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## A Comparison of the Tourist Destination of Las Vegas and Macau: A Cultural and Psychographic Approach

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### *Abstract*

*The purpose of this manuscript was to understand the cultural and psychological differences between the tourist destinations of Las Vegas and Macau. These communities have had parallel development and the analysis was focused upon how each of these communities changed in relation to their cultural differences. These are international destinations that initially concentrated upon gambling, but have diversified their attractions. A triangular method of Critical Analysis, Word Cloud, and Thematic Content Analysis was used. The results indicated that there were parallel developments, but the express difference was in terms of a liberal versus a conservative approach.*

*Key Words: Hotel Evaluation, Culture, TripAdvisor, Triangulation, Word Cloud, Content Analysis*

### Introduction

There has been much written about destinations such as Las Vegas and Macau. The primary focus of most comments has been on the economic impact of gambling. (Denton and Morris, 2001; Loughlin and Pannell, 2010) These communities have had evolutionary developments as their society has changed. The primary changes have been focused upon economic development to bring more revenues into their areas. (Jorge, 2014) This does not suggest that the cultural aspects have been forgotten or not emphasized. There is a relentless pursuit of change in order to stay competitive. (Chung, 2005; Yu and Lei, 2016) The history of these two communities is rooted in the nature of gambling and its position in society. Sometimes the political and economic structures favor it and other times they spurn it. What is being suggested is that these communities follow the changing mores of the society. These communities are under similar influences and have had parallel developments. There is a cycle to their development, and it represents the government and its desire to regulate the nature of the activities in these communities. These communities have been the driving force in the revitalization or the continued development of their regional economies. (Chung, 2005) This economic condition also includes the development of a tax base in which the government is intensely interested.

The purpose of this manuscript is not to discuss the economic development of these communities; this information is already well-documented. Most of the information focuses upon a demographic or economic approach to understanding these communities. A cultural and psychographic approach may be able to bring a new or different perspective to understanding the nature of these communities. This manuscript will critically review the history of the Las Vegas and Macau communities (Critical Incident Method) to give a perspective for interpreting the results. (Tetteh and Burn, 2001) It is difficult to obtain a cultural or psychographic perspective from current data sources. It must be remembered that the nature of these approaches is to understand what attracts the individual to these areas. One of the approaches to understanding the individual is to know how and why they have made decisions. (Donada and Nogatchewsky, 2009; Van Laer and Izberk-Bilgin, 2019) However, data is extremely difficult to obtain about decision-making in terms of tourism, but one way to do this is to understand the nature of a common decision. The main decisions in these communities center are on food, lodging, and attractions, the most common of which is lodging. These decisions cannot be understood with only absolute quantitative numbers. They can be better understood by utilizing a qualitative approach. These qualitative approaches often add more perspective because they allow for comprehending individual responses.

A very prevalent approach is the classification of narrative statements. There are a number of methods that could be used. ( Lee *et al.*, 2014; Liang *et al.* , 2019) One of the best may be a Thematic Content Analysis. (Myong *et al.*, 2005) In the era of big data, text is so massive that Thematic Content Analysis is not practical. A big data approach that can help is the Word Cloud statistical procedure, a technique in which all text is examined to develop the frequency of words that appear. (Joseph *et al.*, 2017) This approach is problematic in that it does not examine relationships among text or words. If a Word Cloud approach could be used to identify significant text or words, then relationships among these words could be identified through a traditional Thematic Analysis. This type of method allows for the examination of a big data set and the ability to drill down and understand individual comments. This two-step approach is a macro approach that tries to examine statements to develop thematic understanding. (Lee *et al* , 2014) Through using a text finder, the relationships between and among the words can be identified and organized into themes.

In summary, the political, economic, historical, and cultural aspects of each of these communities is very complex, and have changed and will continue to change based upon controlling influences. The one critical element is the individual and what influences his/her decisions. These decisions have an impact upon their lives, both short-term and long-term. It is important to understand the nature of these decisions from a personal perspective to improve the quality of the experience and the sustainability of their participation in tourism activities in these areas.

#### Data Perspective

Evaluations of hotels and their service are often based upon a system of self-reporting. Self-reporting mechanisms are frequently related to rewards to stimulate a response. This has a built-in bias because the individual or those

individuals responding are likely to score the evaluation in a very positive way. These types of information are often used to justify their operations and make management decisions. (Ayeh, 2013) The system that is used must have an objective base in order to provide quality information. It must be recognized that there is not a perfect system of data collection. The biases and the assumptions must be well understood so that the conclusions have a great degree of validity.

