But Most of All We Love Each Other: Does Social Cohesion Pay off?
Evidence from FDI Flows to Middle Income Countries

Wasseem Mina

Abstract:

In this paper, we empirically examine the relationship between social cohesion and FDI flows . Using panel data on 52 middle income countries for the period 1984-2012, we first identify social cohesion-related institutions using PCA and examine their individual and collective influence on FDI flows. Religion in politics, internal and external conflicts, and ethnic tensions are the institutions with highest loadings on the social cohesion component. Adopting fixed effects estimation methodology, the paper finds that religion in politics stands out with its positive influence on FDI inflows.

Keywords: Social cohesion, Institutions, FDI, Developing countries, Transitional economies

JEL classification: F21, C23

But Most of All We Love Each Other: Does Social Cohesion Pay off?
Evidence from FDI Flows to Middle Income Countries

Introduction

The issue of social cohesion and inclusive societies has recently attracted the attention of the World Bank in its 2013 World Development Report. The main message of this report is job creation lies at the root of social cohesion. Though it is not a straightforward and specific concept to define, the World Bank (2013) defines social cohesion as the capacity of societies to manage collective decision making peacefully without conflicts.

OECD (2012) stresses the multi-dimensionality of the concept, and points out that social cohesion is comprised of social exclusion (Bossert et al. 2007; Lucas 2012, Sen 1985; Stanley et al. 2011; Teraji 2011), social capital (Bourdieu 1993; Dickes et al. 2011; Lin 2001; Putnam 1995), and social mobility. Social cohesion has been argued to have its economic payoffs.[1] Collective decision making serves the provision of public goods through voluntary contribution (Alesina and La Ferrara 2000). In fractionalized societies the provision of public goods tends to be weaker (Alesina et al. 1999; Keefer and Khemani 2005).

In this paper we first identify institutions that are most-relevant to social cohesion using principal component analysis (PCA) and empirically examine the influence of those components and individual institutions on FDI inflows using fixed effects (FE) estimation methodology.

The paper finds that, out of the four individually identified social cohesion-related institutions, religion in politics stands out with its positive influence on FDI inflows. A one percentage point improvement in religion in politics increases FDI flows by about 0.5 percentage point.

The structure of the paper proceeds as follows. Section 2 discusses the empirical model and data. Section 3 discusses the use of PCA in the identification of social cohesion component and related institutions. Sections 4 presents the empirical results, and section 5 concludes.

[1] See Foa (2011).

Empirical Model and Data

Empirical Model

The empirical model of this paper builds on the location advantage hypothesis of Dunning's (1981) ownership-location-internalization (OLI) paradigm. According to the OLI paradigm, a firm produces abroad building on three types of advantages: ownership (O), location (L), and internalization (I). A firm's ownership advantages arise from its possession of intangible assets, such as technology, patents, and skilled management. The firm itself does not possess location advantages but rather the host economy it invests in. For example, the host economy may enjoy large market size and potential, cheap skilled labor, developed infrastructure, openness to trade and capital flows, developed financial markets, friendly business environment, and quality domestic institutions. Domestic institutions may influence social cohesion. The internalization advantage emanates from the firm's own engagement in production abroad rather than relying on the market, in the form of licensing or subcontracting for example, because of the higher transaction costs of the latter.

Since the purpose of this paper is to examine the effect of host country social cohesion on foreign entrepreneurs' FDI flows, we focus on the location advantage hypothesis. We express the empirical model as:

$$FDI_{i,t} = \beta_0 + \beta_1 FDI_{i,t-1} + \beta_2 GROWTH_{i,t} + \beta_3 TRADE_{i,t} + \beta_4 FINANCE_{i,t} + \beta_5 INFRASTRUCTURE_{i,t} + \beta_6 COHESION_{i,t} + \varepsilon_{i,t} \quad \textbf{(1)}$$

FDI is FDI inflows as a percentage of GDP. *GROWTH* is market potential as measured by real GDP growth rate. *TRADE* is trade openness as measured by the sum of imports and exports as a percentage of GDP. *FINANCE* is the degree of financial development as measured by the total value of stocks traded as a percentage of GDP. *INFRASTRUCTURE* is the degree of infrastructure development as measured by the number of telephone lines per 100 people. Finally *COHESION* is the individual social cohesion-related institutions and principal component, as identified and extracted by PCA.[2,3] With the exception of real GDP growth rate, these variables are in logarithmic form.

---

[2] We decided to exclude nominal GDP (in log form) as a measure of market size due to the presence of unit root process. First difference of log nominal GDP yields the growth rate.

