#2017-005

Country risk, FDI flows and convergence trends in the context of the Investment Development Path

Jonas Hub Frenken and Dorcas Mbuvi

Country risk, FDI flows and convergence trends in the context of the Investment Development Path

Jonas Hub Frenken* and Dorcas Mbuvi†

January 2017

Abstract

Based on the identification of two transition phases within the Investment Development Path (IDP), this study explores the relationship between country risk and foreign direct investment (FDI) over time and in relation to the process of economic convergence between emerging and developed economies. The findings suggest that both economic - and business environment risk factors are closely related to FDI flows. Furthermore, it is found that as countries progress through the various stages of the IDP, economic convergence comes together with similar trends of convergence in economic - and business environment risk exposure. These simultaneous long-term developments plausibly contribute to the convergence of countries in terms of in- and outward FDI flows during the later stages of the IDP.

JEL classification: F21, F23, F43
Keywords: Country risk, foreign direct investment, convergence

1 Introduction

Global foreign direct investment (FDI) flows have grown at a rapid pace over the last couple of decades, an increasing amount of which finds its way to emerging economies. The changing landscape in terms of the global FDI distribution, of particular interest in the context of country risk, can be understood following Dunning's (1986) Investment Development Path (IDP) theory, which suggests that FDI develops through a path that expresses an intertemporal dynamic relationship between a country's state of economic development and its net outward investment (NOI) position. The global shift in FDI flows over time might indicate that multinational firms have increasingly considered emerging economies a safe haven for their investment, in which the opportunities presented outweigh the possible risks involved. In this context, it seems of interest to investigate whether the FDI convergence process between emerging and developed economies has also come together with a relative decrease in the exposure of emerging economies to country risk.

While the relationship between country risk and FDI has been the subject of academic study and debate, few have analysed it in relation to the process of economic convergence. In line with previous research and using IDP theory as a guideline for analysis, this study will first explore the relationship between various types of country risks and FDI in- and outflows for a selection of emerging and developed economies. It is hypothesised that, controlling for

---

*UNU-MERIT and Maastricht University. jh.frenken@alumni.maastrichtuniversity.nl
†UNU-MERIT and Maastricht University. mbuvi@merit.unu.edu

a country's general state of development, a favourable low-risk investment environment will be associated with a higher level of both inward and outward FDI. Subsequently, unit-root tests will be used to study the presence of convergence trends between countries in terms of FDI flows, their state of development and their exposure to various types of country risk.

2 Literature review

2.1 Defining the concept

Country risk has been conceptualised variedly in the literature, depending on factors such as the underlying risk sources, the types of investments involved, historical contexts and the specific methodologies used for assessing particular types of risk by different authors (Bouchet et al., 2003). The difficulty of reaching consensus among academics and practitioners on a comprehensive definition of the concept follows largely from the various terminologies used in different fields to deal with similar or overlapping risk issues. Given the multiplicity of country risk sources and their interaction, an underlying common theory or framework for country risk assessment has therefore yet to be formulated.

According to White & Fan (2006), country risk factors can generally be conceptualised within four main components: political risk, economic risk, financial risk and cultural risk factors. Bouchet et al. (2003) consider political risks to mainly concern the potential or actual change in the political system of a country, emanating for example from wars or democratic evolutions. The interpretation of economic risks in the context of country risk varies, but the focus in risk assessment lies primarily on the unanticipated change that is attributable to the deterioration of the internal or external economic environment of a country. Financial risk factors tend to be more focused on the creditworthiness of countries and governments (sovereign credit risk). Again, risks arise from the possibility of unanticipated changes in the system, such as defaults or risk migrations (capital flights). White & Fan (2006) point out that for some, sovereign credit risk is what actually constitutes country risk in general but that such an understanding of the concept undermines some if not most of the risks that are relevant in the context of global FDI flows. Finally, cultural risks are interpreted as the types of risks that arise from the ignorance of other cultures or the unanticipated discovery of behavioural patterns that impose a cost on a company investing in a host country. Cultural risk factors that are particularly relevant in the context of a country's business environment, can include bureaucratic ritualism, nepotism and various forms of corruption.

2.2 Country risk and FDI flows

Busse & Hefeker (2005) studied the linkages between political risk, institutional quality and FDI in developing countries. They found that government stability, the absence of internal conflict and ethnic tensions, basic democratic rights and a high quality of law and order were positively related to FDI inflows. In a large sample of developing and developed economies, Méon & Sekkat (2012) found a relationship between political risk and FDI that was weaker when global FDI, that comes in a wave-like pattern depending on the global economic outlook, was larger. In a similar analysis, Baek & Qian (2011) studied whether political risk factors might affect FDI inflows to industrialised and developing economies. They found political risk to be a significant determinant of FDI inflows to both economy types, controlling for several economic indicators. A good performance of countries in terms of democratic accountability was associated with a higher level of FDI inflows to

both industrialised and developing economies. Specific political risk factors, such as ethnic tensions and military in politics were only found to be negatively related to FDI in the case of industrialised economies; whereas efficient law and order, low religious tensions and government stability were only associated with higher FDI inflows to developing economies.