Management decisions are based upon a variety of information sources. Many of the data sources have shifted to Big Data/social media. Big Data has a high degree of validity and reliability because of the numbers involved. (Jeacle and Carter, 2011) This type of data has an element of being unsolicited and often includes critical comments. Usually, both ends of the spectrum of positive and negative comments are included. This type of data source is not representative of the general population, but it provides diversity of responses which give an indication about different positions. The best secondary source allows for cross comparisons. There is no doubt that this data is skewed, but understanding the underlying assumptions will give you an indication of its shortcomings, and how to place conclusions from Big Data sources within the proper context. (Ayeh, 2013) Another issue with this kind of data is that it is not usually statistically analyzed to provide the necessary depth of understanding needed. (Liu, 2017) When the data is only descriptive, it only provides trends, and does not drill down to achieve better understanding.

It is recognized that the best data source is primary but, most of these are proprietary. Therefore, secondary data sources are a viable alternative because many have an independent and objective basis. After reviewing the sources of secondary data, it is evident that TripAdvisor is one of the best sources. (Law, 2006; Vásquez, 2011) One of the reasons is that it has a wide geographical reach, and can be segmented in terms of different demographic positions. (Ayeh *et al.*, 2013) Another advantage is the large number of responses, which give rise to a centroid position that is more representative. (Ayeh *et al.*, 2013) This does not suggest that TripAdvisor's data represents a general population's position from any geographic location, but only that it represents different points of view. Another important issue with TripAdvisor is that at one time it featured only comments about accommodation, activities, restaurants, et cetera, but in the recent past, it has been converted to a site that is associated with reservations. This type of position may not be objective because it has an economic interest vested in certain comments associated with sales. With this type of data, baselines must be established in order to get a perspective about the data. (Oriade and Robinson, 2019) This baseline helps develop a global perspective to know how the data has changed. It reflects the time series approach to analyzing the data. Another way of increasing the reliability and validity of the data is through the triangulation of using different techniques, in order to gain a better perspective on the initial data. This is done by using several different techniques of analysis in order to understand the baseline data.

Trip Advisor was used as the data source, but obviously it has limitations. One of the first concerns to improve the quality of the data is to remove comments that have been placed there for marketing purposes. (Vásquez, 2011) Filters and screens have to be in place to expunge these types of responses. Another way of improving the data is to establish some type of criteria for incorporating



information in the data set. These criteria are less about criticism and more about comments that provide the reasons for people's decisions. These comments are written by individuals who want to share information; this sharing of information obviously has a motive. (Van Laer and Izberk-Bilgin, 2019) These motives must be understood and separated from the decision-making process. This is very difficult and has to be put the perspective of reviewing amenities and which have been selected and why. In this context, comparisons need to be made and indicators developed to answer these types of questions, so that there is some kind of basis for adjusting responses. Another factor in reviewing this type of data is the quantitative ratings. These are relative measures and do not reflect depth of understanding. (Liu *et al.*, 2017). These ratings often are the basis for making management decisions. The real context is in the words that help explain the ratings.

## Hotels

The amount of research completed on hotels as it relates to satisfaction is revealing. Those with better facilities, service, and amenities rate higher stars and receive the highest evaluations. (Choo and Tan, 2017; Xie *et al.*, 2016) Critical to these ratings are amenities and services, which are some of the higher costs related to hotels. (Lee *et al.*, 2011; Wilson, 2012) Satisfaction is therefore a critical element in the stratification of hotel types. These stratifications are essential to understand when looking at the decision of clients and their choices. (Banerjee and Chua, 2016) These choices give an indication of the types of individuals that are associated with each satisfaction level. Ratings are directly related to understanding the individual audience that is to be served and providing the expected amenities and services to achieve success. Decisions about hotels reflect personal choice, and show how and why individuals make decisions.

In this study, hotel data was being used as a secondary data source to understand the decisions of individuals in a specific geographic location. The assumption being made is that there are similar processes used to make the same decision in resort areas. These decisions are being reviewed as a window into the cultural and psychological elements of the decision process. Hotels seem to be the best secondary data because this is a principal decision that must be made by all guests. The correlation between accommodation decisions and the understanding of tourists has not been well explored. This is one of the only secondary data sources that have potential for helping to understand these types of decisions.

## Methods

The qualitative methods used in this study were Critical Incident, Word Cloud (R version), and Thematic Content Analysis. The following data bases were reviewed to try to determine the best source of information: Booking.com, Kayak, Priceline, Hotels.com, Hotels Combined, Expedia, Agoda, TripAdvisor, Trivago, and Google. (Hsu *et al.*, 2012; Mayzlin, 2014) TripAdvisor's data base was used in this project. TripAdvisor was chosen because of the quality of the information and its reputation for having the greatest accuracy in its comments. Critical incident historical analysis helps interpret the results by providing a framework for



