Track 2: Developments in IB theory

Competitive Session

Institutional distance and its impact on location choice

Analysis of the Swiss Foreign Direct Investments

Abstract

The main purpose of the study is to assess the impact of institutional distance on the location choice of FDI. Based on the notion of "liability of foreignness" (Zaheer, 1995), institutional distance with a specific host country is supposed to have a negative effect on the level of FDI in this host country. However, this effect is hypothesized to be reduced by the institutional quality of the host country compared to the home country one. Using aggregate data on Swiss OFDI, the study attempts to determine to what extent institutional distance and quality influence the location choice of OFDI. Institutional distance (formal and informal) is measured using the Mahalanobis approach instead of the standard Euclidean method. Using the random effect generalized least squares, the results indicate that the informal institutional distance is an important factor in the Swiss OFDI location. The same result is found for the services sub-sample. Additionally, for service sample, the formal institutional distance has a negative effect - as expected - that is offset with the better host institutional quality. For the manufacturing sub-sample, the institutional distance does not impact significantly the location choice, whereas the institutional quality does positively.

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1 Introduction

As the world becomes more and more globalized, distance separating countries seems to disappear. Some scholars consider that globalization has led to the "Death of distance" (Cairncross, 1997). In opposition to this view, others affirm that "distance is fundamental in international business (IB) theory, and implicitly or explicitly occupies a central position in all its subfields" (Nachum & Zaheer, 2005: 747). Analyzing the foreign direct investments (FDI) undertaken by multinational enterprises (MNEs), the observation is evident, as noted by Cantwell (2009) and Rugman & Verbeke(2007): FDI are primarily undertaken in host regions geographically and institutionally closer to the home country. Thence, distance still matters in the internationalization process of firms.

In the last decade, Van Tulder (2010) notes that the research tends to be oriented towards the institutional and governance distance between countries. Many scholars have emphasized the role of institutions in the internationalization process of firms (Dunning & Lundan, 2008). Institutional distance defined as "the similarity or dissimilarity between two countries in terms of institutions" (Kostova, 1996) can impact the location choice of foreign direct investments. The central issue is to define institutions. Different conceptualizations exist: from North (1990) distinguishing formal and informal institutions to Ghemawat (2001) and his "CAGE" (cultural, administrative, geographic, economic) framework . This study classifies institutions according to North (1990). North distinguishes two types of institutions, the formal and the informal ones. The formal institutions are defined as all the rules setting by a society, whereas the informal

institutions refer to codes of conduct, norms and conventions (North, 1990: 36 and 47).Many studies have tested the role of institutional distance on the location choice and found overall a negative relationship (see Aleksynska & Havrylchyk, 2013; Beugelsdijk et al., 2004; Cezar & Escobar, 2013; Du, 2009; Kuncic & Jaklic, 2013; Lankhuizen et al., 2011; Pogrebnyakov & Maitland, 2011; Seyoum, 2009; Trevino & Mixon, 2004; Z. Wu, 2009; Xu & Shenkar, 2002). However, the diversity of conceptualization and operationalization of institutional distance makes difficult the comparison between studies. For that reason, this study attempts to clearly argument the choice of institutional distance measures.

Additionally, in this context, the study of the Swiss case brings another piece of evidence to attempt to validate the theoretical relationship between institutional distance and location. Switzerland reports a significant level of FDI, primarily directed to European countries (UNCTAD, 2014). This study aims to understand whether institutional distance can be a significant factor explaining this trend. Recent studies on Swiss OFDI focus primarily on other determinants to attempt to explain this trend (Arvanitis et al., 2011; Arvanitis et al., 2012; Baldegger, 2013).

To that purpose, the theoretical analysis explains the effect of both dimensions of the institutional distance (informal and formal) on the foreign direct investments in a specific host country, primarily based on the concept of “liability of foreignness” developed by Zaheer (1995). Institutional quality is added as a moderator of the relationship OFDI-institutional distance. For the empirical study, the properties of distance are analyzed in depth and the Mahalanobis approach is preferred to the standard Euclidean method, the latter used in most studies on institutional distance (Ando & Paik, 2013; Ando, 2012; Añón Higón & Manjón Antolín, 2012; Beugelsdijk et al., 2004; Chang, Kao et al., 2012; De Beule et al., 2013; Dikova, 2012; Du, 2009;

Elango et al., 2013; Estrin et al., 2009; Ionascu et al., 2004; Kittilaksanawong, 2009; Lankhuizen et al., 2011; Maseland & Van Hoorn, 2013; Wu, 2009; Yiu & Makino, 2002). First, using random effect generalized least squares method for panel data, the estimations assess the impact of aggregate measures of institutional distance on the Swiss outward foreign direct investments (OFDI) stocks by country of destination. The sample is then divided on two sub-samples: manufacturing and services. Second, the institutional distances are decomposed in different dimensions. The institutional distances are re-calculated individually for each dimension as the absolute difference and their impact on OFDI is assessed using random effect generalized least squares model.

The paper is structured as follows. The second section explains the theoretical relationship between institutional distance and location choice, whereas the third section considers other location determinants. The fourth section is dedicated to the methodology and data. The fifth section reports the results. Finally, the sixth section concludes the paper.

2 Institutional distance and location choice

In the academic literature, a great effort has been done in attempting to explain why firms invest in foreign countries. In other words, scholars attempt to understand why – under which conditions - firms undertake FDI in foreign countries. Among the theories developed over the last decades, the eclectic paradigm of Dunning (1981) is one of the sounder theories that have been used in recent studies focused on FDI. The paradigm includes elements from previously developed theories, i.e. the monopolistic advantage theory (Hymer, 1960), the transaction cost / internalization theory (P.J. Buckley & Casson, 1976) and the product life cycle theory (Vernon, 1966). It tries to explain why firms decide to invest across their borders. According to Dunning's

view, firms have to possess three advantages to overcome the costs due to foreignness: ownership-specific advantages (or O-advantages), the location-specific advantages (or L-advantages) and the internalization advantages (or I-advantages). The location-specific advantages give incentives to firms to invest in a specific country. These advantages can be of different natures, from the country endowments in natural or created resources to the reduction of the transportation costs, as well as the favorable macroeconomic environment of the host country towards FDI (Dunning & Lundan, 2008: 101-102).

Besides these OLI advantages encouraging firms to undertake FDI, the Uppsala school develops a model based on "psychic distance" (Johanson & Vahlne, 1977). "Psychic distance" is defined as "the factors preventing or disturbing firms learning about and understanding of a foreign environment" (Vahlne & Nordström, 1992: 3). In early stages of internationalization, the model developed by Johanson & Vahlne (1977) and Vahlne & Nordström (1992) posits that firms invest in psychically closer countries, similar to their own. This can be explained by the concept of "liability of foreignness".

Firms investing in a foreign country are faced with the issues of foreignness compared to the domestic firms of the host country. Foreignness implies different additional costs for the foreign firms compared to the local firms. These costs are defined by Zaheer (1995) as the" liability of foreignness" (LOF). According to Zaheer (1995: 342), the liability of foreignness is "the costs of doing business abroad that result in a competitive disadvantage for an MNE subunit". These costs have been firstly brought out by Hymer (1976) in his theory on international operations of national firms. According to Luo et al. (2002: 284), these costs can be assimilated to hazards and uncertainties arising by distances at different levels (spatial, cultural and institutional). Eden &

Miller (2004) consider three types of hazards - the unfamiliarity hazards, the discrimination hazards and the relational hazards – primarily due to differences in institutions.

Unfamiliarity hazards

The unfamiliarity hazards arise because of the lack of host-market knowledge or experience. Hymer (1976: 34) highlights the fact that "national firms have the general advantage of better information about their country: its economy, its language, its law and its politics." On the contrary, the foreign firms need to "acquire" these institutional data on the host country. The acquisition of these types of information is costly for firms investing in a foreign country and can impede the firm to invest. According to the transaction costs theory (Buckley & Casson, 1976), the benefits have to outweigh the costs for a market entry in an institutionally distant country. The costs depend on the nature of the required institutional data of the host country. With respect to formal institutional data (i.e. data on laws, legislation, politics), the difficulty to "acquire" them is moderated since the formal institutions are relatively easily accessible to foreign firms (Scott, 2008). Additionally, the costs decrease substantially for the specific host country, until completely disappearing. As noted by Caves (1971: 13), the costs of knowledge acquisition are assimilated to fixed costs for each host country, independent on the firm invested resources. However, Petersen & Pedersen (2002) note that a certain level of involvement from the investing firm in the learning process is necessary to consistently decrease the associated costs. With respect to informal institutional data (i.e. culture, language, norms, customs, religion, mode of thinking), their acquisition requires a deep integration and absorption of the informal mechanisms ruling the host society (Scott, 2008). This is a long-lasting process that cannot be finalized in a short term. The acquisition of these informal institutional data is very costly for the foreign firms, especially for the human resources management.

Institutional distance (either formal or informal) increases the unfamiliarity between the home and the host country and hampers investments in this particular host country.

