

WHERE TO LOOK FOR AN INTERNATIONAL ALLIANCE PARTNER?

Abstract

We combine insights from strategic alliance literature, international business and economic geography to explore *where* firms form international alliances. We focus specifically on the importance of micro-locational factors such as global cities. This paper is an attempt to provide a better understanding of the multilevel factors that interact to make a particular partner in a particular location more likely to be chosen by a focal firm. We take an explorative methodological approach through a cluster analysis of international alliances made by American companies in 2015. One main contribution is the importance of micro-locational characteristics when studying international alliance formation.

Key words: Alliances, distances, micro-locations, global cities

Introduction

The international business literature has long been investigating country differences and how this affects *why* and *how* firms choose to place their international activities (Alcacer & Chung, 2007; Nachum & Wymbs, 2005; Porter, 2001). Research has found that various types of country differences (cultural, administrative, geographical, economic, social, cognitive, etc.) strengthen the sense of liability of foreignness (LoF) (Hymer, 1976; Zaheer, 1995). A high degree of LoF most often increases the risk of an international collaboration as it is considered to add complications such as extra coordination and monitoring costs (Tihany et al., 2005; Ambos & Håkanson, 2014). This can be translated into spatial transaction costs of managerial responsibilities which are linked directly or indirectly to country differences (Beugelsdijk et al. 2010; Cano-Kollmann et al., 2016).

Contrary to studies on why and how companies place their international activities, we focus on *where* the companies place their activities. Traditionally, international business scholars have used the nation-state as unit of analyses to study the effect of country differences on location choice (Nielsen et al., 2017). The differences can be identified as different types of distance, such as cultural, administrative, geographical and economical distance (Ghemawat, 2001). As with country differences, it is found that when these distances get too big they most often bring complications to international collaborations as well as extra costs. It is however argued that the different distances between nation states might be too large a measurement, and that general country measures cannot capture or cover all the internal nuances within a country (Zaheer et al., 2012). Instead research argues that we must equally consider other location factors linked to for example micro-locations and which might be even more significant in the companies' internationalization strategy (Brown et al., 2010).

For these reasons we choose to focalize on the importance of micro-locations when studying where companies look for an international alliance partner and we include the *global cities* in this study. Research shows that local states and cities more and more enter in competition of attracting certain types of investment by proposing subnational locational advantages (Cheng, 2007; Ho, 2000).

In this context, global cities (such as London, New York, Tokyo and Paris) stand out as they are distinct from their home country as well as regions and clusters in terms of their interconnectedness, centrality and influence in the world economy (Sassen, 1991, 2012). These cities have more in common with each other in terms of economic activities, a cosmopolitan population, level of infrastructure and technologic development than with their home country (Belderbos & Heijltjes, 2005).

In this study we state that the effect of micro-locational characteristics, such as global cities, remains under-investigated in the alliance formation literature, and we know relatively little about where companies look for an international alliance partner. This is surprising when we consider the growing importance of global cities in the world economy. In this context we wonder if some cities are more alliance “friendly” than others and if there are a higher concentration of alliances in certain cities. For these reasons we wish to study where companies look for an international alliance partner at a city level. More precisely, we investigate the importance of the cities where the partners are based, as we believe that subnational locational advantages given by local factors attracts companies and convince them to look for an alliance partner in specific places. Furtherly we integrate the concept of distance at a city level in order to underline the importance of micro-locational factors. We believe that using distance measures at a country level would undermine the special status of global cities.

Based on the presented arguments we thus look to answer the following research question: *To what extent can micro-locational factors help us understand where firms look for an international alliance partner?* In order to answer this question, we combine research knowledge from alliance formation, international business and economical geography. By associating literatures found in different disciplines we hope to obtain a better understanding of the multilevel factors which interact on international alliance formations.

The lack of knowledge on the importance of micro-locational factors convinces us to use an explorative methodology. We find a need to firstly specify and classify the elements which may help

us understand where alliance partners are sought and if some cities are more alliance attractive than others. In order to do so we take a configurational approach (Miller, 1996). It is argued that this method is particularly adapted as a first step to understand complex phenomena as it considers that a sample may consist of several homogenous configurations which vary from one another (Ketchen et al. 1997). The configurations are identified with the combination of major theoretical contributions and taxonomies of empirically findings. This is a method that is often used within the literature of entrepreneurship (Khelil, 2016) but rarely found within the alliance literature. The method allows us to end this paper by proposing an empirical taxonomy and a theoretical typology; and which emphasize the multi-aspects of where a given company looks for an international alliance partner.

The paper is organized as follows: First we look to the location choice and FDI theory for inspiration on where companies chose to place their international activities. This leads us to a theoretical multilevel typology proposed by Nielsen et al., (2017) which identifies factors that affect location choice. We combine the typology with knowledge on partner characteristics found in the alliance formation literature as well as with knowledge of location characteristics found in the global city literature. We also include research from the distance literature in order to identify the dyadic between location and partner characteristics. Hereafter we apply a Hierarchical Clustering on Principal Components (HCPC) method where we use the theoretical typology to identify the tested variables. After having presented the results we reinterpret them using the existing literature. This allows us to propose three types of alliances in which the micro-locational factors are found to be differently important when companies decide upon where to look for an international alliance partner. The paper is ended by presenting the limits and perspective of our study.

Theoretical framework and typology

Location choice and FDI

It is found that the alliance formation literature (including partner selection) is relatively weak compared to literature on alliance governance and performance (Nielsen, 2007). As a result, we do

not find fully explained in the literature what the determinants are when companies look for an international alliance partner. Here we are particularly focused on the lack of knowledge on the importance of micro-locational factors in the international alliance formation. Therefore we firstly turn our attention toward the literature on *location choice* for inspiration.

A large number of studies have looked into the determinants of location choice, especially from a Foreign Direct Investment (FDI) perspective (for overviews please see Nielsen et al., 2017 and Kim & Aguilera, 2015). The determinants may be understood from an economical perspective where the trade cost determines the location choice of the FDI (Krugman, 1979). Here the geographical proximity is found to determine the flow of FDI between countries (Kleinert & Toubal, 2007). With the help of economical measurements such as the Gravity model, research shows that too much distance, in terms of geographical and economic measures, between countries deflate the level of FDI (Head & Mayer, 2013). Scholars within international business have equally studied FDI when trying to explain the location choice in international markets. This is mostly done from a managerial point of view and how the companies confront the LoF in their internationalization strategies. When entering a foreign and unknown market, research shows that a home-country company naturally is disadvantaged when it comes to local business environment, which is considered an extra managerial cost, compared to the local firms (Pedersen & Petersen, 2004). Some studies show that firms prefer to invest less in foreign ventures as the level of uncertainty and risk increases (Gatignon & Anderson, 1988; Brouthers, 1995). Other studies show that companies invest in foreign ventures through a strategy with a high level of control in order to compensate for the risks even though this is linked to higher transaction costs (Hennart, 1991; Brouthers et al., 2003; Meschi & Riccio, 2008).