comparisons. (Butterfield et al., 2005; Flanagan, 1954; Mahrt and Scharkow, 2013) Basic sources were reviewed and critical incidents were identified, based upon three content experts review. The reviews were events and elements that influenced tourism development. The events detected were common to more than two sources. Word Cloud is a process of reviewing material and determining which words have the greatest influence in a data set. Word Cloud methodology was used to identify critical keywords. (Berson and Berson, 2009; Joseph et al., 2017) This is a filter that allowed for developing a better database for analysis. The Word Cloud procedure also allows for comparison of different Word Cloud patterns to identify the similarities and differences among groups. The Word Cloud is not a true theoretical methodology but is a data procedure to manipulate the documents for further analysis. It is a qualitative method that is based upon the grouping of data from a qualitative perspective by the use of word frequencies to better define the data. It is essential to point out that the Word Cloud can be manipulated by the limiting the words that are used in the analysis. The second filter was a Thematic Content Analysis by experts who reviewed the relationships among the words in each Word Cloud. (Donada and Nogatchewsky, 2009; Gonzalez et al., 2011; Myong et al., 2005; Kim and Jeong, 2015; Tetteh and Burn, 2001) This second filter allowed for the establishment of construct validity because the Word Clouds could be compared to the findings of the content experts. The Word Cloud does not identify the dynamic relationships between and among the critical words, so using thematic content analysis was necessary to provide these relationships. There were three content experts used in the review process. This was a system of judgment based upon consensus. Once these elements had been established, the content experts recommended a framework to help better understand the information isolated.

The database was comprised of hotel comments and general comments about the destination. Data was reviewed from January 1, 2018 to December 31, 2018. The hotel comments provided insight into the individuals and their choices in the destination because this is the one common decision that all visitors make. Therefore, it helps to understand the decision process and what factors influence these decisions. The hotel information can be subdivided by audience type, visitor location of origin, et cetera. The features, in this particular data set, are far more detailed than any other information source. The general comments provided a macro perspective and the hotel comments provided micro perspective.

### Comparison

Macau has surpassed Las Vegas as a world gambling destination. However, this does not diminish the importance of Las Vegas. It only serves to view these two communities as parallel competitors.

### Las Vegas Perspective/ Critical Incident

Las Vegas was established as a stop on the Old Spanish Trail, a trading route from Mexico to Los Angeles. Another historic development was the railroad, which linked Salt Lake City and Los Angeles by way of Las Vegas. At that point in time, it had an agricultural base because freshwater could be pumped into the settlement. Urbanization really began with the development of the Boulder Dam

(Hoover Dam). With the development of the dam, this brought many personnel into the area, and infrastructure was needed to provide food, lodging, and services for these individuals. Water and electricity from the dam allowed for other development. This began the era of tourism, spurred by criminal investment; corruption was a hallmark of this era. Private investment eventually helped to find new funds and reduce the criminal investment. This private investment helped develop Las Vegas into a major tourism destination. However, as Vegas has struggled, it has developed a diversity of attractions, entertainment, and special events to effectively compete with other destinations. The latest attempt is the addition of professional sports.

Much of the success of Las Vegas has been due to its location, especially in relation to the Colorado River. Originally, trade caravans found Las Vegas and its valleys as a good stopping place because of its natural resources. Another advantage of this location is its position, between Mexico and the United States, which has been beneficial to the military because of its strategic position. There were also some Mormons who tried to colonize the Valley, but their efforts were not successful. During the Civil War, there was some development, but it was minor because it did not hold a strategic position. After the Civil War, there was varied interest in the Valley, based upon farming and trade. The Mormons had an intense interest in the land.

The first major development was the involvement of the San Pedro, Los Angeles, and Salt Lake Railroad. This was an essential transportation route for the commercialization of the Valley. The agricultural value of the land during this period was the primary attraction. The Land Act of 1885, offered land in this area for a minimal cost. The major resource for the development of this area was water and minerals, particularly silver, which was important in its early development. Its geographic location also made it the crossroads of railroad development. Resources and geographic location helped to make it an early success.

In 1910, strict gambling laws went into effect. Utah was the last state in the West to enact such laws. During this period, there was a bond between political and commercial interests. This bond helped in the development and commercialization of the region. The area prospered until 1922, when there was a major railroad strike, which caused a significant recession.

The first major development of the modern era was the construction of the Boulder Dam (Hoover Dam). This provided water and electricity, which are basic infrastructural elements for growth. In addition, the large workforce for the dam had to have infrastructure, which was the basis of Las Vegas' population growing from 5000 to 25,000. The workforce was primarily male, and therefore the type of entertainment provided was alcohol, theaters, showgirls, and gambling. The criminal element saw an opportunity to make money, and helped in the development of the infrastructure. Gambling was legalized to accommodate this population. The government tried to control the population by developing a companion city for services. This restricted the population visitation, but it was when the criminal element seized the opportunity to develop backdoor operations. When the dam was completed in 1935, the necessary infrastructure elements for growth (electricity, water, hotels, political structure, et cetera) were in

place. Lake Mead provided a recreational area for developing tourism. With the improvement of access through better roads, the area had all the necessary resources for commercialization.