Discrimination hazards

The discrimination hazards refer to the "discriminatory treatment inflicted on the foreign firm relative to local firms in the host country. […] by the government, consumers or the general public of the host country" (Eden & Miller, 2004: 11). This increases the difficulty to gain external legitimacy from the host country. Hymer (1976) and Mezias (2002: 268) had already pointed out this issue. The advantages enjoyed by domestic firms, compared to their foreign counterparts, can be of different nature, e.g. government subsidies, exclusive contract arrangements. As pointed out by Vernon (1977), this discrimination can also be due to the fact that MNEs are seen as a threat to the technological and industrial development of the host country. The concept of "liability of outsidership" developed by Johanson & Vahlne (2009) is the central issue. In fact, the lack of local embeddedness in the host country can potentially discriminate the outsiders for the benefit of the local firms. With respect to the relation with institutional distance, these discriminatory behaviors will be intensified when the institutions of the home and the host countries are highly different in formal and informal terms. As in the case of the unfamiliarity hazards, the informal institutional differences are more difficult to be overcome. They require time and a long integration process.

Relational hazards

The relational hazards are assimilated to the costs due to organizational difficulties in operating in foreign markets, either intra-organizational costs (arising from inside relations) or inter-organizational costs (arising from firm-to-firm relations) (Eden & Miller, 2004: 12). Intra-

organizational relations (or networks) refer to the relation between parent firm and its subsidiaries, whereas inter-organizational relations (or networks) refer to the external relations with suppliers, partners and competitors. Investing in foreign countries significantly influences these networks and creates associated costs. At the intra-organizational level, the differences in the organizational culture (resulting from national culture) can lead to internal misunderstanding and end in internal conflicts (Dow & Larimo, 2007). The complexity for human resources management increases the costs, especially between institutionally distant countries. At the inter-organizational level, the costs arise primarily due to the lack of trust between partners, intensified if the respective institutional background is diametrically different (Eden & Miller, 2004: 12; Kostova & Zaheer, 1999). To sum up, the relational costs increase with the institutional distance.

Institutional distance and internationalization process

As pointed out by Bae & Salomon (2010): "At the root of the liability of foreignness lie differences in institutions across countries." (Bae & Salomon, 2010: 328). In other words, the costs of doing business abroad increase due to higher institutional differences between the home and host country (either formal or informal). Figure 1 shows the theoretical effect of institutional distance on the internationalization process of firms, distinguishing between firms originating from Emerging Economies and from Developed Economies. In both cases, when firms invest in similar countries, the institutional distance is small and results in low LOF, fostering investments in similar countries. However, the internationalization process in dissimilar countries is harder for firms from Emerging Economies. The high institutional distance results in even higher LOF due to the discriminatory behavior of Developed Economies against them, hampering investments in dissimilar countries (Kuncic & Jaklic, 2013).

Hypothesis 1a: The larger the formal institutional distance between the home and the host country, the lower is the level of FDI in this host country. A negative relationship between formal institutional distance and FDI is hypothesized.

Hypothesis 1b: The larger the informal institutional distance between the home and the host country, the lower is the level of FDI in this host country. A negative relationship between informal institutional distance and FDI is hypothesized.

As noted by previous studies on institutional distance (Aleksynska & Havrylchyk, 2013; Kuncic & Jaklic, 2013; Seyoum, 2009; Trevino & Mixon, 2004), the relative formal institutional quality also plays a determinant role in the location choice. A better formal institutional quality of the host country is found to be positively related to foreign investments in this country, especially for investing firms from Emerging Countries. The formal institutional quality can be considered as a moderator of the impact of formal institutional distance. The following hypothesis can be posited:

Hypothesis 2: The negative impact of formal institutional distance on FDI will be reduced (or even offset) by a better formal institutional quality of the host country compared to the home.

3 Methodology

3.1 Dependent variable

The dependent variable considers annual Swiss outward foreign direct investments stocks (OFDI - in millions US dollar) by country of destination over the period 2007-2012. The total sample (*OFDI_tot*) includes OFDI stocks from the whole Swiss economy. Thereafter, the sample is divided into two sub-samples: OFDI stocks from manufacturing (*OFDI_man*) and OFDI stocks

from services (*OFDI_serv*). Some data are confidential for some countries[1] in the sub-samples, and hence the number of observations is smaller than for the total sample. The data come from the Swiss National Bank (SNB). Table 1 reports the statistics for the total sample and for the sub-samples. N corresponds to the total number of observations over the 6-year period. The number of countries of destination can be easily calculated. It corresponds to the total number of observations divided by 6. For the total sample, 64 countries of destination are considered, whereas for the sub-samples, only 47 countries are analyzed. Standard descriptive statistics are reported (mean, standard deviation (sd), minimal value (min), maximal value (max)). Additional statistics (skewness and kurtosis) indicate that the data are highly skewed and log-transformation should be undertaken to approximate a log-normal distribution (Benoit, 2011).

To have more insights into the data,

indicates the percentage share of Swiss OFDI stocks in the manufacturing sectors and in the services over the period considered. As we can note, from 2007 to 2012, the share of OFDI in manufacturing decreases by virtually 10% to account for nearly 31% of the total Swiss OFDI in 2012. Respectively, the share of services over the same period increases by 10% and accounts for 69% of total Swiss OFDI in 2012.

Besides, Table 3 reports the Swiss OFDI distribution by world region over the period of interest. As it can be observed, the distribution remains virtually the same year by year, with a higher share in EU and North America (more than 60 percent). These regions are the closest of Switzerland in terms of informal and formal institutional features (see Figure 2 and Figure 3).

[1] Data on OFDI stocks in sub-samples are confidential for Bangladesh, Bulgaria, Costa Rica, Ecuador, Egypt, Guatemala, Israel, Kenya, Morocco, Nigeria, Pakistan, Peru, Saudi Arabia, Sri Lanka, United Arab Emirates, Uruguay and Vietnam.

3.2 Independent variables

The key independent and control variables used to test the model are described in Table 6. The expected sign on Swiss OFDI are reported, as well as the data sources. The main objective of this study is to test the impact of the informal and formal institutional distance on the Swiss OFDI, other explanatory variables included in the model taken as control variables. Hence, it is worthwhile to explain how these distances are measured.

Key independent variables

With respect to the informal institutional distance, it is based on the work of Hofstede (1980) and Hofstede et al. (2010). The informal institutional distance is difficult to be assessed and is often proxied by the cultural aspect of the informal institutions (A.S. Gaur, Delios, & Singh, 2007; Salomon & Wu, 2012; Xu & Shenkar, 2002; Xu, 2001). Hofstede defines culture as *"a collective programming of thought distinguishing members of one group from another"* (Hofstede, 1980: 21*)*. He identifies four dimensions of culture that help determine the differences and similarities between cultures of different countries, namely: power distance, uncertainty avoidance, individualism and masculinity[2]. Two other dimensions were added in the study of Hofstede et al. (2010), but for a limited number of countries. Due to this limitation, the culture is composed of the four initial dimensions. Each country is assigned a score by dimension, invariant over time since culture is assumed to be strongly anchored in a society and difficult to change in short-medium term. In previous International Business (IB) studies, cultural distance is mostly measured by the index developed by Kogut & Singh (1988), corresponding to the standardized squared Euclidean measure divided by the number of dimensions (see Ando & Paik, 2013; Ando,

[2] See Appendix 1 for description of each dimension.

2012; Añón Higón & Manjón Antolín, 2012; Beugelsdijk et al., 2004; Chang et al., 2012; Dikova, 2012; Ilhan Nas, 2012; Ionascu et al., 2004; Maseland & Van Hoorn, 2013; Xu, Pan, & Beamish, 2004; Yiu & Makino, 2002). Nevertheless, as pointed out by Berry et al. (2010) and Kandogan (2012), this measure assumes zero covariance between the cultural dimensions. Table 4 reports the correlation matrix between the different Hofstede's dimensions, invalidating the zero-covariance assumption. Berry et al. (2010) and Kandogan (2012) recommend to measure the distance using the Mahalanobis method[3]. This method is scale-invariant and takes into account the covariance between the dimensions. The informal institutional distance between Switzerland and different host countries is reported on Figure 2. The map shows that the informal institutional distance is relatively smaller between Switzerland and developed countries (European Union, North America, Australia, New Zealand, Japan) and relatively larger between Switzerland and developing countries (Russia, China, India). However, the informal distance is also smaller between Switzerland and Brazil/Argentina/South Africa. This can be explained by the cultural influences from the European colonies in the past. Surprisingly, the distance with France is relatively important. Analyzing the individual dimensions of informal distance, an important difference in scores can be noted between Switzerland and France for power distance, masculinity and uncertainty avoidance.

With respect to the formal institutional distance, it is based on the work of Kaufmann et al. (2010). Kaufmann et al. (2010) developed six composite Worldwide Governance Indicators (WGI), based on 32 different data sources (e.g. survey institutes, think tanks, non-governmental organizations, international organizations, and private sector firms), namely: voice and accountability, political stability and absence of violence, government effectiveness, regulatory

[3] Mahalanobis distance: $M_{jH} = \sqrt{(I_j - I_H)^T S^{-1} (I_j - I_H)}$, where I_x is the vector for country X with n dimensions and S the covariance matrix for n dimensions.

quality, rule of law, and control of corruption[4]. Each of these indicators represents a facet of governance. According to the authors, governance can be defined as *"the traditions and institutions by which authority in a country is exercised. This includes (a) the process by which governments are selected, monitored and replaced; (b) the capacity of the government to effectively formulate and implement sound policies; and (c) the respect of citizens and the state for the institutions that govern economic and social interactions among them." (Kaufmann et al., 2010: 4).* The database covers more than 200 economies and assigns a score for each indicator by country and by year (from 1996 to 2012). In previous IB studies, the formal institutional distance is measured by the standardized Euclidean distance, assuming zero covariance between the dimensions (see Ando, 2012; Beugelsdijk et al., 2004; Dikova, 2012; Du, 2009; Gaur & Lu, 2007; Ionascu et al., 2004; Yiu & Makino, 2002). As shown in Table 5, the correlation matrix is not an identity and correlation coefficients are statistically significant. To consider this data property, it is preferable to measure the formal institutional distance using the Mahalanobis method. The formal institutional distance between Switzerland and different host countries is reported on Figure 3. The map shows that the formal institutional distance is relatively smaller between Switzerland and developed countries and relatively larger between Switzerland and developing countries, except for Brazil and Chile at the upper bound of the 1st quartile.