Research emphasizes that international activities always should be viewed in their context. They can therefore only be fully understood in the light of the overall strategic goal of the firm, the contractual form of activity, the given industry, the size and the international experience of the firm and the nationality of both home, host and market country (Dacin et al., 1997; Glaister & Buckley,

1996; Nielsen, 2003; Li & Parboteeah, 2015). Nielsen et al. (2017) propose a multilevel typology based on existing literature when empirically studying the question of where companies place their international activities. The typology is divided into three types of characteristics: 1) the location characteristics such as the importance of certain industries or products measured as for example market size in a given country, 2) the parent firm characteristics such as size, reputation and experience and 3) the relationship or fit between the parent firm and the destination often measured in different types of distance (Nielsen et al. 2017). We are inspired by these three levels which we will use both theoretically and empirically when trying to understand where a company looks for an international alliance partner.

Where to look for an international alliance partner

International alliances are recognized as an important part of a company's international economic activity (Dunning, 1995) and share the location-based advantages and the uncertainty of entering unknown territory with FDI (Kogut, 1985; Canabal & White, 2008). Even though it can be discussed to what extent alliances in general can be identified as FDI in terms of the amount of resources invested, equity agreements (such as joint-ventures) are traditionally categorized as FDI (Raff et al. 2009). However, it is a fairly under-investigated part of the literature on FDI which is surprising considering that the growth rate of equity agreements is twice as large as for other types of FDI (Owen & Yawson, 2013). Based on these arguments we choose to use the multilevel analysis proposed by Nielsen et al. (2017) but in an alliance formation context which we will present in the following using theory from alliance literature, international business and economical geography in order to classify the characteristics which affect where companies look for an international alliance partner:

Location characteristics

International alliances first of all reduce costs by using the comparative advantage of each partner (Glaister & Buckley, 1996). It is argued that firms engage in international alliances when the benefit from the cooperation outweighs extra costs due to the distance (Geringer, 1991; Hamel, 1991). This can be classified as “hard” economic determinants for creating an alliance such as market size and cost for production (level of wages and productivity), access to resources as well as trade (such as physical infrastructure and bargaining costs) (Nielsen et al. 2017).

Besides these pure economic factors research has found that there often is an ongoing pressure from local institutions which impact the legal form of the international alliance (Beamish & Lupton, 2016). In fact, choosing to create international strategic alliances can be the only or most interesting market-access option due to the local policy regulations (Chiambaretto, 2015), often seen in newly industrialized countries, such as Japan and China (Meschi & Cheng, 2002; Murray et al., 2005). There seems to be a consensus in the literature that regional, national and sub-national institutions set out the business environment of a given place such as constraints or possibilities for foreign companies (Kostova & Zaheer, 1999). The institutional parameters can both be linked to extra cost of doing business in order to protect local actors or a way of attracting foreign investment by offering advantageous business environment.

An advantageous business environment can be created by political decisions on a national, regional or local level and may take the shape of intra-industry agglomeration or industrial clustering. The industry-specific clustering can be traced back to Marshall’s agglomeration theory (1925) where knowledge is clustered in industrial specific micro-locations. The industrial clustering is known to produce knowledge spillover between companies from the same industry as well as create a favorable business environment for co-located producers, clients and suppliers (Porter, 1998). However, Jacobs (1970) showed that the spillover actually appeared between complementary industries and thus across diverse companies in an agglomeration. This generates increased turnover across industries and various actors and actually gives rise to an attractive diversified urbanized zone for investors or companies looking for a business partners, such as alliance partners. This theoretical approach is

closely related to the global city theory where research explains that companies, especially transnational ones, are attracted to cosmopolitan business environments. These represent financial centers as well as centers for advanced producer services and management, and where the infrastructure is both globally and locally interconnected (Beaverstock et al. 1999; Sassen, 2012)¹.

Global cities are the result of a new economic logic given by an enhanced mobility of capital throughout the world and which is more or less free from geographical determination. The local government is found to participate little in the development of these centers even though a global city rarely can be taken out of its national/country context (Brown et al. 2010). This creates a new sort of agglomeration which “...constitutes a key component of the organizational structure of the global economy” (Sassen, 1991:196). Studies have shown that global cities strongly attract FDI because of the competitive advantages linked to these places which help firms deal with the LOF (Zaheer, 1995). As a result, there is a cultural diversity from the concentration of foreign companies that creates a cosmopolitan environment which assumingly erases or diminishes the sensation of different types of risks linked to country differences (Nachum, 2003). Although research has looked into the function of global cities and what ties them together across a global world in terms of heterogeneous characteristics (Wall & van der Knapp, 2011); less attention has been paid to the importance of distance between these cities and how this affect the location choice of companies’ international strategies. Also, global cities have rarely been investigated in an alliance context (Goerzen et al. 2013) but we assume that given the particular international and diverse atmosphere global cities would be an obvious and easy place to look for an alliance partner and should attract more alliances.

¹ Global cities separate themselves from other concepts such as “mega-cities” and “world cities” because of the mentioned characteristics and not because the size of the cities. Global cities can in fact be relatively small such as Zurich (Beaverstock et al. 1999).

Parent firm characteristics

As well as destination location factors, other variables may explain why a particular alliance partner is considered attractive. In the literature, factors linked to the parent firm have often been investigated, such as size and experience of the company. Research shows that bigger companies, for example MNE's, create more international alliances than smaller companies do (ASAP; OBSAP, 2017). This is due to the fact that they have more resources (in terms of financial capital, managerial skills and network) and by their very nature as international competitive where they look to be globally present (Nielsen et al. 2017). Bigger companies are often also more productive which is known to be linked to a higher level the level of FDI (Antras & Helpman, 2004) and are often found to be more attracted to global cities than other cities (Wall & van der Knapp, 2011). The company experience is often linked to age of the company and the older the company the more experience it is expected to have with given markets (Goerzen et al. 2013). The literature has highlighted that the international experience with a certain market enables the companies to gain skills and capabilities, which is a way of reducing the LOF (Johanson & Vahlne, 1977; Christoffersen, 2013). Experience can also be seen as repeated alliances between the same partners, which are found to perform better than alliances between unknown partners (Goerzen, 2007). This is due to the build level of trust and confidentiality during the continuous collaboration.

