



## Does FDI Affect Attendance to Social Protests?: Panel Granger Causality Test

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### ABSTRACT

FDI as an the extension of foreign economic units has significant economic and political impacts on host country. The literature focusing on the political determinants of the FDI inflows, does not put emphasis on whether FDI can affect the level of political rights, attendance level to the social protests in the host country. This study sheds new insight by adding the relevant literature the issue of the impact of FDI on attendance level to social protests in the host countries by bringing the cross country evidence. I refer in the paper some channels through which FDI can affect the attendance level to social demonstrations. The main channel, along with others, I emphasize that if the growth-enhancing FDI keeps flowing and creating economic growth, voters become more motivated to vote for the incumbent party. To this end, incumbent government to draw economic benefits from FDI inflows, particularly right before elections, would release the restrictions on the political rights, and ease the harsh repressions and crackdowns to diminish the level of political risks and uncertainty that would lower the difficulty of collective action which would prompt the attendance level to social protests. Dumitrescu & Hurlin Panel Granger test is implemented to test FDI-number of social protesters causality using the relevant data of six European countries where the FDI flows to benefit primarily from stock of knowledge, human capital stock. Test results indicate that there is a bi-directional causality running from FDI to number of social protesters that implies that FDI has an impact on attendance level to protests in the host country.

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## Introduction

Economic, political turmoil, or oppression of certain political, social rights would trigger society's reaction. Society might put pressure on political actors by protesting against structural deficiencies in political, economic institutions, corrupted politicians, power attenuation of key political elites, etc.

Social groups met in public space such as in Tiananmen Square in Beijing, Independence Square in Kiev, and Tahrir square in Cairo to protest against the restrictions imposed on social, political, economic rights. In this study I aim to focus on one economic variable, foreign direct investment, and seek whether it has any impact on attendance level to protests.

Foreign direct investment (FDI) inflows in global scale have been increasing especially after financial and trade liberalization in developing countries. As globalization process accelerates, the FDI inflows flood in developing countries. FDI is foreign savings for the host country seeking to exploit economic conditions specific to host country such as commodity market conditions, labor market conditions or political conditions.

If the FDI aims to benefit from educated and skilled labor stocks of the country, it contributes on the capital stock, technology and knowledge stock, so on the productivity growth in sustainable fashion. It also promotes institutions that promote the human capital accumulation, enforcement of contracts and property rights, and politics that does not provide exclusive rights for any group in the society. However, if FDI benefits from the exploitation of cheap labor stocks of the country the FDI brings old-fashioned technology so that would make limited impact on technology, and knowledge stock. FDI might promote the persistency of political system where political rights are restricted that would provide the repressed wages and low level of expenditures per employee. Therefore, depending on local labor market conditions, FDI would make various impacts on economic growth and political landscape.

In other words; FDI inflows generate some political dynamics that are very relevant to its economic impacts. FDI seeks the high profit level by exploiting highly skilled, and

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educated local labor. Exploitation level for the societies particularly where the stock of skilled labor is much would be higher if the local labor force is politically secure, and can reach easily to the cutting edge knowledge. Therefore, it can be argued that FDI inflows would favor the political rights and individual rights including property rights.

Influence of FDI on economic growth, and the effect of democracy on the size of FDI inflows are heavily studied subjects in the literature. Lipsey and Sjöholm (2004) show the positive impact of FDI on economic growth, Kalemli-Ozcan and Sayek (2004) find that FDI is beneficial for growth only if the host country has well developed financial institutions. Borenstein et al (1998) concludes that FDI affects economic growth in positive direction with great impact if the host country has high level of human capital stock. Additional to influence of FDI on the host country economic parameters, influence of political characteristics on FDI inflows studied. Democratic quality is the main parameter studied in the literature, Rodrik (1996), Harms and Ursprung (2002), Busse and Hefeker (2005) investigate whether democratic quality explains the size of FDI inflows, and whether it is significant determinant of FDI inflows, and they conclude that it does affect FDI inflows significantly. On the other hand, Greider (1998) argues that FDI floods into the countries where the political rights are restricted which eases the suppression of domestic wages.