Data

In our analysis we use panel data on a sample of 52 middle income countries covering the period 1984-2012. These countries are classified as middle income by the World Bank in July 2012. Of these countries eight are from East Asia and Pacific, 11 from Europe and Central Asia, 17 from Latin America and Caribbean, six from Middle East and North Africa, three from South Asia, and seven are from Sub-Saharan Africa.

Data on *FDI* are obtained from UNCTADSTAT database. Data on *GROWTH*, *TRADE*, *FINANCE*, and *INFRASTRUCTURE* are obtained from WDI. Data on *COHESION* institutions are obtained from International Country Risk Guide.

ICRG data include 12 political risk components: a) government stability (GS), b) socioeconomic conditions (SC), c) investment profile (IP), d) internal conflict (IC), e) external conflict (EC), f) corruption (C), g) military in politics (MP), h) religion in politics (RP), i) law and order (LO), j) ethnic tensions (ET), k) democratic accountability (DA), and l) bureaucracy quality (BQ). Higher (lower) political risk ratings indicate lower (higher) risk and better (worse) performance.

Identification of Social Cohesion Component and Institutions

There is no clear theory or a body of empirical literature, which identifies social cohesion institutions *per se*. In the empirical literature, the influence of corruption, rule of law, conflicts, or property rights protection, for example, on FDI in particular or capital flows in general is examined (Busse and Hefeker 2007; Chakrabarti 2001; Asiedu 2006; Mishra and Daly 2007; Naudé and Krugell 2007; Kolstad and Wiig 2012). We will therefore adopt Principal Component Analysis (PCA) to reduce the numerous ICRG correlated political risk institutions into a smaller number of principal components.

---

[3] A similar model specification is used in Meon and Sekkat (2013), who study the role of institutions and trust in promoting FDI flows. They explain FDI flows in terms of GDP, GDP growth, GDP per capita, infrastructure (measured by the percentage of paved roads in total roads), education (measured by primary school enrollment), openness (measured by the indicator of economic openness produced by Economic Freedom Network), institutions (measured by ICRG's investment profile and the World Bank's formal protection of misbehavior of directors), trust (obtained from World Values Survey), and an interaction term for institutions and trust.

Table 1 shows the 11 principal components obtained. The first component alone explains about one third of the variance. The factor loadings of the first component show highest correlation (absolute value of about 0.6) with internal conflict, military in politics, law and order, ethnic tensions, religion in politics and external conflict. The factor loadings of the second component show highest correlation with democratic accountability, government stability, and bureaucracy quality. The factor loadings of the third component show highest correlation with investment profile. For the fourth component, religion in politics, law and order, and bureaucracy quality have the highest correlation though the correlation coefficients are about 0.5.

[Insert Table 1 about here.]

To identify institutions that are possibly associated with social cohesion, we need to interpret the factors. Thus our next step is to rotate the extracted factors using the Varimax method. Rotation reports religion in politics, external conflict, internal conflict displaying the highest factor loadings (of about 0.60) (followed by ethnic tensions if the cut off loading is slightly lowered to 0.50). Rotation also reports government stability, law and order, and internal conflict having the highest factor loadings of the second component. The factor loadings of the third component show highest correlation for democratic accountability, investment profile, and military in politics. For the fourth component, corruption and bureaucracy quality have the highest correlation.

Regression Results

Fixed effects estimation results, accounting for unobservable country, and country and time effects, are presented in tables 2 and 3. The first four columns correspond to the identified individual social cohesion-related institutions: religion in politics, internal conflict, external conflict, and ethnic tensions. The last column reports the results for the social cohesion component. The R-squared for the estimated country-effects models suggest the estimated models explain nearly one third of the variation in the dependent variable. The explanatory power of the model nearly doubles when the time effects are included, as table 3 shows. The *F* tests indicate the joint significance of the explanatory variables.

[Insert Table 2 about here.]

[Insert Table 3 about here.]

Results show that among the four social cohesion-related institutions, religion in politics has a positive and statistically significant influence on FDI flows at the one percent level. A one percentage point improvement in the role religion in politics, i.e. less religion in politics, increases FDI flows to middle income countries by about one third percentage point. The remaining three institutions are statistically insignificant. The social cohesion principal components are statistically insignificant.

Results for the control variables show that trade openness and financial development have positive and statistically significant influence on FDI flows. The positive influence of market potential is only marginally significant in the fixed country effects model specification. The positive coefficient of the lagged dependent variable suggests persistence of FDI flows.