In order to address the issue of "direction" of distance or more precisely the issue of "quality" of the host institutional environment, a dummy variable is created taking the value of 1 if the host country rank in the 1st pillar (institutions) of the Global Competitiveness Report is higher than the Swiss rank, 0 otherwise.

[4] See Appendix 2 for description of each Worldwide Governance Indicator (WGI).

Control variables

As highlighted in IB theory, other determinants can potentially affect the location choice of FDI. Table 6 reports the proxies chosen to operationalize the firms' motives (market-seeking, natural resources-seeking, strategic asset-seeking and efficiency-seeking), the host country policy towards FDI, the trade and spatial costs, as well as two macroeconomic variables.

Firms' motives for FDI. At a micro-level, Dunning & Lundan (2008) identified four types of motives for foreign production: market-seeking FDI, efficiency-seeking FDI, natural resource-seeking FDI and strategic assets-seeking FDI (e.g. patents, brand image, specific know-how). Market-seeking FDI may be undertaken for various underlying reasons. Besides the desire to enlarge their market in potentially growing economies, different reasons are enumerated to support this motivation: "the need to follow the main suppliers and customers that have set up foreign-producing facilities; the product adaptation to local tastes or needs; the market proximity that allows to reduce transaction costs; and the need to have a strategic physical presence in the leading markets served by the competitors" (Dunning & Lundan, 2008: 70-71). Efficiency-seeking FDI are based on a geographically efficient allocation of firm activities. On the one hand, the objective consists in benefitting from different availability and cost of labor (e.g. cheap unskilled labor in some countries), and on the other hand in capturing economies of scale and scope (Dunning & Lundan, 2008: 72). Natural resource-seeking FDI are undertaken to gain access to specific natural resources, either rare or unavailable in the home country (Dunning & Lundan, 2008: 68). Most of these target resources, especially for a small country as Switzerland, are raw materials. Finally, strategic assets-seeking FDI are undertaken to gain access to technological capabilities, management and marketing expertise, as well as organizational skills. Strategic asset-seeking FDI allow the investing firms to consolidate their ownership-specific

advantages and enhance their global competitiveness, which is the crucial point to survive in a competitive market. (Dunning & Lundan, 2008: 72). According to Dunning & Narula (2004: 48-51), agglomeration of related activities (such as clusters) is significant in the location's choice for strategic asset-seeking FDI.

These motives can be strategically significant and more relevant for the investing firms than the costs associated with foreignness, encouraging firms to invest even in institutionally distant countries.

Trade and geographical distance. Trade activities between a home and a host country are a premise to a future higher commitment in foreign investments, as documented by Johanson & Wiedersheim-Paul (1975). Their work considers that the internationalization process consists of four stages, from exports to production in the host country. Consequently, the more a firm exports in a host country, the higher the probability that it will invest in this country. Exporting means incurring costs of transportation. Hence, having their own subsidiary in the host country would be more beneficial for firms than exporting, the fixed costs of a foreign establishment being offset by the drastic reduction of the variable costs (Buckley & Casson, 1981). Some aspects of the market seeking motive can also explain why firms decide to invest in a host country, if the exports intensity is high (as an example: to adapt the production to the local needs) (Buckley et al., 2007).

Imports are also primordial in the location choice. The firms can consider that it is more profitable to internalize these flows through foreign investments rather than to import from host countries (Buckley & Casson, 1976). Hence, the more important are flows from a host country, the higher the foreign investments in this host country.

With respect to geographical distance, firms prefer to invest in geographically closer countries. Rugman & Verbeke note that "the liability of intra-regional expansion appears to be much lower than the liability of inter-regional expansion." (Rugman & Verbeke, 2007: 201) First, considering the liability as an additional cost, the cost of operating in the "home" region is diminished compared to the cost of operating in another region. Second, the firm has more difficulties to control the internal organization deployed in more regions. As highlighted by Rugman & Verbeke (2007: 201), "the distance separating North America, Europe and Asia remains substantial". Cantwell to add: "most multinational enterprises (MNEs) have tended to be mainly regionalized rather than fully globalized" (Cantwell, 2009: 39). The greater the geographical distance, the fewer firms invest in this host country.

Macroeconomic environment. The macroeconomic environment of the host country is also considered as a significant factor affecting the location choice. In fact, the exchange rate as well as the host country inflation rate can potentially encourage or discourage investments in a host country. With respect to the exchange rate, previous studies observe a positive relationship between the appreciation of the home country currency vis-à-vis host country currency and the foreign investments in this specific host country (Alba et al., 2009; Bénassy-Quéré et al., 2001; Blonigen, 2005; Goldberg, 2009; Udomkerdmongkol et al., 2006; Van Wyk & Lal, 2008: 517). This can be explained by the fact that foreign assets become less expensive compared to domestic assets.

With respect to the host country inflation rate, its volatility (i.e. changes from one year to another) can result in uncertainty for the risk-averse investing firms, discouraging them to undertake foreign investments in this specific host country (Le et al., 2015: 10; Van Wyk & Lal, 2008: 516). Host country inflation rate volatility is negatively related to FDI in this host country.

Besides, the host country FDI policy determines also the level of FDI inflows in this country. An open policy towards FDI attracts FDI, whereas a restricted FDI policy can significantly hamper foreign investments in this country (Le et al., 2015; UNCTAD, 1998; Walsh & Yu, 2010).

3.3 Empirical models and methodology

Models

Based on previous theoretical arguments, the following equation is considered for estimation:

$$\ln(OFDI_{tot}) = \beta_0 + \beta_1 \ln(ID_{inf}) + \beta_2 \ln(ID_f) + \beta_3 INST_{qual} + \beta_4 \ln(ID_f) * INST_{qual} + \beta_{5-17} \ln(control\ variables) \quad (1)$$

The variables are transformed into natural logarithms in order to address the issues of highly skewed distribution of data and expected non-linear relationships between variables (Benoit, 2011). An interaction term is added to account for the moderating role of institutional quality on the relationship OFDI-formal institutional distance.

Previous studies on institutional distance consider distance as a composite measure, but few of them simultaneously test the impact of distance based on individual dimensions (Dikova, 2012; Parboteeah et al., 2008). In this study, informal ID is composed of 4 dimensions and formal ID of 6 dimensions. The individual distance is then determined by the absolute difference between the home and host countries on the considered dimension. The equation is rewritten as:

$$\ln(OFDI_{tot}) = \beta_0 + \beta_{1-4} \ln(Absolute\ difference\ for\ individual\ dimensions\ of\ informal\ ID) + \beta_{5-10} \ln(Absolute\ difference\ for\ individual\ dimensions\ of\ formal\ ID) + \beta_{11} INST_{qual} + \beta_{12-24} \ln(control\ variables) \quad (2)$$

The same models are estimated for the two sub-samples: manufacturing (*OFDI_man*) and services (*OFDI_serv*). For manufacturing sub-sample, the control variables are all included in the model, whereas for the services sub-sample, the variable corresponding to the natural resources seeking motive as well as imports/exports variables are dropped from the model, as they cannot be considered as determinants for OFDI.

Econometric method

The sample is constructed as a panel data set. For a specific destination country "*i*", the sample reports flows and other variables over a period of time (*"t"* years). As time-invariant variables are included in the models, the fixed effect method is not suitable to estimate equations (1) and (2) (Wooldridge, 2009). Hence, equations (1) and (2) are estimated by two statistical methods: the pooled ordinary least squares (POLS) and the random effect generalized least squares (RE). The Breusch and Pagan Lagrangian multiplier test is performed to identify the preferred method. If the test rejects the null hypothesis of a variance across countries equal to zero, RE is preferred to POLS (Torres-Reyna, 2007).

4 Results

Both methods are estimated, but the results are only reported for the RE estimations, since the Breusch and Pagan Lagrangian multiplier test indicates to reject the null hypothesis. Thence the RE estimation fits better the data than the POLS estimation. Due to an important lack of data on exports, imports, inflation rate and exchange rate, both equations are estimated following three steps. First, only the key independent variables are included as regressors. Second, the different types of motivations, as well as the geographic distance and the openness to FDI are added to the estimation. Third and lastly, the four remaining independent variables with fewer observations

are also taken into account in the estimation. It is worthwhile to note that the host market size is proxied by the absolute measure (GDP), since the two alternative measures do not reach significance in preliminary estimations. Table 7 reports the different estimations considering the aggregate measure of informal and formal institutional distances, whereas

Table 8 shows the results for the estimations with the absolute differences of the individual dimensions composing the informal and formal institutional distances.