Other parent firm characteristics which are often emphasized by the resource-based view in the literature are the division of tangible and intangible resources (Chung et al. 2000). The resources that a firm may posit can be classified as *technical capital*, *commercial capital*, and *social capital* (Ahuja, 2000). The different types of resources are also found in Garrette and Dussauge (2000) typology of *scale* and *link* alliances. In the scale alliances partners contribute with similar resources and the aim is producing economies of scale for those activities that firms carry out in collaboration. They are often seen as a defensive strategy and are formed to help compensate for a size disadvantage in the global competition. Link alliances on the other hand contribute and combine different skills and resources from each partner. An example can be a partnership in which one partner provides

market access to products that the other partner has developed (Dussauge et al., 2007). Research also explains that firms with strong intangible resources benefit more from complementarities between firm- and location specific resources and will thus have a tendency to look for alliance partners in favorable business environments such as clusters or global cities (Markusen et al., 1996; Nielsen et al. 2017).

Fit between the parent firm and the destination

Lastly it is necessary also to include characteristics of the location-partner dyadic as some factors behind an alliance formation cannot be explained by one or the other. On this topic the literature is particularly interested in the differences between the home-host countries of the companies which are often treated as different types of distances. The most often identified types of distance in the literature are the cultural, administrative, geographic and economic distance (Ghemawat, 2016). We saw above that when looking at the flows of international trade or FDI, distance and borders still play an important role when it comes to international business and that the frequency of trade flows reduces as the kilometers of transport raises (Krugman 1997, Combes et al., 2005; Kleinert & Toubal, 2010). The same tendencies are found in the international alliance literature, where the general assumption is that the further away a country is from a home-country, the more complicated it is to do business between the two partners according to different distances (Mayrhofer, 2004; Ganesan et al., 2005; Tihany et al., 2005; Moala, 2015).

Scholars in international business have long tried to explain how and why distances affect behavior and performance of the companies engaging in the international cooperation (for an overview see Hutzschenreuter et al., 2015). It is found that the distances are associated with higher transaction cost, often measured in terms of extra managerial implications (Cano-Kollmann et al., 2016). Relevant studies show that the high cost of engaging with a certain partner, affect the choice of creating either an equity or a non-equity alliance (Williamson, 1975; Oxley, 1999; Hennart & Zeng,

2002, Globerman & Nielsen, 2007). Even though, the distance effects might differ depending on the type of alliance (Choi & Contractor, 2016).

Distance measures are in general measured at a country level in the international business literature (Ghemawat, 2007). However, as other scholars before us we argue that this level may not be the most adapted one (Zaheer et al., 2012; Harzing & Pudelko, 2016) – especially when looking on global cities. First of all, global cities are often detached from their local context and from geographic determinations (Brown et al. 2010). Instead they are characterized by a cosmopolitan context with a multicultural population given by the concentration of international companies and the high level of economic activity (Sassen, 1991). They therefore share the same city profile given by a particular global setting and could be found not to be concerned by country differences. It is hard to specify as distance measures and global cities, to the best of our knowledge, never have been studied simultaneously in the international business literature. For the here mentioned reasons we wish to combine global cities and distance measures but at a city level in order to take into account the specificities of global cities. We thus choose to focalize on the four distance dimensions used in the CAGE Distance Framework proposed by Ghemawat (2001) at a city level: Cultural, administrative, geographic and economic distance. We believe that this is the best way to measure the dyadic between the partners and their location and should allow us to test to what extent global cities share certain characteristics which makes them attractive as location when companies look for an alliance partner.

Based on the above mentioned theoretical approaches, we wish to combine the proposed multilevel theoretical contributions on where companies look for an alliance partner with an empirical taxonomy where the tested variables correspond to the theoretical typology above. The taxonomy will give us an indication of which of the above-mentioned alliance determinants are most significant in certain situations when trying to uncover where companies look for an international alliance partner. The combination of the two approaches should allow us to propose a new theoretical typology which emphasizes the multi-aspects of international alliance formation.

Data and method

Based on the theoretical typology we have chosen to focus on 10 variables which correspond with the multilevel characteristics identified in the literature. This allows us to construct an operational analysis framework with indicates which variables are associated with certain dimensions (Khelil et al. 2012), and which may help explain where companies look for an alliance partner. Figure 1 illustrates our followed procedure.

[Insert Figure 1 around here]

Figure 1: Methodological framework

Data

In order to create the empirical taxonomy, we compiled a database which contains international alliances (consisting of 71% joint-ventures and 29% non-equity agreements), made by American firms in 2015. USA is the biggest economy in the world and American companies have the highest level of FDI as well as create the most international alliances on a world basis (Goerzen, 2007). It is equally found that a limited number of countries are responsible for the majority of economic flow and international transactions on a world basis, led by the USA as the most prominent actor (Sassen, 1991). Accordingly, when applying the global city index (as we do in the following) proposed by Beaverstock et al., 1999 and modified by Goerzen et al., 2013, it is clear that USA has the most cities ranked as global cities compared to other countries. For these simple reasons we argue that it is worth being studied by scholars.

By choosing one focal country, USA, it allows us to more easily understand the effect of distances as we have one starting point. We can hereby more easily grasp the distance measures as well as show that firms from different cities in the US are affected by different factors in an alliance formation context. The core of the data was obtained through SDC (Securities Data Company) Platinum and data was further expanded by the use of several other sources. Please find a full list of sources in Annex 3 as well as a list of the 32 countries found in the database with the partnering cities in each country in Annex 1.

Operationalization and variable presentation

As we saw in the literature, we need to include factors on firm level, the institutional level as well as the country level when we try to understand where companies look for international alliance partners. We use the three levels found in the theoretical typology to define the variables. For this reason, we have chosen first to include two descriptive variables which correspond to the theoretical category of partner characteristics: the size of the partnering companies as well as their experience. From previous studies it is shown that bigger companies have more resources as well as experience which often ease their international activity and that they therefore more often engage in international alliances (OBSAB 2017). We have divided the size variable into five categories: 1) micro enterprises (< 10 employees); 2) small enterprises (< 50); 3) medium-sized enterprises (< 250); 4) intermediate-sized enterprise (<4999); 5) large enterprises (> 5000) (INSEE²). Concerning company experience we know from research that learning from passed experience in various countries and markets help companies to look for the needed information to overcome the LOF (Johanson & Vahlne, 2009). We choose to measure the company's experience as the age of the company, as older companies are assumed to have more experience with different markets and thus be further in their process of internationalization (Goerzen et al., 2013).