The U.S. Army and the U.S. Air Force developed facilities in Las Vegas during the World War II years, which stimulated additional business. Prostitution was a problem during this era. The government influenced laws during this period to bring change. During the war years, modernization began with the development of the pleasure resorts. During this time, there was a struggle between the criminal element and the local business community. There was close cooperation between the Mormon banks and criminal investment. The criminal investors saw the potential of the postwar era. They envisioned Las Vegas as an investment opportunity because of the large population moving west. Much of this vision was modeled on other cities where gambling and entertainment had helped in developing the community.

After the war, there was great urbanization, and tourism increased dramatically. This was an extension of the period of criminal and Mormon investment. Mormon investment provided legitimacy and political cover. This was also the era of entertainment from mega stars. In addition, there was atomic testing near Las Vegas in the early 50s. These were atmospheric tests continued until the early 60s. During this period, there were many employees in the area from the US Atomic Energy Commission.

In the late 50s and 60s, criminal investment came to a halt as the government took more control and passed legislation to limit their involvement. Private investment became the norm. Entertainment, such headliners, as the Rat Pack continued to increase tourism significantly. Government recognized the importance of revenues related to community development, and began a process of annexation. Another issue that had to be addressed was integration. Owners and criminal investment saw the opportunity to integrate its casinos, and did so, which was good for business and politics. This era was characterized by conflict in competing interests.

During the 70s and 80s there was a population explosion in the Las Vegas region. This led to rapid infrastructural development in the commercial and housing sectors. Urbanization was at its peak. Las Vegas was diversifying its opportunities for conventions, entertainment, and resort activities. It was truly the era of resort development that included casinos.

The 90s and the 2000s were eras of intense mega-resorts development with a variety of special attractions, shopping, entertainment, and gambling. Private investment was the hallmark, and criminal investment was almost nonexistent. The political entities were focused upon tourism and developing quality products for diverse audiences. The private developer was characteristic of this period. Hotels were demolished and mega-resorts built. Entertainment, conventions, and special events were the primary emphasis of this period. Growth was almost exponential. There were downturns, but all property survived. Since then, it has been a community that is constantly exploring new avenues of tourism. Recently, there has been a focus on the establishment of mainstream sports. Las Vegas has always been into sports such as professional rodeo, NASCAR, college

sports, and professional sports teams. The professional sports being developed are those that will make Las Vegas into a true urban center. There have also been tragedies like the mass shooting on October 1, 2017. Las Vegas is one of the premier destinations in the world because of its progressive tourism approach.

### Macau Perspective/Critical Incident

Macau, a former Portuguese colony, is the only legalized gambling area of China. Gambling has been legal since 1850. The region has a history of gambling on traditional Chinese games. It has a consistent architecture that gives it old world charm. Most of the visitors here are from mainland China and Asia.

Macau has globalized its approach to development as China has gained economic power. It has continued to develop infrastructure with a bridge that connects Macau to Hong Kong. With the connection and additional infrastructure development, this region has turned it into an international destination with many different types of tourist activities. Prior to the Chinese take over in 1999, Macau had an organized crime element that controlled some of its development. There were VIP gambling rooms and services for whales. There were no other locations that were controlled where this kind of gambling could be provided. The focus, in the past, has been on high spending customers versus mass marketing gambling. Macau still makes big money from VIP rooms. These high rollers made up a large percentage of the business.

With the increased development, there were significant revenues for taxes, as well as economic impact from tourism. In 2014, China's president Xi Jinping cracked down on corruption. The VIP gaming rooms in Macau were seen by the government in Beijing as a massive leakage of capital from the Chinese economy. A large part of the big money being gambled by these VIPs was seen as the proceeds of corruption and bribery on the mainland. As such, there was a significant loss of revenues. To remedy this, there was a shift away from elite to mass markets. There was a move to diversify activities that included conventions, exhibitions, and special events. This entertainment mixture has resulted in a community that has one of the highest per capita incomes in the world. There was also a major move toward developing a quality entertainment product. Revenues have been increasing exponentially. China also sanctions lotteries, especially around different sports. Gambling is also provided outside the law, including such activities as unofficial lotteries, clandestine casinos, and betting on games such as mahjong and card games.

### Parallel Comparison

The emphasis of Las Vegas and Macau was on decadence, specifically gambling, alcohol, and prostitution. This does not suggest that the application of these is culturally the same, but only that the same underlying root caused similar developments. These activities are common to most societies, but the difference is that these communities evolved into centers of decadence. Most societies shun these activities, but revel in the money generated. In both of these communities, there is an intense competition to control the development of these activities because of the money involved.

The location of these communities is unique in terms of access. Both have a position that allows them to be the crossroads of their region. Each has climatic uniqueness that gives the area an inviting environment for tourism. The other element of location is that both are located in very liberal communities as compared to the general society that allowed for the development of promiscuous endeavors.

Another common element is that both have had some criminal investment that has furthered development of these communities. It must be remembered that the criminal endeavors focused upon making money and seeking communities that would allow investment in these activities. These investments could not be made without a political structure that supported these efforts. Eventually, these communities sought legitimacy and respect, and the government sought to minimize criminal influences.

