. β_{0i}

represents country specific factors not considered in the regression, which may differ across countries but not within the country and is time invariant. η_i is a stochastic term, which is constant through the time and characterizes the country specific factors not considered in the regression. u_{it} is error term of the regression and independently and identically distributed among countries and years.

Our dependent variable is FDIOUT. Three FDI outflow indicators are FDIOUTGDP, FDIOUTTT, and FDIOUTTTMH. We also introduced four more potential determinants of FDI outflow into our models. The list of dependent and independent variables, their definitions, and the data sources are given in Table 1 below.

Table 1. List of Dependent and Independent Variables

Variables	Definition	Source
FDIOUTGDP	FDI outward flow percentage of gross domestic product	UNCTAD
FDIOUTTT	FDI outward flow percentage of total merchandise trade	UNCTAD
FDIOUTTTMH	FDI outward flow percentage of total trade in merchandise and services	UNCTAD
UNION	Trade union density rate (%)	ILO
CPI	Consumer price index (2010 = 100)	WDI
ENROLTER	School enrollment, tertiary (% gross)	WDI
CELLPHONE	Mobile-cellular telephone subscriptions per 100 inhabitants	WDI
ECOFREE	Economic freedom index	Fraser Institute

The expected association between labor unionization rate and three proxies of FDI outflow is positive. Countries having higher level of unionization are anticipated to experience more outward flow of FDI. Studies in the literature about the effect of unionization show that high unionization density considerably prevents foreign direct investments. FDI prefers the countries having lower unionization density and weak bargaining power and allowing flexible wage settings. Therefore, higher unionization rate may encourage capital flight.

CPI reflects the three things; namely degree of uncertainty in an economy, political instability, and economic instability. FDI does not prefer to invest in an atmosphere in which there exists higher uncertainty and less political and economic stability. Hence, we expect to have a positive relationship between CPI and FDI outflow.

ENROLTER is gross tertiary school enrolment in terms of percentage and represents the human capital level in an economy. Countries investing more on human capital and improving quality of human capital may attract more FDI. On the other hand, lower human capital level may discourage FDI and thus speed up FDI outflow. Therefore we expect to have a negative coefficient for ENROLTER variable.

CELLPHONE is a proxy for the penetration of information communication technology (ICT) in a country. Some studies in the literature indicate that countries with higher penetration of ICT attract more FDI. In other words, foreign capital are inclined to not to stay in countries possessing lower ICT penetration. Thus we anticipate a negative coefficient for CELLPHONE.

ECOFREE is an index of economic freedom. FDI is prone to invest more in countries in which economic freedom is widespread. Therefore a negative coefficient for ECOFREE variable is expected.

Before proceeding to evaluate the empirical results, it will be better to check the correlation between unionization rate and three FDI outflow variables. Table 2 provides correlation coefficients and P-values for each particular variable pairs. As in the table, correlation coefficient values between unionization rate and three FDI outflow proxies (i.e., FDIOUTGDP, FDIOUTTT, and FDIOUTTTMH) are positive and range from 0.137 to 0.213. Also all of them are highly statistically significant.

Table 2. Correlation Matrix

	UNION	FDIOUTGDP	FDIOUTTT	FDIOUTTTMH
UNION	1.0000			
P-value	-			
FDIOUTGDP	0.1377	1.0000		
P-value	*0.0004*	-		
FDIOUTTT	0.2022	0.9330	1.0000	
P-value	*0.0000*	*0.0000*	-	
FDIOUTTTMH	0.2133	0.8698	0.9638	1.0000
P-value	*0.0000*	*0.0000*	*0.0000*	-

Table 3 below provides descriptive statistics of all variables used in the models.

By using period average values for the years of 2004-2013, we provided scatter plot of three indicators of FDI outflow and unionization variable in Figure 1 below. As the figure hints that there is positive association between unionization rate and proxies of FDI outflow.