Hayakawa et al. (2013) studied the influence of both political and financial risk factors on FDI inflows over time, but found mainly the political risk factors to be related. Internal and external conflict, government stability, ethnic tensions and socioeconomic conditions were, among other political risk factors, found to be related to FDI flows in some specifications. Furthermore, a negative relationship between FDI inflows and foreign debt was observed and, for developing countries, a positive relationship with exchange rate stability. They concluded that multinational firms consider financial risk exposure to be of less concern than political risk when investing abroad. The findings of a relationship between FDI and political risk are consistent with other studies, such as Krifa-Schneider & Matei (2010) and Ramcharran (1999). In addition, Krifa-Schneider & Matei (2010) found that developing countries with favourable business environments attracted greater levels of FDI, while Ramcharran (1999) observed a positive relationship between FDI and the economic performance of a host country. Singh & Jun (1995) found political risk to be a significant determinant of FDI inflows for countries that had historically attracted high levels of FDI. For countries that had not attracted such levels, socio-political instability was found to have a negative impact on investments. Favourable business environment conditions were associated with a higher level of inward FDI, particularly for those countries that had low tariff rates on international transactions.

Arbatli (2011) studied the determinants of FDI inflows to emerging economies, focusing on economic policies. Low corporate tax rates and tariffs in the host country, a stable exchange rate and an educated workforce were found to be positively related to FDI. In terms of political risk factors, it was found that the amount of FDI inflows decreased when countries experienced strikes, government crises, revolutions or anti-government demonstrations. In a regional analysis of South Asia, Azam et al. (2012) studied the influence of political risk factors and macroeconomic policy on FDI inflows. Political risk was found to have a significant influence in this region on FDI, both in the short and in the long run. The macroeconomic policy uncertainty index that they constructed - a composite of monetary, fiscal and exchange rate policy indicators - was found to be related to FDI inflows in several countries. Furthermore, both the degree of trade openness (in the short run) and market size were positively related to FDI flows. Finally, Lewandowski (1997) studied the relationship between risk and FDI inflows in emerging economies from the former Soviet Union. Significant correlations were found with inflation level, credit risk, regulatory risk and political risk.

3 Setting

3.1 Data

The risk data used in this study comes from the FDI Country Risk Index (FDI-CRI, 2016). This dataset includes annual risk data (1994-2014) for 66 countries, half of which are considered to be emerging economies and half developed economies. The FDI-CRI's identification and subsequent classification of countries, which is adopted in this paper, is guided by three IMF (2016) criteria: i) per capita income; ii) export diversification, so that oil exporters with a high GDP per capita (e.g. Kuwait, Qatar) would not make it into the 'developed'

classification as the majority of their exports are oil; and iii) a country's degree of integration into the global financial system. The FDI-CRI uses a 0-100 scale, where a higher rating represents a lower level of country risk. It is composed of four subscales (*Figure 1*): i) economic and financial risk (EFR); ii) political risk (PR); iii) business environment risk (BER); and iv) environmental and climate change risk (ECCR). The first three subscales are given an equal weight of .3 each, while the fourth subscale has a weight of .1. Each of the subscales is composed of three or more subscale components with varying weights. For country $i = (1, ... \ N)$ in year $t = (1, ... \ T)$:

$$FDI\text{-}CRI_{it} = f(EFR_{it}, PR_{it}, BER_{it}, ECCR_{it}) \tag{1}$$

Figure 1: The FDI-CRI framework; score range in parentheses (FDI-CRI, 2016)

	Subscale	Subscale Component
The FDI Country Risk Index (FDI-CRI) *(0-100)*	A. Economic and Financial Risk (EFR) *(0-30)*	A1. Government Budget *(0-6)*
		A2. Economic Freedom and Globalisation *(0-12)*
		A3. Financial and Economic Stability *(0-12)*
	B. Political Risk (PR) *(0-30)*	B1. Violence, Conflict and Organised Crime *(0-9)*
		B2. Political Stability and Corruption in the Public Sector *(0-9)*
		B3. Human Rights and Gender Equality *(0-6)*
		B4. Demographic Pressures and Labour Force Participation *(0-6)*
	C. Business Environment Risk (BER) *(0-30)*	C1. Access to Finance *(0-6)*
		C2. Infrastructure and Trade *(0-6)*
		C3. General Business Environment and Corruption in the Private Sector *(0-6)*
		C4. Human Capital *(0-6)*
		C5. Public Health *(0-6)*
	D. Environmental and Climate Change Risk (ECCR) *(0-10)*	D1. Environment and Ecosystem *(0-6)*
		D2. Climate Change – Vulnerability and Susceptibility *(0-2)*
		D3. Climate Change – Coping and Adaptive Capacity *(0-2)*