However, the literature does not put special emphasis on that FDI would affect the politics in the country because of its significant influence on economy where the *economic voting* is notable in voting behavior. Therefore, democratic quality, willing to demand more rights by the domestic people, and political risk would not be neutral to FDI inflows. Greider (1998) argues that the FDI exploits from politically repressed society where it enjoys the suppression of wages by the local authority. However, such a view is not valid for general and negated by Ursprung and Harms (2002).

### **Foreign Direct Investment – Number of Protesters : Causality**

Why people protest?, or how eager people want to attend to protests? depends mainly on the collective action problem. Collective action problem in this context can be defined as the discrepancy between the desire to change the set of institutions in place by the society and the actions put in practice to change it by the society. Cost of social protest per person is high

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if not divided among more attenders, and the chance of changing the political course is low if much people do not attend protests. Therefore, number and regularity are important that affect the power of protests. On the other hand, there is always chance to free ride on the rights obtained through these protests by non-protestors. Collective action problem would arise if attenders think that free-rider population is majority of the population. The fear from post-protest repression alleviates pre-protest, if additional measures are taken by the government that would decrease participation level. However, if the repression level is low and stable, then the collective action problem becomes less problematic due to decrease in cost of attendance per person.

The size of foreign direct investment inflow is related to political risk, and democratic quality in the host country. Therefore if the level of political conflict and risk increases it would affect the size of foreign direct investment flowing which particularly that exploit the stock of knowledge and skilled labor stock in the country. In this regard, I argue that the economies that enjoys external savings would be cautious on affecting political conflict and political risk levels in the country so the intervention and repression levels would be limited and observable. This, in turn, would lower the risk of coming across with long year jail or harsh torture under custody following the protests that would decrease the level of collective action problem and would affect positively participation levels and effectiveness of the social protests. However, if political blocks and repression levels ease following FDI inflows that will open the social groups the space to benefit from more stable and political realm which would increase the number of social protests.

Furthermore, as economy develops and economic voting becomes the determining force of the upcoming winner of the elections, then FDI puts certain restrictions on political discourse and agenda which also ease the pressure of the state on the opposition forces to not jeopardize the political conflict and risk level in the country that affects FDI inflow negatively.

On the other hand, if foreign direct investment inflows impact wages positively then the cost of attending social protests will be higher which would increase the size of free rider population. Therefore, increasing living standards through hike in wage would decrease the attendance level to social protests. Even though this effect is closely related to in what degree

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FDI inflows affect negatively the harshness of repression. Therefore, the effect would be positive, negative or neutral

However, even this logic above imposes certain causality and imply there is a positive contribution of FDI on the social protests level in the country, the context and technology that the FDI ushers the country would switch the relationship. If the FDI comes to the country due to its load of unskilled cheap labor, which also argued by Gardier (1998) ,any political regulations that ensures the sustainability of this would ensure the persistent inflows of FDI.

Additionally, the income effect of FDI inflows, such as wage increase through increase in labor demand by FDI, would result in increase in the demand of leisure time. Workers might become more political oriented if they consume their more leisure time on critical political issues which might increase the level of participation to social protests.

There are very few studies focusing on the effect of FDI on political rights, and democratic quality. Robertson and Tietelbaum (2011) examined the influence of FDI inflows onto the strikes across a range of low-and-middle income countries with various levels of democracy. They report that FDI increases the level of strikes and industrial conflict in less democratic countries. Dutta and Roy (2009) examined the influence of FDI on the press and media freedom. They use a panel of 115 countries over a period of 20 years, and conclude that FDI flows hike the level of press freedom in the country.

This is study, as of my knowledge, is the first study attempts to investigate the causality relation between the Foreign Direct Investment and the social protests including general strike, demonstrations, slow down, rally, march, raid, attack , occupation, hunger strike, riot, petition, ouster, taking hostages. The data set include the data for six countries; United Kingdom, Austria, France, Italy, Switzerland, Sweden for the period of 16 years, 1980-1995 The stock of knowledge and skilled labor stock, the power of law enforcing institutions, the level of property rights security are higher compared to other European countries.