In order to measure location characteristics, we have classified the cities of each partner according to the global city index proposed by Goerzen et al., 2013. The index, which is based on Sassen's (1991) idea of "global capacity" and the index proposed by Beaverstock et al., (1999), divides world cities into four categories: Group α contains the 10 *most* global cities in the world, group β consist of the 10 *second* most global cities; group δ of the 35 *third* most global cities and group γ consist of 67 "potential" global cities. In total the index classifies 122 cities. We have included a group 0 in our analysis in order to classify the cities which are not found in the global index. It is important to note that global cities are not classified according to their size and thus differ from mega-

² www.insee.fr/en/methodes/default.asp?page=definitions

cities. Instead they are characterized by a cosmopolitan environment and interconnectedness (idem.). Please see a full list of the global city index in Annex 2.

To measure the dyadic between partner and location characteristics we have chosen to use four distance variables between the cities of the alliance partners. We are inspired by the CAGE Distance Framework proposed by Ghemawat (2001) which gathers the four most treated types of distance in the international business literature: Cultural, administrative, geographical and economical distance. Up until now the effect of distances has mostly been measured at a country level within the literature. This is foremost due to the fact that research has seen different types of distance as given by country characteristics such as culture, history, language, legal origin, and economic development of a country. At the same time data on distance measures are most easily found at a country level. One of the most prominent examples is Hofstede's cultural index (1980) based on country differences (even though data is collected at a company level). This index remains one of the most used measures when working with cultural distances (Harzing & Pudelko, 2016). The distance dimensions in the CAGE Distance Framework are traditionally also measured at a country level but we choose to measure the dimensions at a city level for the present study. We make this choice in order to capture the importance of micro-locational factors and we thus wish to integrate differences or similarities between the cities where the partners are situated.

We measure cultural distance as the percentage of foreign born population in the partner's city. Sassen (1991) explains that the global cities are characterized by a diversity of minorities (which represents more than half of all resident workers in some global cities) and which creates a "new" cosmopolitan culture. We therefore find it interesting to test the cultural composition of each city. The administrative distance is captured as the average office rent per square feet in each city. Research explains that one of the "back sides" of the global cities is the high level of rent and wages because of the density of foreign companies and level of competition (Goerzen et al. 2013). The geographical distance is measured as kilometers between the cities and thus between specific locations. This is an

often-met critic of country measures when addressing the question of geographical distance because research forgets to take the size of the countries into consideration (Mayer & Zignago, 2011). Lastly economical distance is identified as the GDP per capita in each city. Global cities are known to have a well-educated and wealthy population because of the many international companies in the cities which attract this kind of workforce. At the same time the cities also have a high level of poverty because of illegal immigrants and a low-educated workforce which are attracted by the demand and need of services for the well-educated population (Sassen, 2002). For this reason, we find it relevant to test for the impact of living standards in the cities. All the variables are summarized in the Table 1 below.

[Insert Table 1 around here]

Table 1: Variable presentation

**As the variables have different scales, we standardized the variables in the following in order to avoid giving more emphasis to variables that have higher variances.*

Taxonomic analysis

The aim of the method is to group the empirical observations into a limited number of homogenous groups (dimensions) through a set of clustering variables (Meyer et al. 2013). We used the algorithm Hierarchical Clustering on Principal Components (HCPC) (Husson, et al., 2010) to identify a possibly empirical configuration of international alliance partners. It combines three standard methods of multivariate data analyses: Principal component analysis, Hierarchical clustering and partitioning clustering.

Principal component analysis is used to reduce the dimension of the 10 variables associated with each alliance into few continuous variables containing the most important information from the initial set of variables. We find that four dimensions have an “eigenvalue” over 1 and explain 60% of the total variance, which is illustrated below in Table 2:

[Insert Table 2 around here]

Table 2: Results of the PCA analysis

The contribution of the variables for each dimension is illustrated in the four figures below. We find that the variables SizeA, AgeA, Geo_Dist, Eco_Dist and SizeB have the most contribution to the first dimension, which explains 19,04 % of the total variance. Concerning the second dimension (which explains 15,61 % of the variance) the variables IndexB, Adm_Dist, IndexA and SizeB are those who contribute the most. For dimension 3 (variance 14,08 %) it is however the variables AgeB, Adm_Dist and SizeB which contribute. Lastly, Cult_Dist, contribute most to the fourth principal component, which explains 11,60 % of the variance. AgeA and SizeA also contribute to dimension 4 but at a lesser extent. These results indicate that dimensions depend on a combination of different variables and that some of them are partner related, others locational related and others related to the dyadic between these two (distance related).

[Insert Figure 2-5 around here]

Figure 2-5: Variable contributions

Next, hierarchical clustering is performed using the Ward's criterion on the four principal components found above. The choice of the number of clusters is based on the hierarchical tree (Figure 6) which suggests 3 clusters.

[Insert Figure 6 around here]

Figure 6: Cluster Dendogram of the 3 main clusters

The third step of the HCPC algorithm performs a K-means clustering to improve the initial partition obtained from hierarchical clustering. The final partitioning solution is illustrated below in Figure 7 where we see that the clusters are closely related but not overlapping. Figure 8 shows the size of each cluster and we find that the first cluster includes 28,66 % of the alliances, cluster two covers 39,93 % and cluster three explains 38,41 % of the alliances in our database.

[Insert Figure 7 & 8 around here]

Figure 7: Final partitioning;

Figure 8: Cluster sizes

Lastly, Table 3 shows the mean value of the variables describing each cluster.

[Insert Table 3 around here]

Table 3: Variables mean for the 3 clusters

Methodological results of the cluster analysis

Table 3 above presents the three identified clusters: Grp. 1, Grp. 2 and Grp.3 and the mean value of the tested variables which were found significant. We will explain the three groups more in details in the following:

Grp 1: In this group alliances are made by companies where neither the size (-0,91; -0,68) nor the age (-0,51; -0,36) of the partners are big. The average is negative which indicates that the companies are both relatively small and young. The same goes for the three types of distance: cultural (-0,43), geographical (-0,79) and economical (-0,47). This result indicates that there is little cultural, economic and geographic distance between the partners. However, both the global index A and B (0,27; 0,47) have a score which is positive and thus above average. The location of city B, which is the non-American partner, on the index seems to be a little more important (a higher score). This group is thus mainly made up by alliances between partners which are both located in global cities and that there is little distance between them.