Subscale A assesses the regulatory quality and effectiveness with which a country's government budget is managed (A1); the degree of monetary, business and financial freedom in a country and the extent to which its economy is integrated into the world economy (A2); as well as the stability of a country's economic and financial system based on such factors as inflation and exchange rates, or the general quality of the local economic institutional systems including monetary policy (A3). Subscale B assesses the extent to which a country is affected by war and ethnic or religious tensions and the degree in which society is exposed to violence and organised crime (B1); the durability and stability of a country's political and legal institutions and whether they are transparent or affected by corruption and nepotism (B2); gender equality and if basic human rights are effectively protected by a country based on legislation and (foreign) policymaking (B3); as well as demographic pressures in a country based on such factors as the dependency ratio and unemployment rate (B4). Subscale C assesses the ease of financial access for businesses based on the quality and soundness of

a country's financial infrastructure, interest rates and tariffs (C1); the overall quality of a country's infrastructure and the ease of trade for (international) businesses investing in a country (C2); the general quality of the business environment based on such factors as the effective protection and enforcement of intellectual property rights, the ease of starting a new company in the country, government regulations and taxation policies for businesses (C3); the educational attainment of a country's workforce, the quality of its educational system and the extent to which a country might be affected by a brain drain (C4); as well as public health risks and the quality of a country's healthcare system and infrastructure (C5). Finally, subscale D assesses the quality of environmental policy and the general condition of a country's environment and ecosystem (D1); the potential threat of climate change to a country based on its vulnerability and susceptibility (i.e. risk factors that are largely beyond a country's control) (D2); and its coping and adaptive capacity to climate change (i.e. risk factors that are largely within a country's control) (D3) (FDI-CRI, 2016).

Moreover, this study relies on the World Development Indicators (World Bank, 2016) and the Human Development Index (UNDP, 2016) for the FDI country data in addition to other control variable information.

3.2 Theoretical model

FDI theories can generally be classified into macro and micro theories. Over time, a third category, the so-called development theories of FDI that combine aspects from both macro and micro theory, have gained ascendency. These include product-life cycle theory, Japanese FDI theories and the FDI five-stage or Investment Development Path (IDP) theory. The latter will serve as the theoretical model for analysis in this study. IDP theory (Dunning, 1986; Dunning & Narula, 1996) suggests that FDI develops through a path that expresses an inter-temporal dynamic relationship between a country's state of economic development - proxied by GDP (per capita) - and its net outward investment (NOI) position, which is defined as the gross net outward less the inward direct investment stock.

$$NOI_{it} = FDIout_{it} - FDIin_{it} \qquad (2)$$

IDP theory draws on Dunning's (1980; 1988) eclectic paradigm, also known as the OLI framework (ownership-location-internalization). It envisages economic development as a succession of structural changes and contends that such economic and social transformations have a systematic relationship with the behaviour of inward and outward FDI flows (Narula & Guimón, 2010). IDP theory suggests that firms would only engage in FDI when three related conditions are together fulfilled: i) investing firms should have ownership advantages vis-à-vis other firms; ii) it is beneficial for the firms to internalize such advantages rather than to use the market to transfer them to foreign firms; and iii) there are some locational advantages in using a firm's ownership advantages in a foreign locale (Nayak & Choudhury, 2014). Country risk factors are relevant in the context of all three conditions. When it comes to the internalization process and ownership advantages, which are firm specific and include both tangible and intangible assets, it can be understood in relation to the degree to which patents and property rights are effectively protected in the host country. Location advantages are connected to the relative advantages between the investor's home country and the potential host countries (Nayak & Choudhury, 2014), which can include such factors as a stable political and economic environment, low production and transportation costs and favourable tax treatments for multinational firms.

5
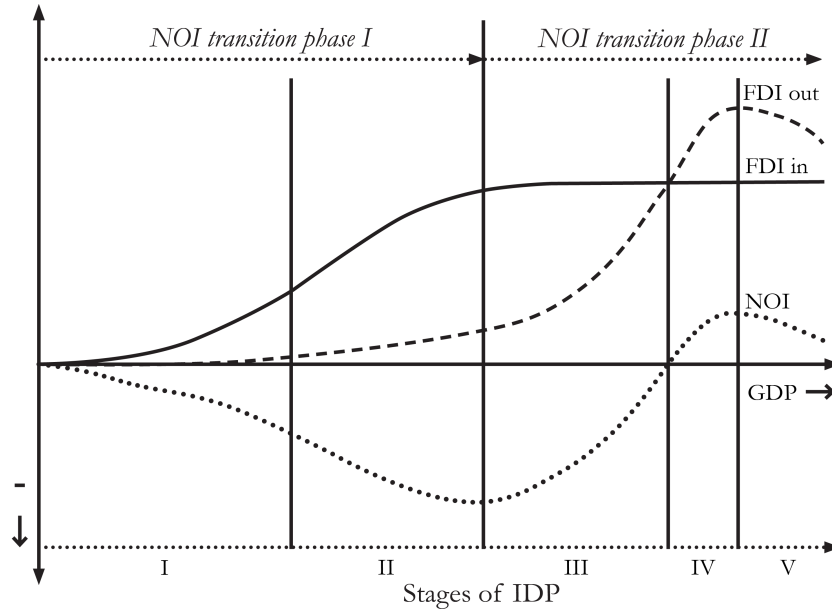
According to IDP theory, countries evolve through five main stages of development (*Figure 2*). These five stages are defined according to the propensity of a country to be a net FDI recipient or exporter. During the first stage, countries are in a pre-industrialisation phase; inward FDI is very low and will typically include mostly natural resource seeking investments, while outward FDI is almost non-existent. Ownership and locational advantages for firms are limited as a result of e.g the limited size of the domestic market, poor infrastructure, a low-skilled labour force or inappropriate institutions and government policies (Narula & Guimón, 2010). In the second stage of development, inward FDI grows significantly as specific locational advantages, such as improvements in basic infrastructure, raise the attractiveness of countries for multinational enterprises; while outward FDI remains limited because ownership advantages in the host country tend to be still relatively weak. Consequently, at this development stage a country's NOI becomes increasingly negative and the inward FDI stock will usually rise at a faster rate than its GDP.