We test whether there is causality running from in any direction including from FDI to number of social protesters via Panel Granger Causality test. The following section refers



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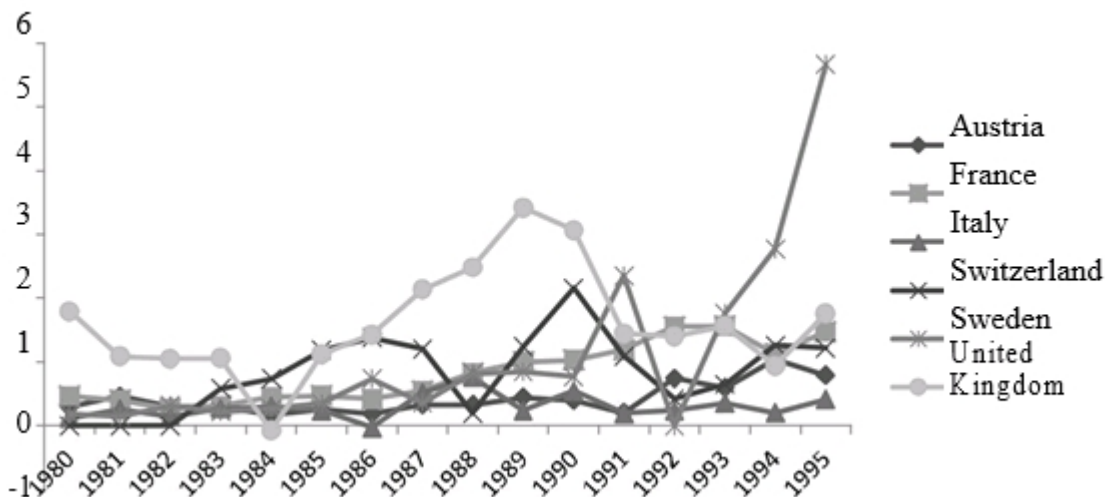
about the data and econometric model, and the final section follows as the comments and discussion of the test results.

The hypothesis claimed here can be also examined for the developing particularly emerging economies where the politics and economics are at least partially based on rational calculations of political players regarding future political state of world. To draw as much benefit as possible, political players; incumbent government and voters deal over the future size of economic outcome. FDI as an growth enhancing channel plays prominent role in this deal. Furthermore, I argue that to seek foreign assistance, and capital these countries provide less politically risky and conflictual environment which decreases the free rider problem and would increase number of social protesters.