Results for model with aggregate measure of distance (Table 7)

Considering only the key independent variables as regressors (see columns 1, 4 and 7), we can observe that the informal and formal institutional distances are correctly signed – as expected – but are significantly different from zero at 1% level only for the total sample and for services sample. The coefficients can be interpreted as the elasticity of OFDI with respect to informal and formal institutional distances(Wooldridge, 2009: 126). As an example, the column 1 indicates that a 1% increase in informal institutional distance (*LID_inf*) decreases OFDI from 1.428%. With respect to the formal institutional quality, the relative better formal institutional quality of the host country with respect to Switzerland positively and significantly impacts the level of OFDI in the manufacturing sectors – as expected, whereas its impact is negative and significant on OFDI in services. This last result is surprising and inconsistent with the related theoretical hypothesis. The moderating effect of quality on formal institutional distance (proxied by the interaction term *LID_quality*) is not found to be positively and statistically significant, except for the services sample at 10% level. This means that the better formal institutional quality of the host country with respect to Switzerland reduces the negative impact of formal institutional distance on OFDI. Therefore, column 7 reports a coefficient for formal institutional distance of -

0.738 and a coefficient for formal institutional distance with host country better formal institutional quality of 0.672. The effect of formal institutional distance on OFDI in services is then nearly offset by the institutional quality.

In addition to the key independent variables, the results reported in columns 2, 5 and 8 consider the most important control variables, i.e. motivations, geographical distance and host country openness to FDI. The estimated models fit better the data than the ones with only the key independent variables. The adjusted R^2 indicate that the variance of the independent variables explains virtually 75% of the total variance for the total sample, 79% for the manufacturing sample and 65% for the services sample. In column 2, the estimated coefficients for the total sample are reported. The explanatory variables of Swiss OFDI with a statistically significant coefficient are the informal institutional distance (-), the absolute host market size (+), as well as the host country openness to FDI (+). The effects of these variables on Swiss OFDI are in line with our expectations. In column 5, the highly significant determinants of OFDI in the manufacturing sectors also include absolute host market size (+) and host country openness to FDI (+) – as for the total sample. However, the informal and formal institutional distances do not have a significant impact on Swiss OFDI in manufacturing, the institutional quality being considered as much more important and having a positive effect. Two additional variables can explain the Swiss OFDI in manufacturing: the level of education of the host country (+) and the geographical distance with Switzerland (-). The estimated coefficients are significant at 10% level and the estimated effects correspond to the expected ones. Column 8 reports the results for the services sample. Again, the coefficients for absolute host country market size as well as for the host country openness to FDI are positively statistically significant at 1% level – as found for the total sample and the manufacturing sample. The market-seeking motive is also found to be a

determinant location factor in Baldegger (2013), as well as in Arvanitis et al. (2011: 133). These authors also report that geographical distance is an important impediment for Swiss OFDI in a specific country (Arvanitis et al., 2011: 77). Contrary to the estimations for the other samples, the institutional distances (either informal or formal) statistically matter as determinants of Swiss OFDI in services. The estimated coefficients are negative and statistically significant at 5% level. Nevertheless, if the host institutional quality is considered as higher than the Swiss one, the negative impact of formal institutional distance on OFDI is offset and becomes even positive (*LID_f*=-0.518 and *LID_quality*=0.907, *final impact*=-0.518+0.907=0.389).

Last specification (columns 3, 6 and 9) includes all the control variables set in the theory. As we can see, the adjusted R^2 does not significantly increase. The inclusion of the import, export, inflation and exchange rate variables does not improve consistently the model. The added control variables are not significantly different from zero and the results are similar to the ones of columns 2, 5 and 8.

Results for model with individual dimensions of distance (Table 8)

Estimation results reported in columns 1, 4 and 7 only consider the key independent variables, i.e. informal and formal institutional distances decomposing respectively into four and six dimensions, as well as the institutional quality. For the total sample, the four individual dimensions included in the informal institutional distance have a significant impact on OFDI. Except for uncertainty avoidance distance (*LUAI_dist*), the estimated coefficients for the three other distances are negative, as expected. Looking at the sub-samples, the coefficients of individual informal distances for the manufacturing sample are not statistically different from zero, whereas for the services sample, only the power distance (*LPDI_dist*) negatively and

significantly impacts Swiss OFDI. With respect to the six dimensions included in the formal institutional distance, only three are statistically significant at 5% level considering the total sample and the services sample: the voice and accountability distance (*LVA_dist*), the rule of law distance (*LRL_dist*) and the control of corruption distance (*LCC_dist*). The effects of the last two are negative and in line with our expectations, whereas the estimated coefficient for *LVA_dist* is positive. For the manufacturing sample, *LVA_dist* is also positive but only significant at 10% level. Finally, we can observe a positive and highly significant coefficient for the formal institutional quality considering the total sample and the manufacturing sample.

In addition to the key independent variables, the results reported in columns 2, 5 and 8 consider the most important control variables, i.e. motivations, geographical distance and host country openness to FDI. The estimated models are really better specified than the ones with only the key independent variables. The adjusted R^2 indicate that the variance of the independent variables explains virtually 74% of the total variance for the total sample, 81% for the manufacturing sample and 62% for the services sample. With respect to the individual informal distances, we obtain similar results for the total sample and the services sample. The coefficient of power distance (*LPDI_dist*) is negative and statistically significant at 1% level. For the manufacturing sample, the inclusion of control variables improves the results for the individual informal distances *LMAS_dist* and *LUAI_dist* becoming negatively significant at 5% level, as expected. With respect to the individual formal distances, the same results are obtained for the total sample and the services sample. The coefficients for *LVA_dist* and *LRL_dist* are significant, although *LVA_dist* reports an unexpected positive coefficient. No estimated coefficients of individual formal distances attain a predetermined significance level for the manufacturing sample. However, the estimated coefficient of formal institutional quality is positive and highly

significant, solely for the manufacturing sample. Finally, the coefficients of two control variables are statistically significant at 1% level for the three samples, i.e. the absolute host market size (*LGDP*) and the host country openness to FDI (*LOPEN*). Similar results are found in Table 7.

Last specification (columns 3, 6 and 9) includes all the control variables set in the theory. As we can see, the adjusted R^2 does not significantly increase, except for the services sample. For the total sample and the manufacturing sample, the added control variables are not significantly different from zero and the results are similar to the ones of columns 2 and 5. For the services sample, the exchange rate positively impacts the Swiss OFDI. In other words, an appreciation of the Swiss Franc vis-à-vis a host currency increases Swiss OFDI in this country.

5 Conclusion

The main purpose of the study is to assess the impact of institutional distance on the location choice of FDI. Based on the notion of "liability of foreignness", institutional distance with a specific host country is supposed to have a negative effect on the level of FDI in this host country. However, this effect is hypothesized to be reduced by the institutional quality of the host country compared to the home country one. Using aggregate data on Swiss OFDI, the study attempts to determine to what extent institutional distance and quality influence the location choice of OFDI. Institutional distance (formal and informal) is measured using the Mahalanobis approach instead of the standard Euclidean method. The Mahalanobis approach has properties fitting better the institutional data properties, especially the correlation between institutional dimensions. Using the random effect generalized least squares, the results indicate that the informal institutional distance is an important factor in the Swiss OFDI location. The same result is found for the services sub-sample. Additionally, for service sample, the formal institutional

distance has a negative effect - as expected - that is offset with the better host institutional quality. For the manufacturing sub-sample, the institutional distance does not impact significantly the location choice, whereas the institutional quality does positively. With respect to individual informal institutional distances, *power distance* is the only one that explains total OFDI and OFDI in services, whereas *masculinity* and *uncertainty avoidance* influence negatively OFDI in manufacturing. With respect to individual formal institutional distances, *rule of law* is the only dimension that impacts negatively total OFDI and OFDI in services. No impact of individual formal institutional distances is observed on OFDI in manufacturing, the quality remaining more significant than the distance. Besides, it should be noted that *absolute market size*, as well as *host country openness to FDI*, remain two significant factors in the location choice of Swiss OFDI for all the estimations.

To have more insights on the reasons of location choice, it would be interesting to deepen the research at a firm level in the form of a survey study with questionnaires. This firm-level analysis is ongoing on a sample of Swiss firms and should help understanding the differences observed between the manufacturing and services samples. To conclude, further research has to be conducted, but primary results show that institutions, either in terms of distance or quality, matter in the location choice of Swiss OFDI.

Bibliography

Alba, J. D., Park, D., & Wang, P. (2009). *The Impact of Exchange Rate on FDI and the Interdependence of FDI over Time*. *ADB Economics*.

Aleksynska, M., & Havrylchyk, O. (2013). FDI from the south: The role of institutional distance and natural resources. *European Journal of Political Economy*, *29*, 38–53. doi:10.1016/j.ejpoleco.2012.09.001

Ando, N. (2012). The ownership structure of foreign subsidiaries and the effect of institutional distance: a case study of Japanese firms. *Asia Pacific Business Review*, *18*(2), 259–274. doi:10.1080/13602381.2010.502315

Ando, N., & Paik, Y. (2013). Institutional distance, host country and international business experience, and the use of parent country nationals. *Human Resource Management Journal*, *23*(1), 52–71. doi:10.1111/j.1748-8583.2012.00201.x

Añón Higón, D., & Manjón Antolín, M. (2012). Multinationality, foreignness and institutional distance in the relation between R&D and productivity. *Research Policy*, *41*(3), 592–601. doi:10.1016/j.respol.2011.12.007

Arvanitis, S., Hollenstein, H., Ley, M., & Stucki, T. (2011). *Exportpotenziale im Dienstleistungssektor: Die Internationalisierung des Dienstleistungssektors und der Industrie des Schweizer Wirtschaft* (No. 47/1). Bern.