Stage three, which will typically include emerging economies, is associated with less spectacular inward FDI growth rates. As a result of improvements in ownership advantages, outward FDI increases as domestic firms become more competitive compared to foreign firms in the domestic market. Domestic firms might engage in resource seeking investments in less developed countries and in market - and strategic asset seeking investments in more developed economies (Buckley & Castro, 1998). While outward FDI growth may surpass inward FDI growth, resulting in an upward NOI trend, the total inward FDI stock of countries at this development stage remains higher and the overall NOI position negative. From stage four onwards, the NOI position turns positive after continued outward FDI growth, underscoring the development of ownership advantages (Narula & Guimón, 2010). As labour costs in the domestic market increase, outward FDI will be directed to low wage countries that are at an earlier stage of development. Finally, Dunning & Narula (1996) postulate the existence of a fifth IDP stage, which corresponds to today's situation in the leading developed economies. With permanently high stocks of both inward and outward FDI, the NOI position of countries will reach an equilibrium state and revolve around zero.

At this stage, the absolute size of the economy will no longer be a reliable guide for a country's competitiveness.

Figure 3: NOI-GDP trendline for the emerging (△) and developed (O) economies of interest (LOESS curve; percentile country averages for the 1994-2014 period)
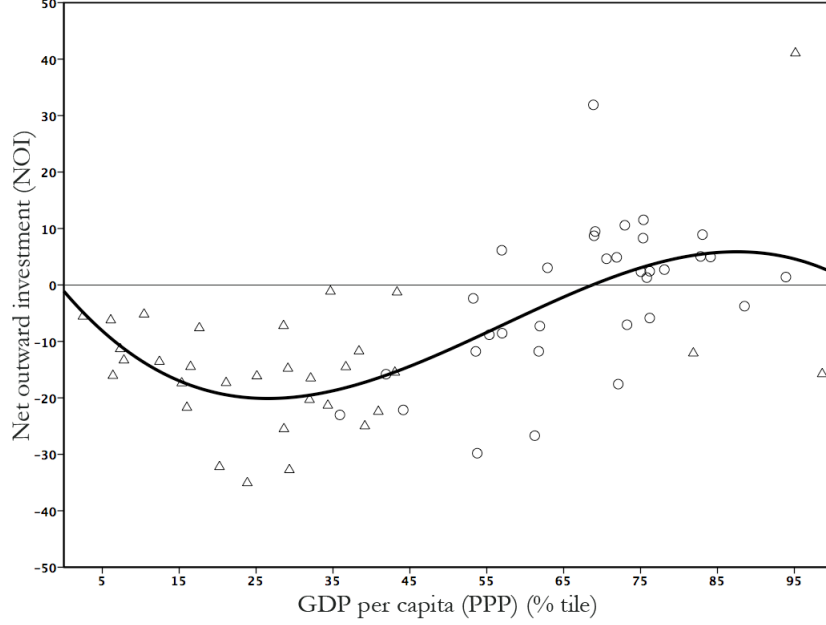
Figure 3 shows the relationship between a country's GDP per capita (PPP) and its NOI position based on the emerging and developed economies included in the FDI-CRI. The observed trend is consistent with IDP theory. The breakpoint from a downward (stage II) to a clear upward (stage III) NOI trend - i.e. that point at which a country's outward FDI growth rate surpasses its inward growth rate - occurs at approximately the 30th GDP percentile, which corresponds to an actual GDP per capita (PPP) of approximately 15 thousand US\$ based on the countries included. The area left of this breakpoint, the first NOI transition phase, contains only emerging economies. Note that under the assumption that these countries truly meet the 'emerging' classification, all of them should already be at the second IDP stage. This is supported by the fact that they already have a substantial amount of outward FDI. On average, both FDI in- and outflows are however significantly lower ($p<.01$) for the countries in the first transition phase compared with the second, while their exposure to country risk is significantly higher for all components of the FDI-CRI.