Table 3. Descriptive Statistics

	UNION	FDIOUTGDP	FDIOUTTT	FDIOUTTTMH
Mean	28.308	3.315	9.187	8.357
Median	21.300	0.200	0.565	0.480
Maximum	99.100	418.360	1600.880	1600.880
Minimum	2.100	-237.120	-980.930	-980.930
Std. Dev.	19.327	23.833	82.102	81.727
Skewness	1.365	11.413	12.812	13.004
Kurtosis	4.237	172.105	222.722	227.314
Jarque-Bera	247.327	2902035	4905676	5112052
Probability	0.0000	0.0000	0.0000	0.0000
Num. of Obs.	661	2392	2406	2406
	CPI	ENROLTER	CELLPHONE	ECOFREE
Mean	-1.910	35.117	60.582	6.760
Median	-2.835	30.530	57.280	6.880
Maximum	127.200	117.890	304.080	9.170
Minimum	-65.970	0.220	0.000	2.930
Std. Dev.	13.065	26.291	48.263	0.933
Skewness	2.324	0.483	0.544	-0.613
Kurtosis	21.529	2.186	2.758	3.727
Jarque-Bera	33512.680	113.206	143.176	163.575
Probability	0.0000	0.0000	0.0000	0.0000
Num. of Obs.	2204	1705	2765	1933
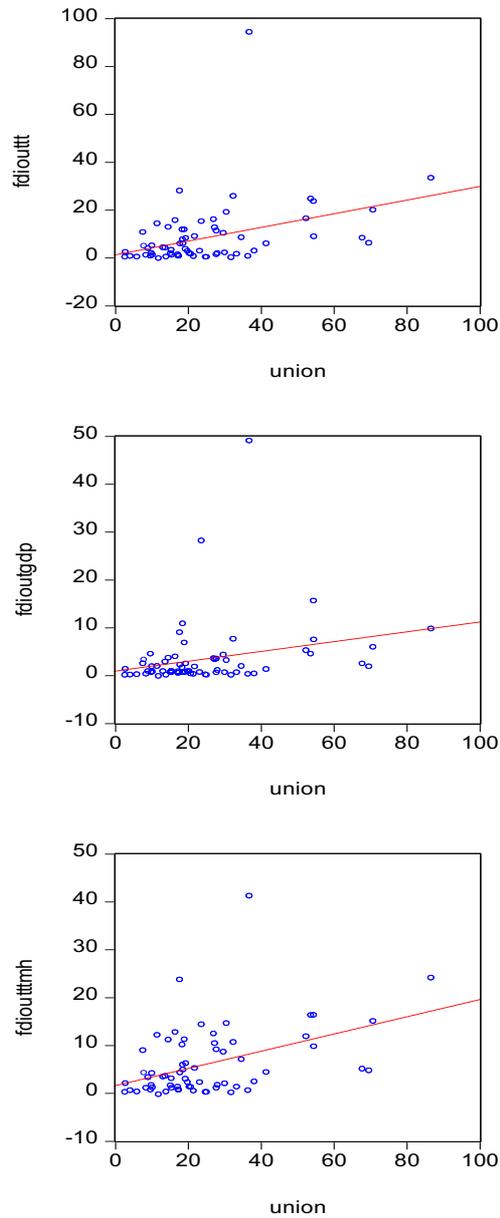
Figure 1. Scatter Plot of FDI Outflow and Unionization Variables

Estimation Results

The results of univariate and multivariate estimations are reported in Table 4 and 5 respectively for three different FDI outflow indicators.

Univariate REM estimation results in Table 4 below show that coefficient of UNION variable takes the prior expected positive sign and are statistically significant in all models.

Table 4. Univariate REM Model Estimation Results

FDI Outflow Proxies ==>	FDIOUTGDP	FDIOUTTT	FDIOUTTTMH
	Model 1	Model 2	Model 3
CONSTANT	**1.6605**	**2.5257**	**2.3023**
Std. Error	*1.3424*	*2.5329*	*1.4259*
Prob.	*0.2165*	*0.3191*	*0.1069*
UNION	**0.0713**	**0.2426**	**0.1650**
Std. Error	*0.0400*	*0.0754*	*0.0423*
Prob.	*0.0754*	*0.0013*	*0.0001*
Num. Of Countries	*66*	*66*	*66*
Num. Of Obs.	*657*	*657*	*657*
R-Squared	*0.0048*	*0.0158*	*0.0230*
F-statistic	*3.1877*	*10.5311*	*15.4212*
Prob(F-statistic)	*0.0747*	*0.0012*	*0.0001*