### **Data and Econometric Technique**

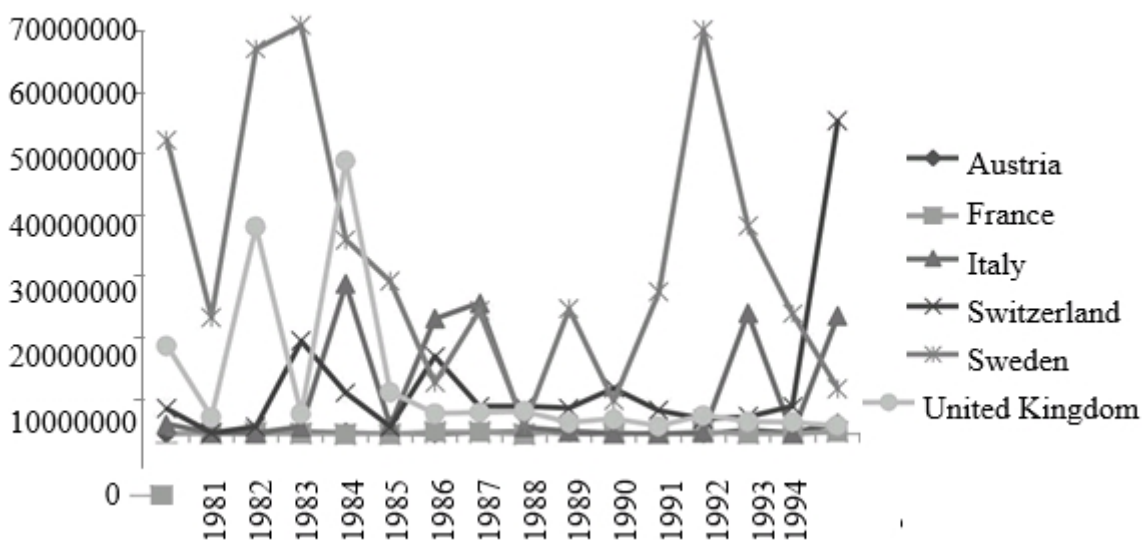
The causality test is performed over two variables, Foreign Direct Investment/GDP and Number of Social Protesters. We include the observations for these two variables for six countries for the period of 1980-1995. Therefore, the total number of observations is 96. FDI data is the FDI inflows received by the country as % of GDP in a given year that is collected from World Development Indicators. FDI/GDP is used to account the real size of FDI across countries. Social Protest level is the number of people demonstrate, protesters in the streets of six countries which also includes attack statistics performed by marginal leftist groups. The data is collected from European Protest and Coercion Data developed by Ron Francisco. The original data set covers the data of all reported protests and repressive events for 28 European countries.

**Graph 1. Foreign Direct Inflows as % of GDP -in the period of 1980-1995.**



The graph1 indicates that United Kingdom has greatest FDI inflows as % of GDP until 1992, which is followed by Sweden whereas Austria, Italy has lowest numbers. In almost all countries the FDI inflows as % of GDP increase after 1984 particularly in the United Kingdom, Switzerland, Sweden ,and France.

**Graph 2. Number of Social Protesters in the period of 1980-1995.**



Graph 2 indicates that most social protesters occur in Sweden over almost all years in the period, United Kingdom had high numbers which decreased dramatically after 1984. Italy

had also high number of protesters whereas, the very low numbers of social protesters are observed in the Austria and France during the period. The data also shows the cyclic behavior of protests in almost all countries.

Dumitrescu and Hurlin (2011) introduced Granger non causality test in heterogeneous panel data where the test statistics is based on the individual Wald statistics of Granger non causality. They claim that if the causality relation exists for a country it would be present for another country. Their main approach is to use extensions of the time series test in cross-sectional dimension. Dumitrescu and Hurlin (2011) differently, than Hoaltz-Eakin et al (1988), argue that the alternative hypothesis is based on two subgroups, in one subgroup there is causality between variables, and in other subgroup there is not causality from one variable to another. This helps to overcome the problem of rejecting the null hypothesis of homogenous Granger non causality if there is causality only for one subgroup of the sample.

Panel Granger Causality test is performed over following model:

$$\frac{FDI_{i,t}}{GDP_{i,t}} = \alpha_i + \sum_{k=1}^K \phi_i^k \frac{FDI_{i,t-k}}{GDP_{i,t-k}} + \sum_{k=1}^K \beta_i^k (\# Social Protesters_{i,t-k}) + \varepsilon_{i,t}$$

$\alpha_i$  is fixed for individual cases, and  $\phi_i^k$  and  $\beta_i^k$  changes across units. Fixed effect model is used to test the hypothesis which is the following;

$$H_0 = \beta_i = 0, \forall i = 1, \dots, N$$

$$H_1 = \beta_i = 0, \forall i = 1, \dots, N_1$$

$$H_1 = \beta_i \neq 0, \forall i = N_1, \dots, N$$

The null hypothesis claims that there are not Granger causality relations between two variables for all individual countries. Under the alternative hypothesis, it is claimed that there is causality relation for at least in one country.