Concluding Remarks

The finding of this paper lends support to the World Bank's (2013) calls for social cohesion. What this paper has found is that religion in politics, conflicts both internal and external, and ethnic tensions matter for social cohesion. Of prime importance to attracting FDI flows is the role of religion in politics. The empirical evidence suggests if middle income countries are interested in creating more job opportunities and reducing unemployment, through attracting more FDI, then governments need to lessen the merger of religion with politics.

References

Alesina, A., R. Baqir, and W. Easterly (1999). "Public Goods and Ethnic Divisions," *Quarterly Journal of Economics* 114 (4), 1243–1284.

Alesina, A., and E. La Ferrara (2000). "Participation in Heterogenous Communities," *Quarterly Journal of Economics* 115(3), 847-904.

Asiedu, E. (2006). "Foreign Direct Investment in Africa: The Role of Natural Resources, Market Size, Government Policy, Institutions and Political Instability," *World Economy* 29(1), 63–77.

Bossert, W., C. D'Ambrosio, and V. Peragine (2007). "Deprivation and Social Exclusion," *Economica* 74(296), 777-803.

Bourdieu, P. (1993). *Sociology in Question*. London: Sage.

Busse, M., and C. Hefeker (2007). "Political Risk, Institutions and Foreign Direct Investment," *European Journal of Political Economy* 23(2), 397–415.

Chakrabarti, A. (2001). "The Determinants of Foreign Direct Investment: Sensitivity Analyses of Cross-Country Regressions," *Kyklos* 54(1), 89–114.

Dickes, P., M. Valentova and M. Borsenberger (2011). "A Multidimensional Assessment of Social Cohesion in 47 European Countries," CEPS/INSTEAD Working Papers No. 2011-07.

Dunning, J. (1981). *International Production and the Multinational Enterprise*. London: Allen & Unwin.

Foa, R. (2011). "The Economic Rationale for Social Cohesion: The Cross-Country Evidence," Paper presented at the International Conference on Social Cohesion, OECD Conference Centre, Paris.

Keefer, P., and S. Khemani (2005). "Democracy, Public Expenditures, and the Poor: Understanding Political Incentives for Providing Public Services," *World Bank Research Observer* 20(1), 1-27.

Kolstad, I., and A. Wiig (2012). "What Determines China's Outward FDI?" *Journal of World Business* 47(1), 26–34.

Lin, N. (2001). *Social Capital*. Cambridge: Cambridge University Press.

Lucas, K. (2012). "Transport and Social Exclusion: Where Are We Now?," *Transport Policy* 20(March), 105-113.

Méon, P.-G., and K. Sekkat (2013). "The Formal and Informal Framework of FDI," ERF Working Paper 810.

Mishra, A., and K. Daly (2007). “Effect of Quality of Institutions on Outward Foreign Direct Investment,” *Journal of International Trade and Economic Development* 16(2), 231–44.

OECD (2011). *Perspectives on Global Development 2012: Social Cohesion in a Shifting World*. Paris: OECD Publishing.

Naudé, W. A., and W. F. Krugell (2007). “Investigating Geography and Institutions as Determinants of Foreign Direct Investment in Africa Using Panel Data,” *Applied Economics* 39(10), 1223–33.

Putnam, R. (1995). “Bowling Alone: America's Declining Social Capital,” *Journal of Democracy* 6, 65-78.

Sen, A. (1985). *Commodities and Capabilities*. Amsterdam: North Holland.

Stanley, J. K., D. A. Hensher, J. R. Stanley, and D. Vella-Brodrick (2011). “Mobility, Social Exclusion and Well-being: Exploring the Links,” *Transportation Research Part A: Policy and Practice* 45(8), 789-801.

Teraji, S. (2011). “An Economic Analysis of Social Exclusion and Inequality,” *The Journal of Socio-Economics*, 40(3), 217–223.

World Bank (2013). *World Development Report 2013: Jobs*. Washington DC: World Bank.