Table 5. Multivariate REM Model Estimation Results

FDI Outflow Proxies ==>	FDIOUTGDP	FDIOUTTT	FDIOUTTTMH
	Model 1	Model 2	Model 3
CONSTANT	**-24.6242**	**-65.9553**	**-50.4199**
Std. Error	*6.2568*	*12.9668*	*8.0334*
Prob.	*0.0001*	*0.0000*	*0.0000*
UNION	**0.0724**	**0.2140**	**0.1338**
Std. Error	*0.0239*	*0.0488*	*0.0296*
Prob.	*0.0026*	*0.0000*	*0.0000*
CPI	**0.1485**	**0.3352**	**0.2387**
Std. Error	*0.0698*	*0.1442*	*0.0889*
Prob.	*0.0338*	*0.0205*	*0.0075*
ENROLTER	**-0.1179**	**-0.1541**	**-0.0732**
Std. Error	*0.0260*	*0.0536*	*0.0330*
Prob.	*0.0000*	*0.0042*	*0.0270*
CELLPHONE	**0.0457**	**0.0224**	**-0.0027**
Std. Error	*0.0145*	*0.0304*	*0.0192*
Prob.	*0.0016*	*0.4613*	*0.8880*
ECOFREE	**3.8842**	**10.3608**	**7.9244**
Std. Error	*0.8930*	*1.8515*	*1.1475*
Prob.	*0.0000*	*0.0000*	*0.0000*
Num. Of Countries	*61*	*61*	*61*
Num. Of Obs.	*547*	*547*	*547*
R-Squared	*0.0977*	*0.1106*	*0.1367*
F-statistic	*11.7192*	*13.4555*	*17.1335*
Prob(F-statistic)	*0.0000*	*0.0000*	*0.0000*

After adding the other control variables into the models, multivariate REM estimation results in Table 5 above indicate the following;

1. Estimation results using FDIOUTGDP as dependent variable in Model 1 indicates that:

The coefficient of UNION variable is highly statistically significant and takes the expected positive sign, indicating that higher unionization rate leads to an increase in the outward flow of FDI in an economy.

2. Estimation results using FDIOUTTT as dependent variable in Model 2 indicates that:

The coefficient of UNION variable is highly statistically significant and takes the expected positive sign, implying that countries having higher unionization rate experience higher FDI outflows.

3. Estimation results using FDIOUTTTTMH as dependent variable in Model 3 indicates that:

The coefficient of UNION variable is highly statistically significant and takes the expected positive sign, implying that FDI tends to escape from the countries in which labor unionization rate is high.

In regard to other control variables in the model, the estimated coefficient of CPI variable takes the theoretically expected positive sign and is statistically significant at least at 5% significance level in all models. Thus, as the uncertainty and instability in terms of political and economic sense increase in an economy, FDI outflows in that particular economy increases as well.

The coefficient of the ENROLTER variable is statistically significant at least at 5% significance level and takes the anticipated negative sign in all models. This result implies that countries with higher human capital endowment experience lower outward flow of FDI.

The coefficient of the CELLPHONE variable is statistically significant and takes the opposite sign in just one out of three models. The reason for taking unexpected sign might be presence of multicollinearity problem among explanatory variables.

The coefficient of the ECOFREE variable is statistically significant and takes the opposite sign in all one model. The reason for taking unexpected sign might be presence of multicollinearity problem among explanatory variables.

Conclusion

This study test the hypothesis that higher unionization rate in an economy leads to an increase in FDI outflow. In order to test this hypothesis, both univariate and multivariate random effect models are constructed and estimated. Three distinct indicators of FDI outflow (i.e., FDIOUTGDP, FDIOUTTT, and FDIOUTTTTMH) are used in the models. The dataset utilized in analyses is unbalanced and the period under study is between 2000 and 2013.

The main finding of the study is that countries with higher unionization experience higher level of foreign direct investment outflows. This result remains valid once we added other potential determinants peculiar to FDI outflow into our models. Also, our results are robust in the sense that our primary finding do not alter no matter which proxy is used for FDI outflow in our models.

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