Before implementing the Granger causality test, we test whether the series include unit root. The table below shows the Unit root test results:



**Table 1. Unit Root Test Results<sup>2</sup>**

Series	Im, Peseran and Shin	Levin, Lin and Chu
FDI	5.43127 (1.000)	7.86452 (1.000)
D(FDI)	-14.5491 (0.000)	-15.0318 (0.000)
#Social Protesters	-2.42469 (0.0077)	- 1.35270 (0.0881)

In both unit root tests the null hypothesis are same which is that all individuals follow a unit root process. However, alternative hypothesis are different: In Levin, Lin and Chu Test it claims that each time series is stationary, in Im, Peseran and Shin allows some (but not all) of of the individuals to have unit roots. Test results in Table 1 implies that FDI is first-difference stationary whereas number of social protesters is level stationary.

Because Dumitrescu and Hurlin Granger causality test implemented on two stationary series, first-difference FDI and level stationary Social protests are used. The panel granger Causality test results are below in Table 2:

**Table 2. Dumitrescu and Hurlin Panel Granger Causality Test Results**

Null Hypothesis	Z-bar Test Statistics (Probability)
<i>#Social Protesters does not homogenously Cause FDI</i>	-1.07734 (0.2813)
<i>FDI does not homogenously cause #Social Protesters</i>	2.25074 (0.0244)

Test results in Table 2 imply that there is bi-directional causality running from Foreign Direct Investment and Social protesters. FDI causes # Social protesters but Social Protesters do not cause FDI inflows. These results dictate that we can conclude that if FDI inflows as % of GDP in the country increases, it would cause number of Social Protesters to change (with negative or positive sign). On the other hand, we can't surely conclude that if number of people attending Social Protests increase or decrease, the FDI inflows increase or decrease. Therefore, countries that put certain weight on foreign direct investment to finance its budget

<sup>2</sup> Number of lags is determined as 2 according to SIC criteria.

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and current account deficit and finance the economic growth faces the more active public space that can slack the autocratic tendencies and usher democratic consolidation.

### **Conclusion**

There are channels FDI inflows can affect the social protest level in the country. Some of these channels are related to economic benefits of the FDI, and some are related to labor market conditions in the country, and political risk. Preconditions in the labor market, technology stock affect the type of FDI inflowing in the country which make various impacts on the economy and politics.

If country enjoys the FDI inflow that increases the probability of re-election of incumbent government, incumbent would decrease the political risk in the country that reduces the FDI inflows. If political risk level reduction goes hand in hand with regulations on social protests which would decrease the repression level imposed by the regime, the cost of participation to social protests decrease that would stimulate social protests. Therefore economic voting behavior of the electorate would decrease the repression level following the FDI inflows.

If the FDI draws benefit from skilled labor, then any political blocks arising from state policy on the reach of the knowledge by the labor would restrict the capacity of FDI of drawing benefits out of skilled labor gets re Therefore, FDI supports politics that put loose restrictions on the reach to cutting edge knowledge. Therefore, with FDI support, workers might put more pressure for reduction of such political blocks. However, if FDI extract profit out of low wages the policies that put the wages low would favor the benefits of the FDI which would reverse effects compared to skilled labor case.

These channels affect the sign and total size of the impact that FDI puts on the number of social protesters. In this study, we are not interested in the size and sign of this impact, but existence of the impact. To this end, I conducted Panel data Granger causality test by using FDI inflows as % of GDP, and number of social protests in the six countries in Europe for the period 1980-1995.

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Because the FDI/GDP includes unit root, and number of social protesters do not, I include the first difference of FDI/GDP, which is first difference stationary, and social protests into the Dumitrescu and Hurlin Granger Causality test. The test results imply that there is causality from FDI to Social protests, and not vice versa. Therefore, we can securely conclude that through some or all of these channels mentioned above, or other channels that not mentioned here, the FDI affect the participation to social protests.

Interesting result is the attendance level to social protests do not cause FDI inflows. We can conclude that FDI do not make the entrance decision on the number of people attending social protests. This result might imply that social protest level does not signal certain political and economic dynamics that enters into entrance decision of FDI.

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