However, the landscape of each is different. Las Vegas is glitter and lights and Macau is developed around cultural themes.

Each of these communities started out with decadent activities, but they began to evolve into a diversity of tourism activities. These are progressive communities that are in competition with other destinations. The mega-resorts are developed to be inclusive. These mega-resorts are destinations in themselves with entertainment, shopping, gambling, special attractions, and special events. One major difference is that Las Vegas has been aggressive in conventions and special events. The special events are used to make the destination new again and popular. Las Vegas is also in a position to develop professional sports packages to make it different. Another distinctive feature of Las Vegas is the popular activities that provide a range of activities that attract a diversity of audiences. Macau has a unique cultural perspective, and has more of a focus on luxury than Las Vegas.

#### Results/ Word Cloud and Thematic Content Analysis

It is possible to do comparisons among Word Clouds, but in this study, direct comparisons were not appropriate. This is because the data sets were not congruent, and therefore, comparisons may lead to spurious relationships. When the data sets are not compatible, it is better to do a theoretical comparison to isolate similarities and differences. As a result, the Word Clouds were compared on a theoretical basis, and once the comparisons were complete, the data sets were reviewed for thematic content. This Thematic Content Analysis was completed by using the significant themes identified by the content experts from the Critical Analysis and the Word Clouds. The primary focus was trying to develop the relationships among the words to discern themes and relate them to the Critical Analysis for interpretation. The Thematic Content Analysis was performed with three different judges, and after reviewing the Critical Analysis and Word Clouds, a discussion ensued to establish consensus. Word relationships were also reviewed to help establish the themes. The reviews were completed independently so as to not contaminate the data. After the independent reviews, the consensus meeting was held to determine a basic theme among the words.



The data from the hotels were divided into three groups based upon satisfaction rankings. The satisfaction rating was the one used by TripAdvisor to evaluate the hotels. This was a one through five rating based upon the level of satisfaction. The ratings were: Excellent, Good, Average, Poor and Terrible. The ratings were ranked from high to low based upon satisfaction levels. They were divided into three categories based upon 15% differences in satisfaction rankings. These represent low, medium, and high positions. These positions represent different decision styles based upon amenities and services selected. Three representative hotels were selected to typify each category. Hotels were selected based upon the number of comments to get the most popular hotels and to provide a good base for analysis. Those individual hotels that had the greatest number of comments were selected because this provided the best opportunity to obtain quality data. The names of the hotels will not be provided as to not single out the hotels. Anonymity is the key to maintaining privacy.

The demographics are very clear in terms of the populations that each of these communities serve. Las Vegas serves more of a US and Western population, and Macau serves more of an Asian and Pacific Rim population. Of these two communities, Macau has the larger gross and net revenues. In this study, hotels were used as an indicator of the culture and psychographic elements of decision-making.

#### Low Scores

The Word Clouds for Las Vegas and Macau were similar. (Figure 1 and Figure 4) The primary element that characterizes these Word Clouds was value. The primary concern is standard expectations which include features like cleanliness and cost. The difference between these two communities is one of atmosphere. The Macau community has more of a conservative approach, and Las Vegas has more of a liberal approach. (This conservation position could be interpreted by the oriental culture as Macau have during the long history and a romantic affair with their culture) That could be interpreted by the oriental culture Macau have during the long history A liberal approach, in this context, is more of a freewheeling and lighthearted way of making decisions. The primary focus is not necessarily on expectations, but on the fun associated with this location. The more conservative approach here is a focus on the pleasure elements and the format in which these elements are presented.

A thematic Content Analysis was performed for Las Vegas, in relation to word relations. The base of the decisions is seeking value in the context of entertainment outcomes. The individual is seeking new experiences, and adventure. The experience is one that is associated with the image of Las Vegas.

When the Thematic Content Analysis was performed on the word associations in Macau, value is expressed in terms of personal satisfaction. Satisfaction, in this context, is connected with a sensory experience. The sensory experience is based upon achievement of success in relation to productivity. The experience is primarily one of culture and the development of accomplishment within the culture based upon normative associations.

## Medium Scores

Again, the Word Clouds for Las Vegas and Macau were similar. (Figure 2 and Figure 5) The primary elements that characterize these Word Clouds were amenities. The primary concern is the attributes and the way they are viewed. This population is seeking flexibility and normative experiences that are perceived by the larger group as a quality experience related to status within the group. The difference between these two communities, again, is the difference between liberal and conservative approaches. The liberal approach for Las Vegas, in this context, is one of lifestyle. It is seeing and being seen participating in the “right” experiences as defined by their social group. The more conservative approach for Macau is one of peace and tranquility (Influence of the Confucianism) from related group experiences. The common dimension is one of success in achieving personal outcomes.

When the Thematic Content Analysis was performed on the word associations with Las Vegas, the basis of the decisions were the position of the attributes selected. The attributes selected are the ones that tend to be trendy. The depths of the experiences are quite superficial; what is important is the image of them participating, and being able to relate their experience to their social group immediately or their significant group when they return home.