Arvanitis, S., Hollenstein, H., & Stucki, T. (2012). *The Choice of Foreign Locations of Swiss MNEs: An Analysis Based on Firm Data* (No. 311). Zurich.

Bae, J.-H., & Salomon, R. (2010). Institutional Distance in International Business Research. In T. Devinney, T. Pederson, & L. Tihanyi (Eds.), *The Past, Present and Future of International Business and Management* (pp. 327–349). Emerald Group Publishing Limited.

Baldegger, R. (2013). *Swiss International Entrepreneurship Survey 2013*. Fribourg.

Bénassy-Quéré, A., Fontagné, L., & Lahrèche-Révil, A. (2001). Exchange-Rate Strategies in the Competition for Attracting Foreign Direct Investment. *Journal of the Japanese and International Economies*, *15*, 178–198.

Benoit, K. (2011). *Linear Regression*.

Berry, H., Guillen, M. F., & Zhou, N. (2010). An Institutional Approach to Cross-National Distance. *Journal of International Business Studies*, 1–21.

Beugelsdijk, S., De Groot, H., Linders, G.-J., & Slangen, A. (2004). *Cultural Distance, Institutional Distance and International Trade* (No. ersa04p265).

Blonigen, B. A. (2005). A Review of the Empirical Literature on FDI Determinants. In *ASSA Conference*. Philadelphia.

Buckley, P. J., & Casson, M. C. (1976). *The future of the multinational enterprise*. London: The Macmillan Press.

Buckley, P. J., & Casson, M. C. (1981). The Optimal Timing of a Foreign Direct Investment. *The Economoc Journal*, *91*(361), 75–87.

Buckley, P. J., Clegg, J., Cross, A. R., Liu, X., Voss, H., & Zheng, P. (2007). The determinants of Chinese outward foreign direct investment. *Journal of International Business Studies*, *40*(2), 353–354. doi:10.1057/jibs.2008.102

Cairncross, F. (1997). *The Death of Distance: How the communications revolution will change our lives*. Harvard Business School Press.

Cantwell, J. (2009). Location and the multinational enterprise. *Journal of International Business Studies*, *40*(1), 35–41. doi:10.1057/jibs.2008.82

Caves, R. E. (1971). International corporations: the industrial economics of foreign investment. *Economica*, *38*, 1–27.

Cezar, R., & Escobar, O. (2013). Institutional Distance and Foreign Direct Investment. *Submitted to "Eco Modelling,"* 1–20.

Chang, Y., Kao, M., Kuo, A., & Chiu, C. (2012). How cultural distance influences entry mode choice: The contingent role of host country's governance quality. *Journal of Business Research*, *65*, 1160–1170.

De Beule, F., Elia, S., & Piscitello, L. (2013). Entry and access to competencies abroad: Emerging market firms versus advanced market firms. *Journal of International Management*. doi:10.1016/j.intman.2013.05.002

Dikova, D. (2012). Entry Mode Choices in Transition Economies: The Moderating Effect of Institutional Distance on Managers' Personal Experiences. *Journal of East-West Business*, *18*(1), 1–27. doi:10.1080/10669868.2012.675807

Dow, D., & Larimo, J. (2007). Entry Mode Choice: Testing New Approaches to Measuring Psychic Distance and International Experience. In *European International Business Academy - EIBA*. Catania, Sicily.

Du, Y. (2009). *Institutional Distance and Location Choice of Multinational Enterprises LOCATION CHOICE OF*. Singapore Management University.

Dunning, J. H. (1981). *International Production and the Multinational Enterprise*. *London* (Vol. XXXX). Allen and Unwin.

Dunning, J. H., & Lundan, S. M. (2008). *Multinational Enterprises and the Global Economy* (Second Ed.). Cheltenham, UK and Northampton MA, USA: Edward Elgar.

Dunning, J. H., & Narula, R. (2004). *Multinationals and Industrial Competitiveness: A New Agenda (New Horizons on International Business Series)*. Edward Elgar.

Eden, L., & Miller, S. R. (2004). *Distance Matters: Liability of Foreigness, Institutional Distance and Ownership Strategy* (No. 404).

Elango, B., Lahiri, S., & Kundu, S. K. (2013). How does firm experience and institutional distance impact ownership choice in high-technology acquisitions? *R&D Management*, *43*(5), 501–516. doi:10.1111/radm.12032

Estrin, S., Baghdasaryan, D., & Meyer, K. E. (2009). The Impact of Institutional and Human Resource Distance on International Entry Strategies. *Journal of Management Studies*, *46*(7), 1171–1196.

Gaur, A. S., Delios, A., & Singh, K. (2007). Institutional environments, staffing strategies and subsidiary performance. *Journal of Management*, *33*(4), 611–636.

Gaur, A. S., Kumar, V., & Sarathy, R. (2011). Liability of foreignness and internationalization of Emerging market firms. In T. M. Devinney, T. Pedersen, & L. Tihanyi (Eds.), *Advances in International Management: The Past, Present and Future of International Business and Management* (Vol. 24., Vol. 24). New York: NY: Emerald.

Gaur, A. S., & Lu, J. W. (2007). Ownership strategies and survival of foreign subsidiaries: Impacts of institutional distance and experience. *Journal of Management*, *33*(1), 84–110.

Ghemawat, P. (2001). Distance Still Matters: The hard reality of global expansion. *Harvard Business Review*, *79*(8), 137–147.

Goldberg, L. S. (2009). Exchange Rates and Foreign Direct Investment. In R. S. Reinert, R. S. Rajan, & A. J. Glass (Eds.), *The Princeton Encyclopedia of the World Economy, Volume 1* (pp. 393–396). Princeton and Oxford: Princeton University Press.

Hofstede, G. (1980). *Culture's consequences: International differences in work-related values*. Beverly Hills: Sage Publications.

Hofstede, G., Hofstede, G. J., & Minkov, M. (2010). *Cultures and Organizations: Software of the Mind* (3rd Editio.). USA: McGraw-Hill.

Ilhan Nas, T. (2012). Institutional distance influences on the multinational enterprises (MNES') ownership strategies of their affiliates operating in an emerging market Bank of Iran. *African Journal of Business Management*, *6*(20), 6276–6290. doi:10.5897/AJBM11.1891

Ionascu, B. D., Meyer, K. E., & Erstin, S. (2004). *Institutional Distance and International Business Strategies in Emerging Economies* (No. 728).

Johanson, J., & Vahlne, J.-E. (1977). The Internationalization Process of the Firm - A Model of Knowledge Development and Increasing Foreign Market Commitments. *Journal of International Business Studies*, *8*(1), 23–32.

Johanson, J., & Vahlne, J.-E. (2009). The Uppsala internationalization process model revisited: From liability of foreignness to liability of outsidership. *Journal of International Business Studies*, *40*(9), 1411–1431. doi:10.1057/jibs.2009.24

Johanson, J., & Wiedersheim-Paul, F. (1975). The Internationalization of the Firm - Four Swedish Cases. *The Journal of Management Studies*, 305–322.

Kandogan, Y. (2012). An improvement to Kogut and Singh measure of cultural distance considering the relationship among different dimensions of culture. *Research in International Business and Finance*, *26*, 196–203.

Kaufmann, D., Kraay, A., & Mastruzzi, M. (2010). *The Worldwide Governance Indicators: Methodology and Analytical Issues Title* (No. 5430).

Kittilaksanawong, W. (2009). How Do Institutional Distances Shape Entry Strategies of Taiwanese High-Tech Firms? In *Academy of Management Annual Meeting Proceedings*.

Kogut, B., & Singh, H. (1988). The Effect of National Culture on the Choice of Entry Mode. *Journal of International Business Studies*, *19*(3), 411–432.

Kostova, T., & Zaheer, S. (1999). Organizational Legitimacy under Conditions of Complexity: the Case of the Multinational Enterprise. *Academy of Management Review*, *24*(1), 64–81.

Kuncic, A., & Jaklic, A. (2013). FDI and Institutions: Formal and Informal Institutions. In *Presented at the EIBA Annual Conference 2013* (pp. 1–26). Bremen (Germany).

Lankhuizen, M., Groot, H. L. F. De, & Linders, G. M. (2011). The Trade-Off between Foreign Direct Investments and Exports : The Role of Multiple Dimensions of Distance. *The Worl*, 1395–1416. doi:10.1111/j.1467-9701.2011.01335.x

Le, N., Li, X., & Yukhanaev, A. (2015). Locational Determinants of Foreign Direct Investment in the Vietnamese Economy. In B. Christiansen (Ed.), *Handbook of Research on Global Business Opportunities* (pp. 1–36). Business Science Reference.

Luo, Y., Shenkar, O., & Nyaw, M. (2002). Mitigating liabilities of foreignness : Defensive versus offensive approaches. *Journal of International Man*, *8*, 283–300.

Maseland, R., & Van Hoorn, A. (2013). Why the distance literature in mangement is about institutions, not distance, and what to do about it? In *Presented at the EIBA Annual Conference 2013*. Bremen (Germany).