Grp 2: For this group the majority of variables have a positive score above average. The exceptions are the economical distance (-0,22) as well as the geographical distance plus the age of company A (empty). It seems that the characteristics of partner B are somewhat more important. Such as the size of partner B (0,76) compared to the size of partner A (0,47). Also, the age of partner B has an impact (0,51). This indicates that the partnering companies are relatively big and old (concerning partner B). Both the cultural and administrative distance are present between the partners (0,26; 0,57), however the latter has a higher score. Once again, the placement of the location of partner B (0,55) is somewhat

more global than that of partner A (0,31). It is interesting that in spite of the fact that the location of the partners in a global city is important, cultural and administrative distances still are present.

Grp 3: For this group the characteristics of size (0,28) and age (0,33) of the partner A (the American company) are important (positive scores above average). This indicates that partner A is relatively big and old. Oppositely the two former groups, the geographical (0,42) and economical (0,54) distances are present. It is interesting that when the location of the partners in a global city isn't important, these two types of distance come into play. This could indicate that for the third group, alliances are mostly made by partners who are not located in a global city and they therefore need to consider other challenges related to geographical and economical types of distance (which are maybe not found as an obstacle in global cities).

Discussion: Reinterpretation of the empirical taxonomy across the theoretical typology

The empirical taxonomy confirms that in order to understand where companies look and find an international alliance partner we need to have a multilevel approach, as already indicated by the literature (Nielsen et al. 2017). In fact, it seems like there is not one way to understand this matter which depends on the partner and location characteristics and the dyadic between these. The empirical taxonomy identified three groups which explain the international alliance formation differently. We translate the three groups into three theoretical settings or alliances types through which we can understand the importance of micro-locational factors when companies look for an international alliance partner in different situations. We will reinterpret and discuss these three types across the theoretical contributions in the following:

Type 1- Global integrated partners: In this setting the partners are both located in global cities which we also find explained in the literature. Research shows that some companies, especially MNE's, look to be globally integrated in order to diminish the sensation of LOF and thus place their activities

in strategic global places, such as global cities (Goerzen et al. 2013). The different types of distance, measured at a city level, were found to be little present. In other words, the differences between the cities where the partners are located are small which could indicate an alliance “friendly” environment where it is easy to look for a partner. This is also argued by the literature where it is explained that global cities are very similar despite the fact of being situated in different countries (Sassen, 1999). This indicates that it could be easier to find an alliance partner in such a place because of the favorable business environment which may remove the difficulties related to country differences. It also confirms that there is a network of global cities which facilitates business flows. It is however interesting that the geographical distance is little which could refer to alliances made between American and Mexican or Canadian companies.

The fact that global cities are relatively similar across the distance measures could indicate that these measures become unimportant. This is confirmed by the literature that explains that these cities have more in common with each other than they have with their nation-state (Belderbos & Heijltjes, 2005). In other words, the result indicates that the particular context of the global cities erases or “paralyzes” the traditional country differences which normally could create problems for the international collaboration (Nachum, 2003). Or the global cities may create new types of distances, such as a new type of culture (cosmopolitan), which this paper has not accounted for (Sassen, 1991). It is argued that the financial flow between the global cities is more or less free from geographical determination and that the local government participates little in the development of these centers (Brown et al. 2010). If this is true this should also eliminate the effect of certain distances.

We equally find that for this type of alliance the size and the experience of the companies don’t seem to matter as we mainly found small and young companies. This is somewhat contrary to what is explained in the literature where it is found that global cities attract a majority of MNE’s

(Markusen et al., 1996). Our results could indicate that the context of a favorable business environment in and between the global cities is accessible for all types of companies.

Type 2 – Global partners routed in local context: For this setting especially the company characteristic of partner B, which was the non-American one, was found important such as the size, experience and location in a global city. As we mentioned, the literature has found that the global cities have a majority of multinational companies, which should be linked to the size and experience of the non-American partner. The empirical results don't allow us to say anything about the direction of the alliance, so we cannot say if American companies look for these characteristics when searching for an international alliance partner. Or maybe this can be explained by the fact that foreign firms often are found to have these characteristics when looking for an American alliance partner (Hennart, 1991). However, it seems like it takes a foreign partner of a certain "caliber" in terms of size, experience and location in order to attract/look for an American alliance partner.

The location of both partners in a global city is also important in this setting, and even found to be more important than in the first setting. This once again indicates the advantages of the network between powerful global cities and the favorable business environment (Wall & van der Knaap, 2011) which could increase the chances of finding an alliance partner. Contrary to type 1, cultural and administrative distances are present between the partners in type 2. This is interesting and could indicate that between certain global cities not all country characteristics can be deleted. This shows that global cities still are routed in a national context and that the particular development/history of the country matters. This is for example found when comparing New York and Tokyo which share the status of global cities (Beaverstock et al. 1999) but which are very different in terms of cultural diversity and industrial development (Sassen, 1991). The same differences are not found when comparing New York and London because of the similarities in cultural diversity (idem.).

Type 3 – Non-global partners: We found, somewhat surprisingly, that almost a third of the alliances are made between non-global partners, as the partners are not located in global cities. It however seems logic as not all alliances are made between companies located in global cities. We also found that the company characteristics of the American company seem more important than the ones of the partnering company, and that these alliances are made by relatively big and experienced American companies.

It is interesting that geographical and economical distances instead are present in this type. We mentioned in the two former alliance types that global cities somehow make these types of distances less important by their global infrastructure and their similar high living standings, among other characteristics (Sassen, 1991). This is maybe not the case for alliances made between partners from non-global cities. This setting could for example represent the case of an American company which creates an alliance with a Chinese company. As both partners are based in non-global cities they could easily lack global interconnected infrastructure of transport and communication, and geographical distance could thus be an obstacle (Sassen, 2002). Further, the location in a non-global Chinese city should more or less equal to a lower living standard than in the non-global American city (The World Bank³), and thus the economical distance becomes important. The non-global alliance type could also be dependent on the type of alliance created and the sector of the partners. Some industries don't need or cannot be globally integrated (Ghemawat, 2007).

The three types here presented, which is both theoretically and methodologically funded, has thus provided us with three alliance types or settings which should be taken into consideration when trying to understand the complex, multilevel factors which interact to make a particular partner in a particular location more likely to be chosen by a focal firm when creating international alliance.

³ www.worldbank.org/en/programs/icp

Contribution to the existing literature

Our findings contribute to the literature on alliance formation, international business management and economical geography in several ways. With this paper we have taken a first step in understanding the determinants of *where* companies look for an international alliance partner. Our explorative study has indicated that we need to take a multi-level approach both theoretically and empirically when studying this. We cannot understand the topic from just one perspective but need to consider both location and partner characteristics, and the dyadic between these. Especially the importance of micro-locational factors was found to be central when trying to understand international alliance formation. The answer to our research question is in fact found to be two-folded, as we have seen that the micro-locational factors affect companies differently in terms of where they look for an international alliance partner.