4 Country risk, FDI flows and convergence trends

4.1 Panel regressions

Based on the identification of two NOI transition phases in the IDP, this section focuses on the relationship between FDI flows and country risk. The following model is estimated:

$$ln\ FDIin_{it} = \alpha_i + \delta Z'_{it} + \beta Risk_{it} + \epsilon_{it} \tag{3}$$

Where *FDIin* is the amount of per capita FDI inflows to a given country in a given year;

$Z = (z_1, \ldots z_k)$ is a vector for the control variables included; *Risk* is either the i) overall performance of a country on the FDI-CRI; ii) the performance on a given subscale; or iii) the performance on a subscale component. $\delta = (\delta_1, \ldots \delta_k)$ is the estimated coefficient for the control variables and β the risk coefficient of interest. Likewise, for FDI outflows (*FDIout*):

$$ln\ FDIout_{it} = \alpha_i + \delta Z'_{it} + \beta Risk_{it} + \epsilon_{it} \qquad (4)$$

For both *FDIin* and *FDIout*, the individual effects of the different FDI-CRI risk indicators (*Figure 1*) are thus estimated, totalling 20 different models for each dependent variable. In order to identify the risk factors that are of particular relevance during the different stages of the IDP, these models are estimated including i) all countries (NOI transition phase I and II); ii) only those countries that are in the first transition phase; and iii) only those that are in the second transition phase. In line with other studies and IDP theory, the control variables that are used include *GDP per capita (PPP) (ln)*, *GDP growth (%)*, *Trade/GDP (ln)* (a proxy for trade openness) and the Human Development Index (*HDI*).

Table 1: Panel regressions; p-values of the risk coefficient in each model

	FDI inflows			FDI outflows		
Model	Phase I & II	Phase I	Phase II	Phase I & II	Phase I	Phase II
FDI-CRI	.007***	.033**	.032**	.000***	.041**	.000***
A (EFR)	.000***	.003***	.021**	.000***	.003***	.000***
A1	.011**	.239	.033**	.004***	.411	.005***
A2	.041**	.037**	.485	.000***	.013**	.015**
A3	.000***	.001***	.004***	.000***	.006***	.000***
B (PR)	.416	.606	.192	.655	.711	.886
B1	.835	.622	.557	.691	.260	.850
B2	.449	.443	.993	.423	.973	.083*
B3	.095*[a]	.605	.012**[a]	.918	.180	.889
B4	.377	.467	.931	.239	.730	.229
C (BER)	.015**	.207	.009***	.000***	.290	.000***
C1	.004***	.048**	.012***	.000***	.114	.000***
C2	.208	.231	.551	.070*	.500	.097*
C3	.090*	.027**	.549	.037**	.775	.006***
C4	.295	.254	.016**	.089*	.988	.003***
C5	.669	.102	.364	.286	.468	.835
D (ECCR)	.078*	.168	.193	.434	.360	.940
D1	.215	.183	.422	.945	.238	.230
D2	.090*	.947	.082*	.252	.572	.285
D3	.058*	.129	.108	.016**	.910	.002***

Significance of coefficients denoted by * (.1), ** (.05) and *** (.01). Estimates based on robust fixed effect model. Adj.R^2 of the models vary between .470 and .776 (dependent variable: FDI inflows, 3-year MA) and between .487 and .823 (dependent variable: FDI outflows, 3-year MA). N countries = 65 (phase I and II), 21 (phase I) and 44 (phase II) respectively. N years = 21. The control variable estimations (not included) are consistent with other studies and IDP theory as the variable GDP per capita (PPP) was found to be significant in all models (and in both NOI transition phases), while the other control variables were only significant in some specifications.

[a] Significant negative coefficient

From *Table 1* it follows that, controlling for a country's general state of development, country risk exposure (FDI-CRI) is a good indicator of per capita FDI in- and outflows during both transition phases of the IDP. Specifically, a country's overall exposure to economic and financial risk factors (A), and in particular its degree of economic stability (A3), are found to be related to FDI flows. A good performance of countries on the government budget risk component (A1) is associated with a higher level of FDI in- and outflows, but mainly during the second transition phase (from an emerging to a developed economy). A country's degree of economic freedom and market globalisation (A2) is related to FDI outflows in both transition phases but only to FDI inflows during the earlier stages of development.

Contrary to some of the studies previously discussed, political risk factors (B) are generally not found to be related to FDI. A favourable low-risk business environment (C) is associated with a higher level of both inward and outward FDI, but mainly during the second transition phase. Specifically, access to finance (C1), quality of infrastructure and trade (C2), the general business environment of a country including the extent to which its private sector is affected by corruption (C3), as well as human capital (C4) are all related to FDI outflows during the later stages of the IDP. A good performance on the access to finance (C1) subcomponent is associated with a higher level of inward FDI as well, during both the first and second transition phase. General business environment risk exposure (C3) and human capital (C4) are related to FDI inflows in the first and second transition phase respectively.

The overall exposure of countries to environmental and climate change risk factors (D) is not found to be related to FDI flows during either the first or second NOI transition phase, but only when the entire development path is considered ($p<.1$). During the second transition phase the vulnerability and susceptibility of countries to climate change (D2) is related to FDI inflows, while their coping and adaptive capacity (D3) is related to FDI outflows and might, in the later stages of development, proxy for the quality of a country's risk management system during environmental and natural disasters.