Mezias, J. M. (2002). How to identify liabilities of foreignness and assess their effects on multinational corporations. *Journal of International Management*, *8*(3), 265–282. doi:10.1016/S1075-4253(02)00069-8

Nachum, & Zaheer, S. (2005). The persistence of distance? The impact of technology on MNE motivations for foreign investments. *Strategic Management Journal*, *26*(8), 747–768.

North, D. C. (1990). *Institutions, Institutional Change and Economic Performance*. New York: Cambridge University Press.

Parboteeah, K. P., Hoegl, M., & Cullen, J. B. (2008). Managers' gender role attitudes: a country institutional profile approach. *Journal of International Business Studies*, *39*(795-813).

Petersen, B., & Pedersen, T. (2002). Coping with liability of foreignness : Different learning engagements of entrant firms. *Journal of International Management*, *8*, 339–350.

Pogrebnyakov, N., & Maitland, C. F. (2011). Institutional distance and the internationalization process: The case of mobile operators. *Journal of International Management*, *17*(1), 68–82. doi:10.1016/j.intman.2010.12.003

Rugman, A. M., & Verbeke, A. (2007). Liabilities of Regional Foreignness and the Use of Firm-Level versus Country-Level Data : A Response to Dunning et al . (2007). *Journal of International Business Studies*, *38*(1), 200–205.

Salomon, R., & Wu, Z. (2012). Institutional Distance and Local Isomophism Strategy. *Journal of International Business Studies*, *43*, 343–367.

Scott, W. R. (2008). *Institutions and Organizations: Ideas and Interests* (Third Edit.). Sage Publications.

Seyoum, B. (2009). Formal Institutions and Foreign Direct Investment. *Thunderbird International Business Review*, *51*(2), 165–182. doi:10.1002/tie

Torres-Reyna, O. (2007). *Panel Data Analysis: Fixed and Random Effects using Stata*. Retrieved from http://dss.princeton.edu/training/

Trevino, L. J., & Mixon, F. G. (2004). Strategic factors affecting foreign direct investment decisions by multi-national enterprises in Latin America. *Journal of World Business*, *39*, 233–243.

Udomkerdmongkol, M., Görg, H., & Morrissey, O. (2006). *Foreign Direct Investment and Exchange Rates: A Case Study of US FDI in Emerging Market Countries* (No. Discussion Paper in Economics, No. 06/05).

UNCTAD. (1998). *World Investment Report 1998: Trends and Determinants*. Geneva.

UNCTAD. (2014). *Bilateral FDI Statistics 2014*.

Vahlne, J.-E., & Nordström, K. A. (1992). Is the globe shrinking: psychic distance and the establishment of Swedish sales subsidiaries during the last 100 years. *Stockolm, Mimeo*.

Van Tulder, R. (2010). The Past, Present and Future of Managing Distance: Stakeholders and Development. In *The Past, Present and Future of International Business and Management* (Advances i., pp. 137–165).

Van Wyk, J., & Lal, A. K. (2008). Risk and FDI Flows to Developing Countries. *South African Journal of Economic and Management Sciences*, *11*(4), 511–528.

Vernon, R. (1966). International Investment and International Trade in the Product Cycle. *Quarterly Journal of Economics*, *80*(2), 190–207.

Walsh, J. P., & Yu, J. (2010). *Determinants of Foreign Direct Investment: A Sectoral and Institutional Approach* (No. No. 10/187).

Wooldridge, J. M. (2009). *Introductory Econometrics: A Modern Approach*. South Western - Cengage Learning.

Wu, Z. (2009). *Three Essays on Distance: Examining the role of institutional distance on foreign firm entry, local isomorphism strategy and subsidiary performance*. University of Southern California.

Xu, D. (2001). *The Effect of Institutional Distance on Multinational Enterprise Strategy*. York University, Toronto.

Xu, D., Pan, Y., & Beamish, P. W. (2004). The Effect of Regulative and Normative Distances on MNE Ownership and Expatriate Strategies. *Management International Review*, *44*(3), 285–307.

Xu, D., & Shenkar, O. (2002). Institutional Distance and the Multinational Enterprise. *Academy of Management Review*, *27*(4), 608–618.

Yiu, D., & Makino, S. (2002). The Choice between Joint Venture and Wholly Owned Subsidiary: An Institutional Perspective. *Organization Science*, *13*(6), 667–683.

Zaheer, S. (1995). Overcoming the liability of foreignness. *Academy of Management Journal*, *38*(2), 341–363.

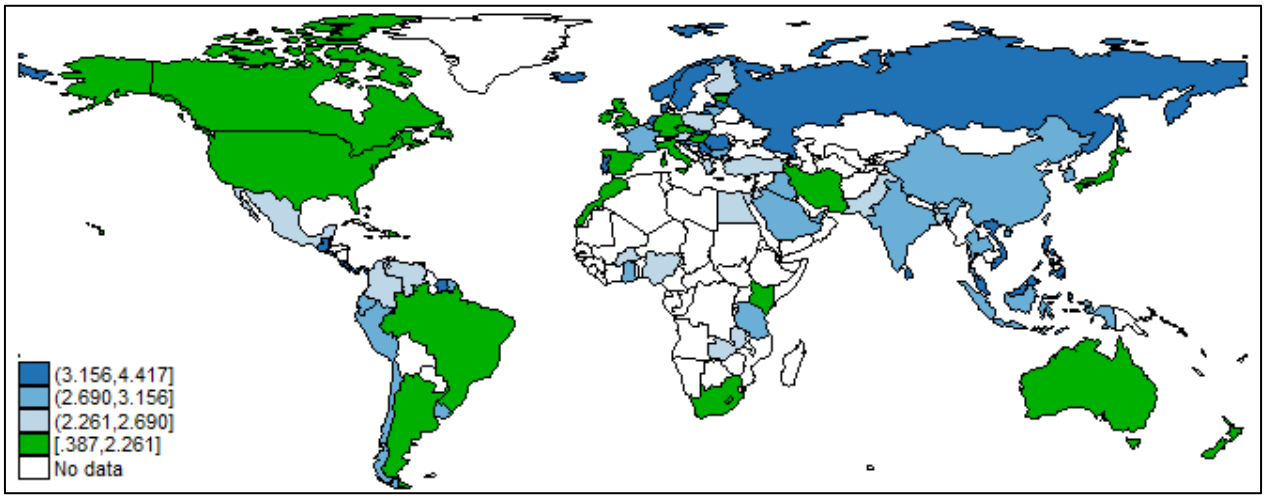
Figures

Figure 1: Institutional Distance (ID), Liability of Foreignness (LOF) and Internationalization

		Host Country	
		Emerging Markets	Developed Markets
Home Country	Emerging Markets	Low ID – Low LOF – High level of FDI	High ID – Very High LOF – Very Low level of FDI
	Developed Markets	High ID – High LOF – Low level of FDI	Low ID – Low LOF – High level of FDI

Source: Adapted from Gaur, Kumar, & Sarathy (2011: 27).

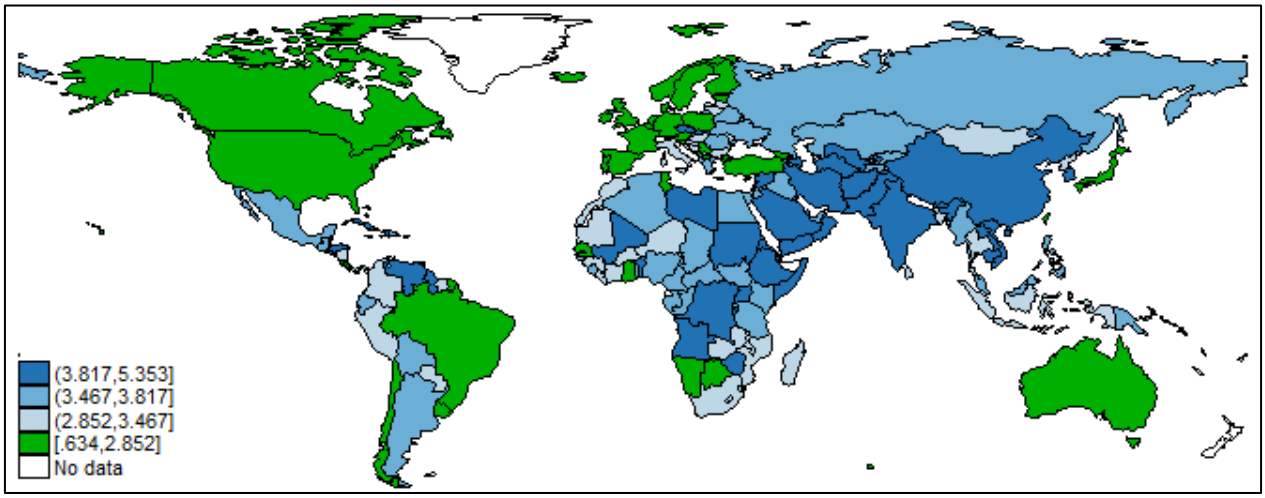
Figure 2: Map of informal institutional distance between Switzerland and host countries (measured using the Mahalanobis distance)



Note: Informal institutional distance is classified using 4-quantiles method (i.e. 0-25%, 25-50%, 50-75%, 75-100%), from low values to high values.

Source: Author's calculations based on Hofstede's scores.