The Thematic Content Analysis of Macau indicated that the experiences were related to cultural conventions of trying to achieve a sense of harmony. This harmony is a cultural element that has been established by the society. This experience may not be recognized by the group, because it is more of an internal or individual experience. The focus is on the depth of the experience as it relates to achievement of outcomes that have a personal influence upon the individual.

## High Scores

Las Vegas and Macau, as before, had similar word structures. (Figure 3 and Figure 6) The primary element that characterized these Word Clouds was status. The focus is upon reputation and the importance of image in relation to the physical resources. Price and exclusivity are also part of this experience. The difference between the two communities again is one of a liberal position for Las Vegas and a conservative position for Macau. The liberal approach is one of having an elite experience no matter the outcomes. The more exclusive the experience, the greater the status is in its quality. It is the conditions that are provided and their associated image. It is the recognition of the individual and their importance. The conservative approach is one of privacy and no direct exposure to other individuals. Individualization is also important. Individualization, in this context, is based upon the status of the individual, and how the individual is treated in terms of reputation and respect. It is their cultural position that is important.

When the Thematic Content Analysis of Las Vegas was completed, the basic decisions focused upon the privileges that were provided. These privileges had to be one-of-a-kind. The more unique the privilege was, the more important the individual’s position. Price is a factor, but not the overriding element. Decisions hinge upon the image of the privileges provided.



The Thematic Analysis of Macau indicated the individualization of the experience as important in decision-making. It is the fulfillment of accomplishment at the highest level that breeds importance. Reputation is the primary element that is associated with success. Even though the money is important, it is the ability to compete at the highest levels and achieve competitive success. The nature of the decision directly depends upon the individuals' assessment of the ability to achieve or accomplish personal outcomes.

## Summary

The primary difference between Las Vegas and Macau is one of a liberal versus conservative approach to decision-making. Word Clouds were segmented by satisfaction level. The three levels analyzed were low, medium, and high. The low-ranked hotels had a focus upon value for both Las Vegas and Macau. The medium scores centered on amenities. The high scores had an emphasis upon status. When the Thematic Analysis was completed for the low scores of Las Vegas, decisions were often based upon image in relation to entertainment. When the Thematic Low Scores were analyzed for Macau, the primary emphasis was upon accomplishment within the culture. The Medium Thematic Analysis of Las Vegas depended upon the image of the experience. The primary emphasis of Macau decisions was on the depth of the experience related to achievement of personal outcomes. The High Scores of Las Vegas focused upon the images of privilege, while Macau's decisions depended upon individual achievement and accomplishments.

The difference in the cultures is where the emphasis in the society is placed: an individual versus a group perspective.

**Figure 1 - Las Vegas Low Satisfaction Category**





Figure 4 - Macau Low Satisfaction Category



Figure 5 - Macau Middle Satisfaction Category







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## Exploring Challenges and Sustainability in Transnational Higher Education Programmes

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### Abstract

*Transnational education (TNE) is firmly embedded as a major aspect of higher education internationalisation. Western institutions have benefited vastly from international demand by exporting their educational programmes. While TNE remains an area of significance and growth, the changing landscape is creating challenges for the sustainability of such programmes. This paper contributes critical insights for TNE strategists by exploring the dynamics and complexity of an evolving TNE context. The future sustainability of TNE based on a dominant model of commoditisation and internationalisation of standardised curricula and pedagogy is challenged. The diversification of TNE providers and modes of TNE globally has major implications for internationalisation strategies and management of partnerships. TNE sustainability will increasingly depend on a growing imperative to shift towards more equitable and locally responsive models of partnership. TNE is inextricably linked to ethical and social dimensions that places focus on addressing the needs and goals of partner countries not only for sustainability but within the wider notion of social responsibility.*

*Keywords: Transnational education, internationalisation, sustainability, international partnerships*

### Introduction

Transnational education (TNE) has emerged over the past two decades as a major aspect of the internationalisation of higher education. TNE is also increasingly referred to as international programme and provider mobility or IPPM, referring to the delivery of higher education in which the learners are located in a different country to that of the awarding institution (UNESCO, 2001). Institutions have pursued TNE under different modes: international branch campuses; distance learning and online learning; licensing, which can encompass validation and franchising, and articulation agreements in which partner institutions agree to jointly recognise study credits and credit transfer within defined study arrangements including joint and double degree programmes (Tsiligiris et al., 2018; Knight and McNamara, 2017; Healey and Bordogna, 2014). The growth of TNE is leading to increased diverse cross-border educational ventures from a broader range of actors extending beyond West to East to East to East, new actors that are generating greater complexity and competitiveness for TNE providers. The purpose of this paper is to examine key developments and trends in TNE and discusses the challenges and implications for the sustainability of transnational programmes.