4.2   Unit-root tests

Given the observed relationship between various types of country risk and FDI, this section examines whether per capita FDI in- and outflows tend to converge between countries over time and if a similar trend might be observed in terms of their state of development and exposure to country risks. In the context of the IDP and taking into consideration the steady increase in global FDI flows over the past decades, the observation of a convergence trend might hint towards a catch-up effect of emerging economies over time.

Unit-root tests can help determine whether a time series variable is stationary and have previously been used to study the presence of a convergence trend in FDI flows between countries (e.g. Kottaridi & Thomakos, 2007). Suppose y_{it} is generated by the first-order autoregressive process:

$$y_{it} = \alpha_i + \beta t + \rho_i y_{i,t-1} + \epsilon_{it} \tag{5}$$

which can be transformed into the augmented Dickey-Fuller (ADF) model:

$$\Delta y_{it} = \alpha_i + \beta t + \gamma_i y_{i,t-1} + \sum_{j=1}^{p_i} \zeta_{ij} \Delta y_{i,t-j} + \epsilon_{it} \tag{6}$$

9

testing the hypotheses H_0: $\gamma = 0 \; \forall i$ (non-stationarity) vs. H_a: $\gamma < 0$ for some i (stationarity), where $\gamma_i := \rho_i - 1$; $\Delta y_{it} = y_{it} - \bar{y}_t$ where $\bar{y}_t := n^{-1} \sum_{i=1}^{n} y_{it}$; and $\epsilon_{it} \sim \; iid\mathcal{N}(0, \sigma_{i^2})$. β is the coefficient of the time trend and p is the lag order of the first-difference autoregressive process. For a given variable y, there is convergence between country i and country j if and only if their difference $y_{it} - y_{jt}$ is stationary with zero mean.

Based on the convergence coefficient ρ, the implied half-life h can subsequently be estimated:

$$h := \begin{cases} \ln(0.5)/\ln(\rho), & \text{if } \rho < 1 \\ \infty & \text{otherwise} \end{cases} \tag{7}$$

For a given variable, the half-life estimate can be interpreted as the time (i.e. number of years) needed to close the convergence gap between countries, in terms of their performance on that variable, in half.

Table 2: *ADF unit-root tests, convergence coefficients and implied half-life estimates of per capita FDI in- and outflows; findings presented by NOI transition phase*

	FDI inflows			FDI outflows		
	Phase I & II	Phase I	Phase II	Phase I & II	Phase I	Phase II
ADF (p-value)	.029**	.925	.000***	.254	.764	.075*
ρ	.969	.979	.959	.961	.966	.956
h (years)	22.01	32.66	16.56	17.42	20.04	15.40

ADF corresponds to the augmented Dickey-Fuller unit-root test; significance denoted by * (.1), ** (.05) and *** (.01). FDI in- and outflows estimates based on 3-year MA. Constant and time trends included.

Considering *Table 2*, a general convergence trend between countries in per capita FDI inflows can be observed over time when the entire IDP is considered. This, however, is not the case when it comes to FDI outflows. No convergence trends are found between countries during the first transition phase. Between the countries in the second transition phase, however, both FDI in- and outflows tend to converge over time. Following IDP theory (*Figure 2*), an explanation for this observation might be that whereas the first transition phase is characterised by strong FDI growth rates, as countries economically progress from an emerging to a fully developed economy these rates will tend to slow down at the beginning (inward FDI) and end (outward FDI) of the second NOI transition phase. The half-life estimates indicate that the convergence in FDI flows between countries is a long-term process; one that might, however, accelerate during the later stages of the IDP.

Table 3: ADF unit-root tests, convergence coefficients and implied half-life estimates of the control and FDI-CRI variables; findings presented by NOI transition phase

Variable	Phase I & II			Phase II		
	ADF (p-val.)	ρ	h (years)	ADF (p-val.)	ρ	h (years)
GDP per capita	.057*	.992	88.52	.000***	.975	27.49
GDP growth	.000***	.846	4.16	.000***	.893	6.10
Trade/GDP	0.028**	.978	30.88	.964	.984	43.25
HDI	.012**	.977	30.05	.465	.963	18.49
FDI-CRI	.000***	.968	21.11	.000***	.970	22.45
A (EFR)	.000***	.970	22.60	.000***	.969	22.01
A1	.000***	.970	22.76	.000***	.971	23.23
A2	.000***	.971	23.55	.000***	.979	31.89
A3	.130	.964	18.75	.000***	.955	15.05
B (PR)	.022**	.985	47.13	.253	.979	32.35
B1	.294	.984	42.18	.763	.972	24.68
B2	.000***	.952	14.12	.052*	.940	11.13
B3	.984	.975	27.72	.983	.951	13.74
B4	.987	.961	17.42	.989	.985	45.86
C (BER)	.000***	.964	18.69	.000***	.989	59.93
C1	.004***	.960	17.16	.070*	.974	25.91
C2	.000***	.990	68.97	.000***	.993	98.67
C3	.000***	.957	15.62	.000***	.971	23.47
C4	.991	.982	37.12	.992	.987	54.66
C5	.993	.988	56.94	.991	.997	247.21
D (ECCR)	.988	.943	11.79	.990	.936	10.53
D1	.989	.945	12.25	.988	.942	11.54
D2	.982	.922	8.52	.822	.929	9.47
D3	.000***	.993	94.61	.000***	.985	47.13

ADF corresponds to the augmented Dickey-Fuller unit-root test; significance denoted by * (.1), ** (.05) and *** (.01). GDP per capita (PPP), GDP growth (%) and Trade/GDP (%) estimates based on 3-year MA. Constant and time trends included.