TABLE 1
Principal Component Analysis of ICRG Institutions

	Initial Eigenvalues				Components								
Comp	Total	% Variance	% Cumulative		Non-Rotated					Varimax Rotation			
					1	2	3	4		1	2	3	4
1	3.4	30.92	30.92	IC	0.8	-0.23	-0.12	0.03	RP	0.77	0	0.23	-0.01
2	1.55	14.1	45.02	MP	0.73	0.26	0.16	-0.05	EC	0.75	0.07	0.07	0.05
3	1.15	10.47	55.49	LO	0.6	-0.29	-0.1	0.48	ET	0.53	0.41	-0.05	0.13
4	1.07	9.73	65.22	ET	0.58	-0.23	-0.27	-0.02	GS	0.01	0.79	0.11	-0.24
5	0.81	7.33	72.55	RP	0.58	0.06	-0.21	-0.51	LO	0.16	0.74	-0.03	0.32
6	0.75	6.82	79.37	EC	0.56	-0.02	-0.33	-0.39	IC	0.56	0.59	0.15	0.16
7	0.59	5.33	84.69	DA	0.35	0.62	0.38	-0.2	DA	0.12	-0.22	0.76	0.2
8	0.54	4.92	89.62	GS	0.43	-0.59	0.33	0.22	IP	0.11	0.44	0.7	-0.2
9	0.44	3.99	93.61	BQ	0.33	0.56	0.12	0.43	MP	0.4	0.25	0.57	0.28
10	0.41	3.68	97.29	C	0.36	0.49	-0.46	0.38	C	0.21	0	-0.02	0.82
11	0.3	2.71	100	IP	0.57	-0.07	0.63	-0.1	BQ	-0.13	0.08	0.42	0.65

TABLE 2
Social Cohesion and FDI Flows
Dependent Variable: FDI Flows % GDP (log)
(Fixed Country Effects)

	(1)	(2)	(3)	(4)	(5)
VARIABLES	RP	EC	IC	ET	Social Cohesion Component
L.FDI	**0.413a**	**0.423a**	**0.423a**	**0.422a**	**0.422a**
	(0.047)	(0.047)	(0.047)	(0.047)	(0.047)
GROWTH	**0.014c**	**0.014c**	**0.013c**	**0.014c**	**0.014c**
	(0.008)	(0.008)	(0.008)	(0.008)	(0.008)
TRADE	**0.483a**	**0.515a**	**0.534a**	**0.513a**	**0.511a**
	(0.137)	(0.141)	(0.145)	(0.144)	(0.140)
FINANCE	**0.094a**	**0.100a**	**0.099a**	**0.100a**	**0.101a**
	(0.020)	(0.020)	(0.020)	(0.020)	(0.021)
INFRASTRUCTURE	0.103	0.059	0.038	0.061	0.061
	(0.063)	(0.063)	(0.067)	(0.062)	(0.059)
COHESION	**0.346a**	0.05	0.092	0.004	-0.007
	(0.115)	(0.229)	(0.086)	(0.096)	(0.019)
Constant	-2.351a	-2.029b	-2.145a	-1.913a	-1.899a
	(0.574)	(0.803)	(0.628)	(0.617)	(0.551)
Observations	978	978	978	978	978
R-squared	0.338	0.332	0.333	0.332	0.332
Number of countries	52	52	52	52	52
F test	0.000	0.000	0.000	0.000	0.000

Notes: Robust standard errors in parentheses. a, b, c significant at 1%, 5%, 10% level, respectively. All variables are in log form except *GROWTH*. Figures for *F* test are *p* values.

TABLE 3
Social Cohesion and FDI Flows
Dependent Variable: FDI Flows % GDP (log)
(Fixed Country and Time Effects)

	(1)	(2)	(3)	(4)	(5)
VARIABLES	RP	EC	IC	ET	Social Cohesion Component
L.FDI	**0.395a**	**0.404a**	**0.403a**	**0.404a**	**0.404a**
	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)
GROWTH	0.012	0.012	0.011	0.012	0.012
	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)
TRADE	**0.278c**	**0.306b**	**0.327b**	**0.301b**	**0.300b**
	(0.148)	(0.15)	(0.153)	(0.153)	(0.15)
FINANCE	**0.072a**	**0.073a**	**0.073a**	**0.073a**	**0.073a**
	(0.022)	(0.022)	(0.022)	(0.022)	(0.022)
INFRASTRUCTURE	-0.085	-0.151	**-0.179c**	-0.148	-0.147
	(0.095)	(0.095)	(0.097)	(0.093)	(0.091)
COHESION	**0.331a**	0.08	0.122	0.003	-0.005
	(0.117)	(0.203)	(0.081)	(0.095)	(0.018)
Constant	-0.841	-1.595	-1.770c	-1.722c	-1.704b
	(0.709)	(1.031)	(0.925)	(0.893)	(0.861)
Observations	978	978	978	978	978
R-squared	0.625	0.623	0.623	0.622	0.623
Number of countries	52	52	52	52	52
F test	0.000	0.000	0.000	0.000	0.000

Notes: Robust standard errors in parentheses. a, b, c significant at 1%, 5%, 10% level, respectively. All variables are in log form except *GROWTH*. Figures for *F* test are *p* values.