### Key Patterns and Trends: Diversification of Transnational Higher Education

Transnational provision has until recent years been dominated by Western institutions. The early pioneers UK and Australia were driven by goals of financial sustainability and independence to export their education programmes to generate

additional revenue streams. UK transnational programmes are delivered to the majority of countries worldwide and in 2017 enrolled 707,915 students, 1.6 times the number of international students studying in the UK (HESA, 2017). For the same period the United States was the second transnational education provider after the UK with a presence in UAE, Qatar, Canada, France, China, India, South Korea, Germany, and Japan and potentially the largest number of branch campuses worldwide (TNE, 2018; Crist, 2017). In 2017, more than a quarter of the total number of international enrolments of 431,438 in Australian institutions were transnational students studying offshore (AusGov, 2018a). Currently French universities provide over 600 transnational programmes delivered to over 37,000 students, of which approximately 6,000 are undertaking distance learning. France's programmes are distributed across different geographical regions of Asia (40%), Africa (30%) and the Middle East (TNE, 2018). German-backed universities represented the 5<sup>th</sup> largest TNE provider with presence in Egypt and Jordan educating approximately 20,000 transnational students (TNE, 2018; Ashour, 2018). Notably many programmes have coalesced in the Middle East establishing the UAE, Qatar and Bahrain as regional transnational hubs. The UAE has been one of the largest hosts with a total of 31 branch campuses and the highest rates of student satisfaction (Wilkins et al., 2012).

A significant development is the diversification of global TNE with the growth and emergence of Asian providers. China and India are two major actors that have achieved significant growth in the transnational market over the past decade. China's ambition to internationalise and expand its education programme has been generating momentum. Domestically it has a growing university student population and increased demand for international study. Second only to the United States, China now possesses 2,900 higher education institutions nationally to address a dramatic rise in student numbers from a total of 117,000 in 1949 to the world's largest student population of 37 million in 2015, with demand continuing to increase (Li, 2018). Overall Asia will account for an estimated 70% of global demand for international higher education (Gill and Kirkpatrick, 2016). This is supported by latest figures where six of the top ten host countries for transnational education are concentrated in the Asian region: China, Malaysia, Singapore, South Korea, Hong Kong and Vietnam (TNE, 2018).

China is a major centre for regional education increasingly attracting international students not only from Asian countries but also from those countries involved in the "Belt and Road" initiative. Similar to other approaches in Malaysia and Singapore, China has developed explicit policies to attract international students with the goal to enrol half a million international students by 2020, an objective it is currently close to achieving (De Wit, 2018; Dennis, 2018). The country has concluded numerous joint programmes with multiple other countries including the UK, USA, Australia, Russia and Canada as well as regional neighbours such as Korea, Japan, Singapore, and India (Li, 2018). China has expanded its transnational provision in the Asian region with 5 branch campuses located in Japan, Laos, Malaysia, Singapore, and Thailand and is gradually extending its reach into Europe and the United States. China has one branch campus in Italy and in recent years China and Poland have entered into four joint education programmes representing 0.4% of the total number for China (Li, 2018). Peking University aims to open a branch of its HSBC Business School in Oxford, UK and there are further plans by another institution to launch a branch campus on the US west coast (Phillips, 2017). India is impacting higher education accounting for significant growth in enrolment of students that has nearly doubled

over the past ten years (UNESCO, 2019), and while it has held back on establishing IBC's it is strongly pursuing educational arrangements internationally (TNE, 2018).

These developments provide both opportunities and challenges for TNE. The emergence of developing countries into TNE creates new avenues to explore new arrangements and partnerships. Poland is increasingly active in higher education internationalisation experiencing growing numbers of both inbound and outbound students and an expansion of partnerships with foreign institutions (Li, 2018). Developing nations such as Iran, Botswana, and Egypt are exploring transnational education partnerships to establish educational hubs and branch campuses while universities from Taiwan, South Korea and China have indicated their ambitions and capacity to engage in cross-border provision (TNE, 2018).

A significant trend is that international students are increasingly choosing a broader range of destinations which reflects a change in the educational capacity and diversification of education choice. This is impacting the leaders in TNE in terms of decreasing market share for the five major countries of the United States, United Kingdom, Australia, France, and Germany (De Wit, 2018). While the total number of students studying abroad globally is still increasing, the rate of growth is starting to decline. This is expected to continue driven by downward demographic trends and an increase in local capacity in key sending countries of China, India and South Korea (British Council, 2018). Development of educational capacity of those countries that have played host to western TNE providers combined with enlargement of the higher education sector in developing countries is impacting a growing regionalisation of student mobility centred on major regional hubs of higher education and influenced by an improving higher education offer (British Council, 2018). The numbers of inbound international students to countries such as China, Malaysia, Egypt, and Singapore continue to rise while new educational initiatives designed to attract regional international students are emerging in Latin America and the Caribbean (De Wit, 2018). Although previously not engaged in attracting international students India has recently initiated a new "Study in India" programme designed to promote Indian higher education to Asian neighbours and Africa (De Wit, 2018).