Table 3 provides an overview of the ADF unit-root tests for the various risk indicators from the FDI-CRI and the control variables used in the panel regressions. Of interest is the question whether the observed convergence trends in FDI in- and outflows are reflected in similar trends of convergence between countries over time when it comes to their state of development and exposure to country risk.

When the entire development path is considered, countries converge over time in terms of both their states of economic and human development. The half-life estimates indicate that, with the exception of GDP growth rates which are inherently more volatile and on average higher in emerging economies (resulting in an opposite convergence trend compared to the other indicators), economic convergence is a long-term process. Focusing only on the second transition phase, convergence between countries is observed for GDP per capita and GDP growth but not for trade openness and human development. The lower half-life estimate for GDP per capita in the second transition phase might indicate that the rate of economic convergence increases during the later stages of the IDP, as growth rates gradually decline.

Convergence trends between countries over time in terms of risk exposure are found for

overall country risk (FDI-CRI), economic and financial risk (A) and business environment risk (C) exposure. A convergence trend in political risk (B) exposure is found as well (for the entire IDP), but only for the subcomponent political stability and corruption in the public sector (B2). For subscales A and C on the other hand, risk convergence is observed for multiple subcomponents, which include: government budget (A1), economic freedom and globalisation (A2), access to finance (C1), infrastructure and trade (C2) and general business environment and corruption in the private sector (C3). For subscale D, convergence between countries is only seen when it comes to their coping and adaptive capacity to climate change (D3). Finally, it is found that countries converge over time in terms of their financial and economic stability (A3), but only during the second NOI transition phase.

The findings seem to suggest that the general development of economic convergence between countries over time has come together with similar trends of convergence in terms of economic - and business environment risk exposure on the one hand, and inward (phase I and II) as well as outward (phase II) FDI flows on the other. For the second transition phase, the findings can be summarised in the following model (*Figure 4*).

Figure 4: Visual representation of the FDI convergence process between countries during the second NOI transition phase of the IDP
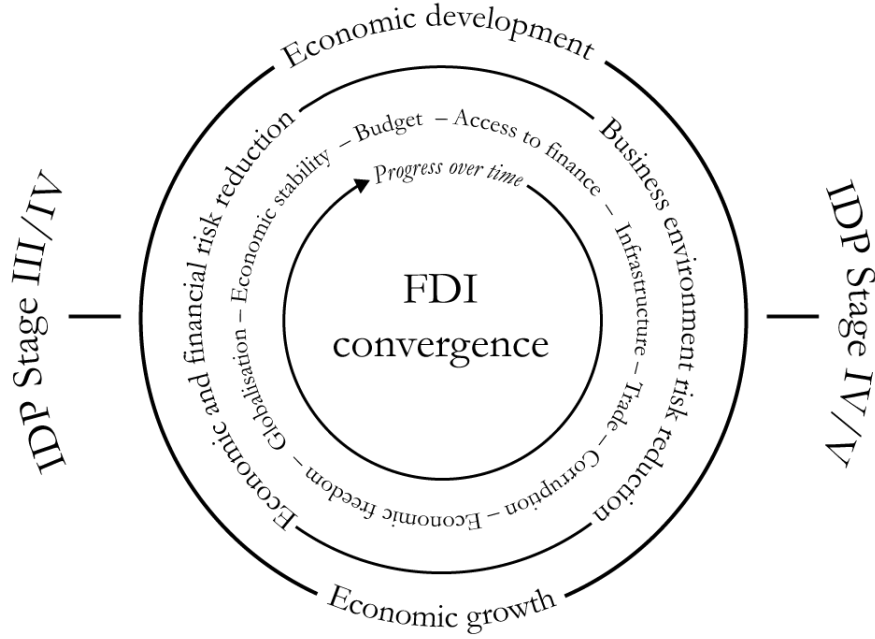
5 Conclusion

This study explored the relationship between country risk and foreign direct investment (FDI) flows in the context of the Investment Development Path (IDP) and in relation to the process of economic convergence. In the panel regressions, a relationship was found between economic - and business environment risk exposure on the one hand and both per capita FDI in- and outflows on the other. As countries progress economically through the various stages of the IDP, a low level of country risk exposure was found to be positively related to FDI over time. The findings also suggest that some factors, such as a country's government budget, might be of particular importance during certain stages of the IDP.