Figure 3: Map of formal institutional distance between Switzerland and host countries (measured using the Mahalanobis distance), 2012



Note: Formal institutional distance is classified using 4-quantiles method (i.e. 0-25%, 25-50%, 50-75%, 75-100%), from low values to high values.

Source: Author's calculations based on WGI scores.

Tables

Table 1: Descriptive statistics of Swiss OFDI stocks (in mio USD), 2007-2012

	N	mean	sd	min	max	skewness	kurtosis
OFDI_tot	384	11517.43	26128.62	-42.48	230786.70	4.83	31.95
OFDI_man	282	5246.32	11225.02	-4838.12	92635.47	5.03	33.17
OFDI_serv	282	10106.59	20430.49	109.74	138151.30	3.71	18.34

Source: Author's calculations based on SNB FDI database.

Table 2: % Share of Swiss OFDI stocks, Manufacturing and Services, 2007-2012

year	Manufacturing	Services
2007	41.03	58.97
2008	40.56	59.44
2009	35.48	64.52
2010	30.93	69.07
2011	30.64	69.36
2012	30.86	69.14

Source: Author's calculations based on SNB FDI database.

Table 3: % Share of Swiss OFDI stocks, by world region, 2007-2012

year	EU	Other European countries	North America	Central and South America	Asia	Africa	Oceania
2007	43.35	6.81	21.42	17.24	8.02	1.49	1.67
2008	42.01	7.79	22.66	14.91	8.59	1.81	2.22
2009	43.02	6.60	22.02	16.63	8.91	1.11	1.71
2010	42.86	6.11	21.36	17.52	9.08	1.19	1.88
2011	43.99	5.48	23.00	15.15	9.24	1.01	2.14
2012	42.75	5.47	22.34	16.93	9.88	0.86	1.78

Source: Author's calculations based on SNB FDI database.

Table 4: Correlation matrix between Hofstede's dimensions

Dimensions	N. of Obs.	Mean	sd	1	2	3	4
1. Power distance	88	61.988	21.260	1			
2. Individualism	88	40.818	22.723	-0.653***	1		
				(0.00)			
3. Masculinity	88	48.636	18.952	0.173	0.0134	1	
				(0.11)	*(0.90)*		
4. Uncertainty Avoidance	88	65.966	21.622	0.228**	-0.181*	-0.00118	1
				(0.03)	*(0.09)*	*(0.99)*	

*Note: p-values in parentheses. *p<0.1; **p<0.05;***p<0.01.*

Source: Author's calculations based on Hofstede's scores.

Table 5: Correlation matrix between WGI, 2012

WGI	N. of Obs.	Mean	sd	1	2	3	4	5	6
1. Voice and Accountability	210	-.010	.999	1					
2. Political Stability	210	-.010	.999	0.724***	1				
				(0.00)					
3. Government Effectiveness	210	0	1	0.786***	0.691***	1			
				(0.00)	*(0.00)*				
4. Regulatory quality	210	0	1	0.767***	0.607***	0.927***	1		
				(0.00)	*(0.00)*	*(0.00)*			
5. Rule of Law	210	-.008	1.001	0.840***	0.782***	0.933***	0.883***	1	
				(0.00)	*(0.00)*	*(0.00)*	*(0.00)*		
6. Control of Corruption	210	0	1	0.794***	0.754***	0.927***	0.848***	0.946***	1
				(0.00)	*(0.00)*	*(0.00)*	*(0.00)*	*(0.00)*	

*Note: p-values in parentheses. *p<0.1; **p<0.05;***p<0.01.*

Source: Author's calculations based on WGI scores.

Table 6: Description of variables

Variable	Proxy	Expected sign	Theoretical argument	Data source
Informal ID	ID_inf: composite measure (invariant over time)	-	Inst. Theory	Hofstede
Formal ID	ID_f: composite measure (annual)	-	Inst. Theory	Worldwide Governance Indicators from World Bank
Formal institutional quality of host country	INST_Qual: dummy – 1 if $rank_{host}$>$rank_{home}$, 0 otherwise (annual)	+	Inst. Theory	Global Competitiveness Reports – 1st pillar: Institutions, 2007-2012
Host market:			Market-seeking	World Development Indicators (WDI) from World Bank and International Monetary Fund (IMF)
(1) Absolute market size	GDP: Host country GDP (in mio USD)	+		
(2) Relative market size	GDPC: Host country GDP per capita	+		
(3) Market growth	GGDP: Annual percentage increase in GDP	+		
Natural resources-seeking	NAT_RES: Total natural resources rents (% GDP) in the host country	+	Natural resources-seeking	WDI
Asset-seeking FDI	PATENT: Total annual patent registrations in host country	+	Strategic-asset seeking	World Intellectual Property Organisation (WIPO) Statistics Data Center 2007-2012
Resource endowment (host country)	TERT: Tertiary education enrollment, gross % in the host country	+	Strategic-asset seeking	Global Competitiveness Reports 2007-2012
Efficiency-seeking FDI (host country)	WAGE: Mean nominal monthly earnings of employees (in USD)	-	Efficiency-seeking	ILOSTAT Database
Geographic distance (CH-host)	DIST: Geographic distance between CH and host country in km (capital cities) - invariant over time	-	Spatial costs	See http://www.levoyageur.net/distances/distance.html (17.11.2014) and http://www.notre-planete.info/terre/outils/distances.php (17.11.2014)
Exports	X: From CH to host country (in mio USD)	+	Trade	Swiss Statistics Office
Imports	I: From host to CH (in mio USD)	+	Trade	Swiss Statistics Office
Openness to FDI (host country)	OPENNESS: Inward FDI Stocks in host country (% GDP)	+	Macro	UNCTAD FDI Database
Exchange rate	ER: Official ER converted to 1 CHF (ER local currency-USD/ER CHF-USD – period average) – annual % change	+	Macro	WDI, OECD Stat and IMF
Host country Inflation	INFLATION: CPI annual % change	-	Macro	WDI and IMF

Source: Author's elaboration.

Table 7: Results for Swiss OFDI determinants, considering aggregate measure of distance, RE estimations

	Log(OFDI_tot)			Log(OFDI_man)			Log(OFDI_serv)		
VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
LID_inf	-1.428***	-0.661**	-0.605**	-0.437	-0.184	0.0705	-1.157**	-0.934**	-0.805**
	(0.501)	(0.318)	(0.293)	(0.499)	(0.150)	(0.205)	(0.530)	(0.384)	(0.356)
LID_f	-0.774***	-0.332	-0.365*	-0.138	0.0957	0.155	-0.738***	-0.518**	-0.721***
	(0.260)	(0.219)	(0.213)	(0.213)	(0.184)	(0.202)	(0.224)	(0.229)	(0.279)
INST_qual	0.0529	0.0509	-0.180	0.269**	0.353***	0.126	-0.301**	-0.248**	-0.322
	(0.184)	(0.109)	(0.150)	(0.136)	(0.117)	(0.124)	(0.122)	(0.111)	(0.229)
LID_quality	0.317	0.184	0.420	-0.209	-0.0967	0.108	0.672*	0.907***	0.731
	(0.459)	(0.302)	(0.376)	(0.257)	(0.309)	(0.345)	(0.350)	(0.333)	(0.559)
LGDP		1.356***	1.506***		1.371***	1.022***		1.408***	1.236***
		(0.226)	(0.299)		(0.179)	(0.276)		(0.254)	(0.291)
LPATENT		-0.178	-0.331		-0.176	-0.276		-0.248	-0.172
		(0.127)	(0.229)		(0.138)	(0.174)		(0.157)	(0.202)
LTERT		0.270	0.0563		0.353*	0.244		-0.0640	-0.341
		(0.225)	(0.216)		(0.215)	(0.276)		(0.388)	(0.380)
LWAGE		0.0858	0.368**		0.118	0.306**		0.00891	0.0354
		(0.0852)	(0.172)		(0.0920)	(0.149)		(0.111)	(0.204)
LNAT_RES		-0.0447	-0.107		-0.0122	0.00818			
		(0.0458)	(0.0664)		(0.0497)	(0.0630)			
LGEO_dist		-0.155	-0.225		-0.189*	-0.0545		-0.178	-0.179
		(0.139)	(0.239)		(0.114)	(0.148)		(0.172)	(0.197)
LOPEN		0.615***	0.387***		0.510***	0.232*		0.623***	0.690***
		(0.149)	(0.142)		(0.118)	(0.134)		(0.165)	(0.161)
LIMP			-0.271			0.0913			
			(0.204)			(0.176)			
LEXP			0.146			0.299			
			(0.201)			(0.231)			
LINFL			0.107*			0.0184			0.0577
			(0.0559)			(0.0524)			(0.0380)
LER			0.0348			0.0247			0.0323
			(0.0228)			(0.0234)			(0.0255)
Observations	381	315	111	279	246	108	282	254	170
Number of countries	64	59	30	47	45	29	47	45	45
Adj. R2	0.234	0.743	0.750	0.015	0.790	0.805	0.209	0.648	0.687

Notes: Robust standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1
Source: Author's estimations.