On one hand, we found micro-locational characteristics, more specifically global cities, to be important when studying where companies look for an international alliance partner. This finding confirmed our introductive wondering about whether certain cities are more alliance “friendly” than others. This seems to be the case when integrating the global city setting because of the attractive business environment and it thus looks to be a good place to look for an alliance partner. When the focal-firm is global integrated, they do tend to look for an alliance partner in a global city. The literature explains that the flow of the world economy can hardly be understood without taking the power of the global city *network* into consideration (Sassen, 2012). This could confirm the high number of alliances between partners based in global cities. This however remains a rather under-investigated part of the alliance literature (Goerzen et al. 2013) and could indicate that we should take micro-locational factors more into consideration when studying alliance formation, especially when the partners are globally integrated (Belderbos & Heijltjes, 2005).

On the other hand, we also found that there is world of business outside the network of global cities which do not depend on the same characteristics when doing business and which cannot be left out when understanding alliance formation. We mentioned above that the alliances made between

non-global partners could be the linked to the industry/sector where certain productions of for example bulky products typically would be situated in the less urban areas and would be difficult to transport (importance of geographical distance) (Ghemawat, 2007). This perspective is linked to the resources which are shared in the alliance and thus the type of alliance created (Tihanyi et al., 2005; Choi & Contractor, 2016). Research has for example found that MNE's production driven activities seems to be placed outside global cities, whereas sales and service activities are placed in the global cities (Goerzen et al. 2013).

With this paper we also join the debate about the relevance of the nation states (Brown et al. 2010; Krugman, 1991) as well as the importance of country differences and thus distances in international business (Zaheer et al. 2012). One could argue that the global city network erases the effect of traditional distances or create new ones. Our results are three-folded in this regard as one setting indicated that for globally integrated companies; the distances are not present when looking for an international alliance partner, as the cities look alike. In another setting the partners were global integrated but cultural and administrative distances remained present between the partners. This shows that we cannot completely deny the effect of country differences or context between certain global cities (Sassen, 1991). And lastly, we found a setting where the partners were considered non-global, and where the geographical and economical distances were present. This again indicates the diversity of ways to understand where companies look for an international alliance partner which support a multilevel understanding of the topic (Nielsen et al. 2017).

When considering the relationship between the powerful network of global cities in the world economy and the relevance of country states and distances, it is equally relevant to discuss how we measure distances. We chose to measure distances at a city level as we found this more evident when studying micro-locational factors. In our study distance measures at state level wouldn't have captured the particularity of global cities. If there is in fact a new geography developing with the growth of the global city network (Sassen, 2002) then we should most likely start to revise the

“traditional” distance measures in international business when studying international alliance formation and location choice.

Managerial implications

Our study may inform, prepare and guide managers when they prospect to create new international alliances, especially about the importance and specificity of global cities. The results should guide them on *where* to look and advise them on what to expect of challenges or advantages from the local setting. Hopefully, our finding may ease the search of the next alliance partner.

Limits, perspectives and concluding remarks

Our study has several limits both theoretically and methodologically. First of all, it remains explorative and can only give us assumptions or guidelines of where to look deeper into alliance formation and the importance of micro-locational factors. Theoretically, we have looked only on a handful of main determinants found in the literature when studying where companies look for an international alliance partner. Other factors may very well, affect this matter as well such as industry and sector of the partners (Ghemawat, 2017). We have not investigated alliance-specific variables either such as trust, opportunism and bargaining power between the partners as well as type of alliances created (Meschi & Riccio, 2008). Research further shows that companies tend to repeatedly create alliances with the same partners which we also could have taken into consideration (Goerzen, 2007). In this context one should also include the direction of the alliances created. Inward versus outward alliances may have different determinants (Welch & Luostarinen, 1993), depending on the city (and country) of the partners. Lastly, by including these aspects it could be interesting to see if one of the identified settings performs better than the others. The results found should therefore be pursued and tested in further research including these theoretical remarks.

Methodologically we chose one focal country, USA, which impacts our results. We saw that country differences still seem to have a certain effect on some alliance formations and we could therefore question the reliability of our results when investigating companies from other countries (Geringer, 1991; Nielsen, 2007). Another methodological limit is how we measure the different types of distances at a city level and the creation of variables. There are multiple ways of defining distances at a city level and as it is a rather unexploited measure, these have still to be “standardized”. Further we created our variables from various secondary data and one might question if they are comparable. There is in fact a need for consistent and comparable data at an international level when working with city measures which makes research highly difficult (Alizadeh, 2017; Pick & Sarkar, 2015).

To conclude our study has provided us with a first part of understanding when studying where companies look for an international alliance partner. We have found that research needs to approach this complex question from a multilevel perspective where particularly the importance of micro-locational factors need to be included. We look forward to pursue these results in future research integrating the above-mentioned perspectives and remarks.

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Web sites:

ASAP: www.strategic-alliances.org

OBSAP: www.obs-alliances-strategiques.fr

Annex 1: List of the 32 countries and the cities represented in the database

USA: Ann Arbor Arlington Armonk Atlanta Austin Barberton Battle Creek Beverly Hills Billerica Birmingham Boston Broomfield Burbank Carlsbad Cedar Rapids Cincinnati Chicago Concord Coming Covington Culver City Custer Houston Denver Elko Englewood Ewing Fairfield Gaithersburg Greenwich Greenwood Village Hartford Indianapolis Irvine Irving Jersey City Johns Creek Las Vegas Laurel Lawrence Lawrenceville Livermore Los Angeles Malden Marlborough Melbourne Menlo Park Miami Midland Milwaukee Minnetonka Miramar Mission Viejo Montvale Mountain View Nashville Newport Beach	Newark New York Norcross Norristown Overland Park Palo Alto Pittsburgh Redmond Reston Richardson Richmond Ridgefield Park Rockville Rockwell Rolling Meadows San Marcos Santa Barbara San Diego San Francisco San Jose Sarasota Santa Clara Sherwood Silver Spring Southfield Springfield St Louis St Petersburg Toledo Tulsa Waltham Washington Watertown Waupun Westlake Westminster Wood Dale	Brazil: Curitiba Rio De Janeiro Sao Paulo Canada: Aurora Brampton Burlington Calgary Cambridge Edmonton Etobicoke Hamilton Montreal Oakville Saint Leonard Toronto Vancouver White Rock China: Beijing Shanghai Shenzhen Suzhou France: Bezons Issy-Les-Moulineaux Paris Germany: Düsseldorf Frankfurt Am Main Hamburg Munich Schrobenhausen Hong Kong India: Bangalore Mumbai New Delhi Ireland: Dublin Limerick	Italy: Campodarsego Milan Japan: Tokyo Kuwait: Kuwait City Luxembourg Malaysia: Georgetown Kuala Lumpur Mexico: Mexico City Netherlands: Amsterdam Norway: Klofta Portugal: Lisbon Russian Fed.: Moscow Saudi Arabia: Jeddah Riyadh Singapore South Africa Johannesbrug South Korea: Seongnam Seoul Spain: Seville Madrid Sweden: Stockholm Upplands Vasby	Switzerland: Basel Geneva Zurich Thailand: Bangkok Turkey: Istanbul United Kingdom: Aberdeen Glasgow London Maidenhead Manchester Merseyside Richmond Staffordshire Utd Arab Em: Abu Dhabi Dubai
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Annex 2: Global city index, Goerzen et al., 2013 (inspired by Beaverstock et al. 1999)