The findings were inconsistent with some of the studies discussed, in the sense that po-

litical risk exposure was generally not found to be related to FDI. Although there are strong and significant positive correlations between all of the FDI-CRI's political risk subcomponents and both inward and outward FDI (p<.01), such a relationship is not found over time when taking into consideration a country's state of development. One explanation for this could be that political risk factors are inherently more static than e.g. economic factors. When it concerns emerging economies, political progress tends to be a particularly slow process. This might help explain why there was no convergence trend observed in political risk exposure during the second net outward investment (NOI) transition phase. Although FDI flows to (and from) both the developed and emerging economies of interest in this study have significantly increased during the 1994-2014 period, based on the FDI-CRI indicators it are only the developed economies that have made significant progress on average in terms of reducing their exposure to political risk (p<.05), while the emerging economies have been lagging behind. Similar issues might play a role when it comes to the environmental and climate change risk indicators. In addition, with regards to the earlier discussion about the conceptualisation of country risk, it should be noted that the FDI-CRI's political risk assessment methodology and included components might differ from the risk indicators used in other studies.

Unit-root tests showed that during the second NOI transition phase in the IDP, countries converge in terms of both inward and outward FDI, their state of economic development and exposure to economic - and business environment risk factors. These developments hint towards a general catch-up effect of emerging economies over time. Although a causal relationship between the different convergence trends is not established, it is hypothesised that economic convergence can be understood as a long-term process that over time, for certain types of risks, comes together with similar convergence trends; both of which can play a role in the FDI convergence process. While continued progress in terms of the further reduction of economic - and business environment risk exposure should be aimed for, policies that will help diminish the exposure of emerging economies to political risk, such as those that are targeted at reducing corruption in the public sector or legislation that ensures the effective protection of human rights, could bring a halt to the widening gap in political risk exposure and potentially help accelerate the FDI convergence process in the long-run.

6   References

Arbatli, E. (2011) Economic policies and FDI inflows to emerging market economies. *IMF working paper*

Azam, M., Khan, M. and Iqbal, N. (2012) Impact of political risk and uncertainty on FDI in South Asia. *Transit Studies Review*. Vol.19, pp.59-77

Baek, K. and Qian, X. (2011) An analysis on political risk and the flow of foreign direct investment in developing and industrialised economies. *Economics, Management and Financial Markets*. Vol.6(4), pp.60-91

Bouchet, M., Clark, E. and Groslambert, B. (2003) Country risk assessment - A guide to global investment strategy. *Wiley Finance*

Buckley, P. and Castro, F. (1998) The Investment Development Path: The case of Portugal. *Transnational Corporations*. Vol.7(1)

Busse, M. and Hefeker, C. (2005) Political risk, institutions and foreign direct investment. *HWWA discussion paper*, 315

Dunning, J. (1980) Toward an Eclectic Theory of international production: Some empirical tests. *Journal of International Business Studies*. Vol.11(1), pp.9-31

Dunning, J. (1986) The Investment Development Cycle revisited. *Weltwirtschaftliches Archiv*. Vol.122, pp.667-677

Dunning, J. (1988) The eclectic paradigm of international production: A restatement and some possible

extensions. *Journal of International Business Studies*. Vol.19(1), pp.1-31

Dunning, J. and Narula, R. (1996) The Investment Development Path revisited: Some emerging issues in foreign direct investment and governments: Catalysts for economic restructuring. *Routledge*

FDI-CRI (2016) *The FDI Country Risk Index*, Version 2014. fdi-cri.org

Hayakawa, K., Kimura, F. and Lee, H. (2013) How does country risk matter for foreign direct investment? *The Developing Economies*. Vol.51(1), pp.60-78

IMF (2016) FAQ - World Economic Outlook (WEO). imf.org

Kottaridi, C. and Thomakos, D. (2007) Global FDI convergence patterns? Evidence from international comparisons. *Journal of Economic Integration*. Vol.22(1), pp.1-25

Krifa-Schneider, H. and Matei, I. (2010) Business climate, political risk and FDI in developing countries: Evidence from panel data. *International Journal of Economics and Finance*. Vol.2(5), pp.54-65

Lewandowski, J. (1997) Risk and foreign direct investment in emerging economies: Lessons from the former Soviet Union. *Middle States Geographer*. Vol.30, pp.97-104

Méon, P. and Sekkat, K. (2012) FDI waves, waves of neglect of political risk. *World Development*. Vol.40(11), pp.2194-2205

Nayak, D. and Choudhury, R. (2014) A selective review of foreign direct investment theories. *ESCAP working paper*, 143

Narula, R. and Dunning, J. (2010) Multinational enterprises, development and globalisation: Some clarifications and a research agenda. *Oxford Development Studies*. Vol.38(3), pp.263-287

Narula, R. and Guimón, J. (2010) The Investment Development Path in a globalised world: Implications for Eastern Europe. *Eastern Journal of European Studies*. Vol.1(2)

Ramcharran, H. (1999) Foreign direct investment and country risk: Further empirical evidence. *Global Economic Review*. Vol.28(3), pp.49-59

Singh, H. and Jun, K. (1995) Some new evidence on determinants of foreign direct investment in developing countries. *The World Bank*

UNDP (2016) The Human Development Index. hdr.undp.org

White, C. and Fan, M. (2006) Risk and Foreign Direct Investment. *Palgrave Macmillan*

World Bank (2016) World Development Indicators. data.worldbank.org

The UNU-MERIT WORKING Paper Series