Table 8: Results for Swiss OFDI determinants, considering individual dimensions of distance, RE estimations

		Log(OFDI_tot)			Log(OFDI_man)			Log(OFDI_serv)		
	VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Informal institutional dimensions	LPDI_dist	-0.507**	-0.397***	-0.286*	-0.285	0.103	-0.0774	-0.731***	-0.506***	-0.466**
		(0.216)	(0.123)	(0.150)	(0.244)	(0.122)	(0.0998)	(0.238)	(0.183)	(0.194)
	LIDV_dist	-0.503**	0.113	0.00960	-0.226	0.0166	0.0575	-0.158	0.115	0.0801
		(0.201)	(0.162)	(0.161)	(0.219)	(0.0865)	(0.121)	(0.213)	(0.193)	(0.194)
	LMAS_dist	-0.453**	-0.190*	-0.197	-0.207	-0.200**	-0.0602	-0.187	-0.0885	-0.0263
		(0.185)	(0.109)	(0.124)	(0.151)	(0.0846)	(0.127)	(0.158)	(0.134)	(0.123)
	LUAI_dist	0.658**	0.0407	-0.0625	0.206	-0.346***	-0.157	0.479	0.144	0.270
		(0.260)	(0.202)	(0.250)	(0.206)	(0.122)	(0.115)	(0.334)	(0.242)	(0.222)
Formal institutional dimensions	LVA_dist	0.336***	0.154*	0.160	0.160*	-0.0346	-0.0710	0.454***	0.273***	0.280**
		(0.0917)	(0.0828)	(0.146)	(0.0895)	(0.0829)	(0.103)	(0.0915)	(0.0977)	(0.128)
	LPS_dist	0.00472	-0.0275	-0.115	0.124	0.0658	0.00868	-0.0555	-0.113	-0.213**
		(0.0986)	(0.0808)	(0.0831)	(0.0785)	(0.0810)	(0.0856)	(0.0756)	(0.0740)	(0.0950)
	LGE_dist	-0.211*	-0.0907	-0.100	-0.0605	-0.0261	0.0599	-0.159	-0.132	-0.150*
		(0.110)	(0.0662)	(0.0745)	(0.0752)	(0.0506)	(0.0718)	(0.111)	(0.0858)	(0.0910)
	LRQ_dist	0.00611	0.0625	0.0301	0.00292	-0.00573	-0.0461	0.123	0.129	0.0244
		(0.0688)	(0.0562)	(0.0662)	(0.0529)	(0.0444)	(0.0408)	(0.121)	(0.116)	(0.0653)
	LRL_dist	-0.116**	-0.0485*	-0.123***	-0.0742	-0.0326	-0.0438	-0.131**	-0.126***	-0.151***
		(0.0464)	(0.0270)	(0.0370)	(0.0456)	(0.0416)	(0.0539)	(0.0537)	(0.0448)	(0.0477)
	LCC_dist	-0.0876**	-0.00708	-0.00772	-0.0363	0.0499	0.0495	-0.112**	-0.0525	-0.0979
		(0.0344)	(0.0459)	(0.0461)	(0.0521)	(0.0523)	(0.0708)	(0.0547)	(0.0515)	(0.0638)
	INST_qual	0.326***	0.185*	-0.0195	0.373***	0.372***	0.144	-0.000626	-0.0125	-0.0890
		(0.114)	(0.0985)	(0.166)	(0.0925)	(0.133)	(0.153)	(0.174)	(0.148)	(0.196)
	LGDP		1.345***	1.465***		1.327***	1.161***		1.381***	1.260***
			(0.202)	(0.207)		(0.182)	(0.337)		(0.234)	(0.282)
	LPATENT		-0.184	-0.427**		-0.158	-0.418*		-0.268*	-0.238
			(0.122)	(0.202)		(0.139)	(0.216)		(0.148)	(0.208)
	LTERT		0.203	-0.00949		0.398*	0.160		-0.300	-0.607
			(0.231)	(0.247)		(0.209)	(0.280)		(0.426)	(0.414)
	LWAGE		0.0978	0.307*		0.124	0.278**		0.0174	-0.0222
			(0.0938)	(0.162)		(0.0950)	(0.137)		(0.124)	(0.212)
	LNAT_RES		-0.0584	-0.128**		-0.0440	-0.0652			
			(0.0495)	(0.0636)		(0.0555)	(0.0846)			
	LGEO_dist		-0.249	-0.188		-0.258**	0.0227		-0.214	-0.193
			(0.183)	(0.206)		(0.128)	(0.172)		(0.199)	(0.208)
	LOPEN		0.630***	0.221*		0.466***	0.150		0.639***	0.599***
			(0.163)	(0.132)		(0.129)	(0.132)		(0.173)	(0.189)
	LIMP			-0.180			0.106			
				(0.174)			(0.160)			
	LEXP			0.110			0.317			
				(0.188)			(0.248)			
	LINFL			0.0651			0.0223			0.0148
				(0.0574)			(0.0523)			(0.0457)
	LER			0.0484			0.0160			0.0631**
				(0.0311)			(0.0294)			(0.0319)
	Observations	374	308	106	273	240	103	276	248	165
	Number of countries	63	58	29	46	44	28	46	44	44
	Adj. R2	0.352	0.736	0.798	0.181	0.815	0.817	0.262	0.618	0.681

Notes: Robust standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1. *Source: Author's estimations.*

Appendices

Appendix 1: Description of Hofstede's cultural dimensions

"Power Distance." This dimension deals with inequalities between individuals within a society and how these are handled by different companies. In other words, power distance represents the degree of acceptance of unequal power between individuals within a company/organization. These inequalities are formalized through the hierarchy between the supervisor and the employee. On this basis, Hofstede (1980: 73-76) creates a power distance index (PDI) to compare the size between different countries. He bases his index on country averages of responses to questions about:

- the behavior of the employee against his supervisor in disagreement
- the perception of the employee on the mode of decision making (autocratic, persuasive, consultative or participatory)
- the mode of decision making preferred by the employee (autocratic, persuasive, consultative or participatory).

The PDI takes values between 0 (small power distance) and 100 (large power distance). This small or large power distance is based on social norms that result in differences in political, religious or organizational aspects. At policy level, countries with low PDI are often democratic countries, while countries with a high PDI tend to be governed in an autocratic or oligarchic way. At religious and ideological level, countries with low PDI are carried by religions that advocate equality, while those with a high PDI appreciate the religions preaching the stratification of society and the ideologies of the polarization of power. Finally, at the organizational level, in countries with low PDI, power is decentralized, wage differences are smaller and the educational level is higher. In countries with high PDI, power is centralized, wage differences are important and labor is less qualified (Hofstede, 1980: 107).

"Uncertainty avoidance." This dimension measures the degree of tolerance of a society faced with uncertainty about the future. Uncertainty is understood in different ways. For organizations, *"the concept is often the environment; environment which usually includes everything not under control is source of uncertainty that the organization tries to compensate."* (Hofstede, 1980: 112) The organizational theories reveal two types of behavior to face uncertainty: the rational and the irrational. To determine the level of uncertainty avoidance, the author creates an index of uncertainty avoidance (UAI) based on country averages of responses to questions regarding:

- The compliance with the rules
- The stability of employment
- The level of stress at work.

The index takes values from -150 (low uncertainty avoidance) to 230 (high control of the uncertainty). It has been rescaled to fit the scale 0 to 100.

"Individualism versus collectivism." This dimension takes into account the relationship between the individual and the community within a society. Individualism refers to, while collectivism. Hofstede (1980: 150-151) gives an example of these two trends by comparing Western thought and the Chinese one. In Western thought, the concept of "personality" is considered a separate entity of society and culture. However, in Chinese thought, "man" is considered a person in itself with its social and cultural development that gives meaning to its existence. To measure the degree of individualism, the author creates an index of individuality (IDV) based on a questionnaire with 14 topics (job satisfaction, cooperation, training, recognition, leisure time, etc..). The index takes values between 0 (low IDV) and 100 (high IDV). In his study, Hofstede (1980:167) found a relationship between the degree of individualism and economic development level of a country (measured by GNP/capita). More developed a country is, the greater the degree of individualism will be.

"Masculinity versus Feminity." This dimension takes into account the division of gender roles within a company. A society is called *"male"* when the division of roles is marked and *"feminine"* when it becomes less important. By *"male",* the author defines a society driven by self-affirmation (eg own satisfaction, advancement, earnings), while by *"feminine,"* he emphasizes the social aspect, namely the relationship with the supervisor, cooperation, pleasant atmosphere at work (Hofstede, 1980: 190). To measure the degree of *"masculinity",* the author creates a masculinity index (MAS) based on a questionnaire with 22 topics related to this dimension. The index takes values from 0 (low MAS) to 100 (high MAS).

Appendix 2: Description of WGI

"1. Voice and Accountability (VA) – capturing perceptions of the extent to which a country's citizens are able to participate in selecting their government, as well as freedom of expression, freedom of association, and a free media.

2. Political Stability and Absence of Violence/Terrorism (PV) – capturing perceptions of the likelihood that the government will be destabilized or overthrown by unconstitutional or violent means, including politically-motivated violence and terrorism.

3. Government Effectiveness (GE) – capturing perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies.

4. Regulatory Quality (RQ) – capturing perceptions of the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development.

5. Rule of Law (RL) – capturing perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence.

6. Control of Corruption (CC) – capturing perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as "capture" of the state by elites and private interests." Kaufmann et al. (2010: 4).

WGI are reported "in the standard normal units of the governance indicator, ranging from around -2.5 to 2.5." Kaufmann et al. (2010: 12).

Source: Kaufmann et al. (2010: 4 and 12).