α	β	γ	Δ
London	San Francisco	Amsterdam	Auckland
New York	Sydney	Boston	Dublin
Paris	Toronto	Caracas	Helsinki
Tokyo	Zürich	Dallas	Luxembourg
Chicago	Brussels	Düsseldorf	Lyon
Frankfurt	Madrid	Geneva	Mumbai
Hong Kong	Mexico City	Houston	New Delhi
Los Angeles	Sao Paulo	Jakarta	Philadelphia
Milan	Moscow	Johannesburg	Rio de Janeiro
Singapore	Seoul	Melbourne	Tel Aviv
		Osaka	Vienna
		Prague	Abu Dhabi
		Santiago	Almaty
		Taipei	Athens
		Washington	Birmingham
		Bangkok	Bogotá
		Beijing	Bratislava
		Rome	Brisbane
		Stockholm	Bucharest
		Warsaw	Cairo
		Atlanta	Cleveland
		Barcelona	Cologne
		Berlin	Detroit
		Buenos Aires	Dubai
		Budapest	Ho Chi Minh City
		Copenhagen	Kiev
		Hamburg	Lima
		Istanbul	Lisbon
		Kuala Lumpur	Manchester
		Manila	Montevideo
		Miami	Oslo
		Minneapolis	Rotterdam
		Montreal	Riyadh
		Munich	Seattle
		Shanghai	Stuttgart
			The Hague
			Vancouver
			Adelaide
			Antwerp
			Arhus
			Baltimore
			Bangalore
			Bologna
			Brasilia
			Calgary
			Cape Town
			Colombo
			Columbus
			Dresden
			Edinburgh
			Genoa
			Glasgow
			Gothenburg
			Guangzhou
			Hanoi
			Kansas City
			Leeds
			Lille
			Marseille
			Richmond
			St Petersburg
			Tashkent
			Tehran
			Tijuana
			Turin
			Utrecht
			Wellington

Annex 3: Sources used for the creation of distance variables at a city level

Geografic distance

www.distancefromto.net

Economic distance

Brookings: www.brookings.edu

The Statistics Portal: www.statista.com

The World Bank: www.worldbank.org

OECD: www.oecd.org

Eurostat: www.ec.europa.eu/eurostat

Cultural distance

Reports:

IOM: http://publications.iom.int/system/files/wmr2015_en.pdf

Bloomberg: https://files.lsecities.net/files/2015/02/Innovation-in-Europes-Cities_Bloomberg-Mayors-Challenge1.pdf

Web sites:

Council of Europe: www.coe.int/en/web/portal/home

World Cities Culture Forum: www.worldcitiescultureforum.com/data/foreign-born-population

City Population: www.citypopulation.de

USA:

Governing the States and Localities (www.governing.com/gov-data/census/foreign-born-city-population-changes-data.html)

American Fact Finder (www.factfinder.census.gov)

Canada: Statistics Canada (www.statcan.gc.ca)

Mexico: INEGI (www.inegi.org.mx)

Europe: Eurostat (www.ec.europa.eu/eurostat)

Abu Dhabi: Abu Dhabi Digital Government (www.abudhabi.ae/portal/public/en/abu-dhabi-emirate/abu-dhabi-emirate-facts-and-figures)

India: Office of the Registrar General & Census Commissioner

(http://censusindia.gov.in/Data_Products/Data_Highlights/Data_Highlights_link/data_highlights_D1D2D3.pdf)

Brazil: IBGE (www.ibge.gov.br)

Turkey: Turkish Statistical Institute (www.turkstat.gov.tr/PreHaberBultenleri.do?id=24562)

China: National Bureau of Statistics of China (www.stats.gov.cn/english/)

South Africa: Africa Check (<https://africacheck.org/factsheets/geography-migration/>)

Administrative distance:

JIL: www.us.jll.com

Mercer Group: www.mobilityexchange.mercer.com/Insights/quality-of-living-rankings

The World Bank: www.doingbusiness.org

CIA Country Reports: www.cia.gov/library/publications/the-world-factbook/

Figures

Figure 1:

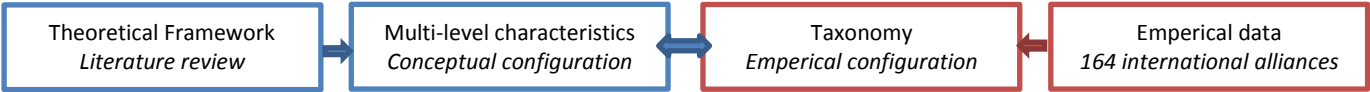


Figure 2-5:

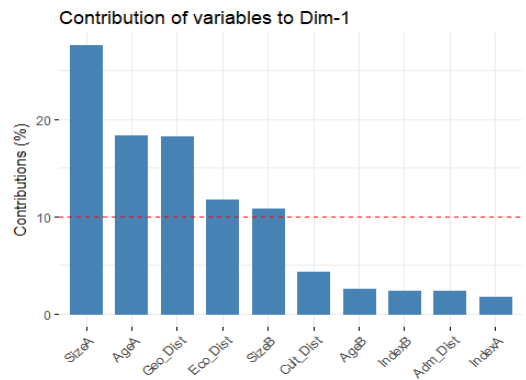


Figure 2: Variable contribution for 1st dimension

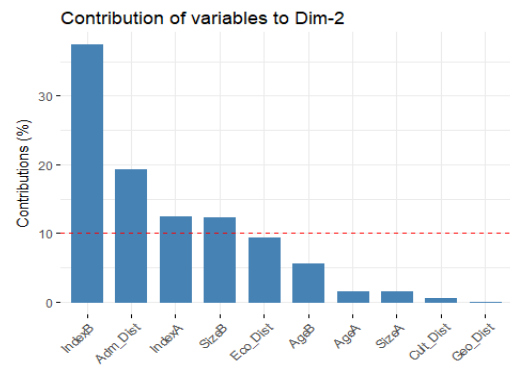


Figure 3: Variable contribution for 2nd dimension

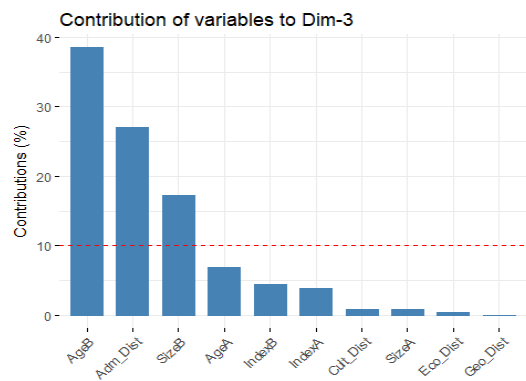


Figure 4: Variable contribution for 3rd

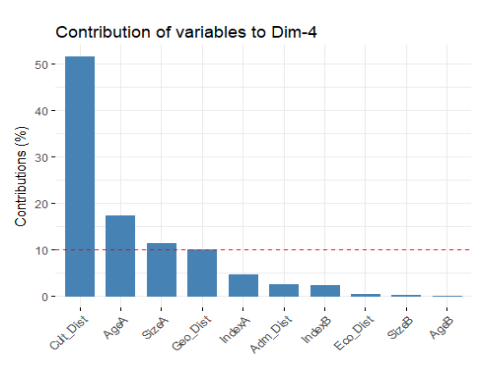


Figure 5: Variable contribution for 4th dimension

Figure 6:

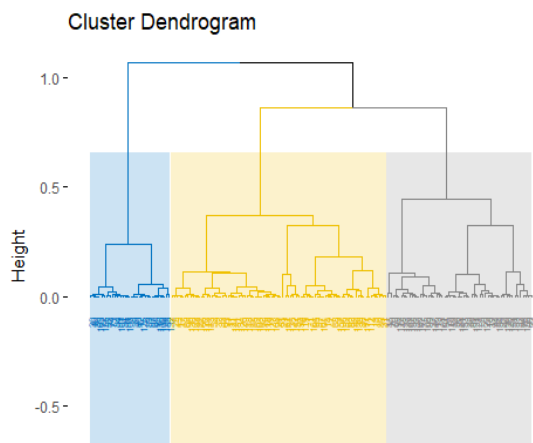
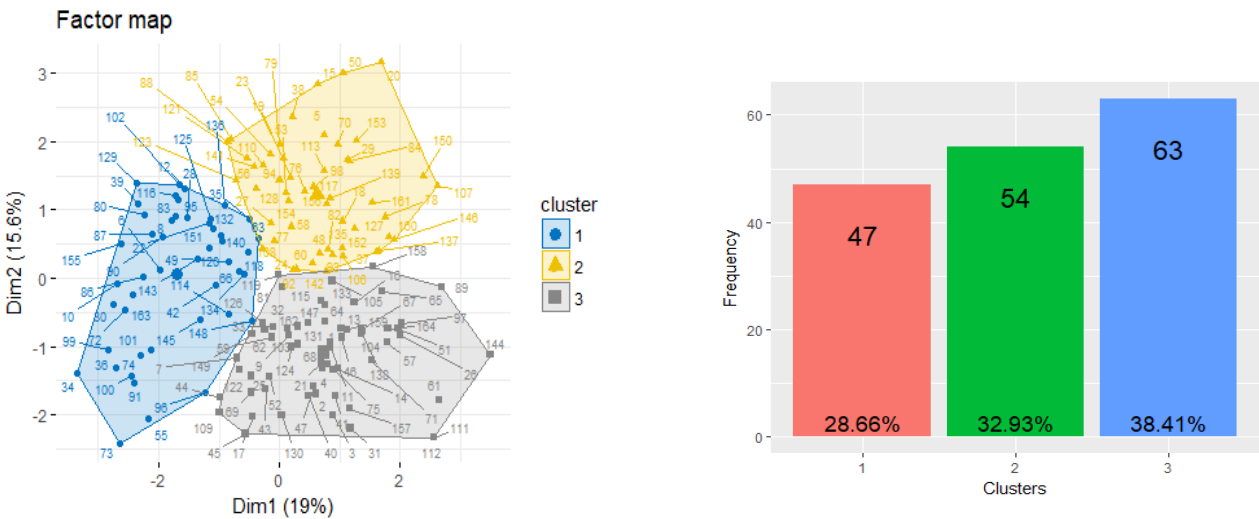


Figure 7 & 8



Tables:

Table 1:

Theoretical variables	Operationalized variables	Name of variables	Value	Variance*
Company level				
Company size	Size company A	SizeA	1-5	1,937
	Size company B	SizeB		1,757
Company age	Age company A	AgeA	> 0	1950
	Age company B	AgeB		1977
Location level				
Global city index	Global index company A	IndexA	0-4	1,530
	Global index company B	IndexB		2,040
Location-firm dyadic				
Cultural distance	Difference in the percentage of foreign born population between the cities	Cult_dist	> 0	0,019
Administrative distance	Difference in average office rent per square meter between the cities (US\$)	Adm_dist	> 0	484,422
Geographic distance	The number of kilometers between the cities	Geo_dist	> 0	15361534,819
Economic distance	Difference in GDP per capita between the cities	Eco_dist	> 0	376967125,415

Table 2:

	Eigenvalue	Variance (%)	Cum. Var. (%)
Dim.1	1.9038409	19.038409	19.03841
Dim.2	1.5608534	15.608534	34.64694
Dim.3	1.4076053	14.076053	48.72300
Dim.4	1.1595923	11.595923	60.31892
Dim.5	0.8885883	8.885883	69.20480
Dim.6	0.8447203	8.447203	77.65200
Dim.7	0.7513777	7.513777	85.16578
Dim.8	0.5610048	5.610048	90.77583
Dim.9	0.5118282	5.118282	95.89411
Dim.10	0.4105888	4.105888	100.00000

Table 3:

Variables	Grp. 1	Grp. 2	Grp. 3
AgeA	-0,51	-	0,33
AgeB	-0,36	0,51	-
SizeA	-0,91	0,47	0,28
SizeB	-0,68	0,76	-
Cult_dist	-0,43	0,26	-
Adm_dist	-	0,57	-0,37
Geo_dist	-0,79	-	0,42
Eco_dist	-0,47	-0,22	0,54
IndexA	0,27	0,31	-0,46
IndexB	0,47	0,55	-0,83