In turn the changing structure and drivers of TNE globally have major implications for internationalisation strategies and management of partnerships. The evolving TNE context is increasingly characterised by more complex interrelations across diverse actors and explorations of new modes of partnership and collaboration that challenges the hitherto dominance of Western institutions. Until recently TNE has been portrayed as a neo-colonial phenomenon dominated by Western countries and characterised by a unidirectional flow of education, expertise management and control (Wilkins and Juusola, 2018; Phan, 2017). It has been argued that the simplified models of TNE that were dependent on unilateral transfer of curricula and quality and management systems are challenged by the emergence of new actors and diverse modes of interdependent relations between all actors (Wilkins and Juusola, 2018; Caruana and Montgomery, 2015). A significant implication is a major shift in TNE education in terms of power differential between the Western TNE countries and Eastern host countries. This power differential between the home and host institutions has been characterised as a "parent-child" relationship (Clay and Minett-Smith, 2012; Dobos et al., 2013; Edwards et al., 2014) where the educational perspective and economic goals have overshadowed the needs and objectives of

host countries (Barrett et al., 2014). A common criticism of current forms of TNE has been the commoditisation and standardisation of programmes that promote a global educational culture that fails to take account of local differences and aspirations (Barrett et al., 2014; Egege and Kutieleh, 2008). This emergent context however is reshaping and rebalancing power dynamics between partners creating significant emphasis on needs, priorities and local realities of host nations. While financial, quality and reputational concerns were key drivers for the standardisation and control of TNE programmes, the extent to which this approach is sustainable in the long-term is called into question. The increasing competitiveness and diversity in the TNE landscape shifts the power towards receivers of TNE keen to retain educational sovereignty, cultural identity and address national and local development goals. There is thus recognition that educational partnerships which contribute to building capacity in host countries and support local and regional objectives and needs will shape future models of transnational education (Tsiligiris et al., 2018; Lawton, 2016; Ilieva, 2016). Emergent countries such as Egypt are increasingly engaging with transnational education as a critical tool to advance national development goals and priorities and to promote economic competitiveness and reputation at a global level (Wilkins, 2018). Yet reputational and financial risks associated with TNE create obstacles for more integrated and contextual forms of transnational provision (AusGov, 2018b; British Council, 2016; EAIE, 2015).

### Local Responsiveness and the Dichotomy of TNE programmes

For exporters of TNE the issue of quality represents a major area of concern. Maintaining the quality of transnational education on levels comparable to or the same as that of the home institution is a key challenge for providers. Evidence shows that many institutions can lack the capacity to manage quality assurance in the TNE context (Healey, 2018). Further, the variations in regulation and processes overseas and the rapidly expanding educational programmes, gives rise to quality concerns and higher exposure to reputational risk. Rapidly emerging counties such as China have placed increasing emphasis on ensuring quality coherence in respect of cultural values (Yang, 2008; Xu and Kan, 2013). Achieving reciprocal acknowledgement of quality perspectives and developing awareness and understanding of quality processes are recognised as major challenges to the quality of TNE (Trifiro, 2018).

This is impacted by pedagogical and curricula issues that have posed major challenges for TNE providers. The provision of curriculum and pedagogical approaches represents a choice between standardised unmediated content and methods on the one hand, to one that accounts for cultural contexts (Barrett et al., 2014). Host nation concerns of westernisation, language, eroding values and traditions or local realities will have increasing implications for management, government and leadership of TNE partnerships. Inevitably as providers move to counter criticism of educational imperialism they become more exposed to operational, pedagogical and quality challenges and risk (Bosire and Amimo, 2017). Depending on the stage of development, host countries favour partners that can offer curricula and pedagogy and research collaboration that have direct relevance and value to local development contexts (Tsiligiris et al., 2018).

Challenges for TNE partnerships in adapting strategies to local contexts exist in addressing different learning styles and localised content (Hoare, 2013) as well as



design and implementation of processes that promote shared responsibilities (Tsiligiris et al., 2018; Lawton, 2016). Yet adaptation of approaches to partnerships and programmes can significantly contribute to local agendas including core dimensions of capacity building and research development and collaboration, and is associated with ethical impacts on the relevance, equality and diversity of higher education provision in host countries (Barrett et al., 2014). The implication of shared processes and increased host provider autonomy are the decision-making challenges that are influenced and subject to cultural values and norms of the host nation which ultimately will require intensive efforts and resources to integrate. The sustainability and motivation of joint venture partners who are often private entities that are subject to financial constraints calls into question long-term collaboration. The implication of intense efforts to negotiate and develop content and pedagogy for the local context means short-term financial goals are sacrificed for long-term benefits of sustainable programmes that prepare students for local social, cultural and economic needs (Knight, 2014).

The future sustainability of TNE will depend on a growing imperative to shift towards more equitable and locally responsive models of partnership. This can only add to the complexity and risk of TNEs which poses significant challenges in respect of leadership, governance and management that need to evolve in response to the rapidly changing power balance and demands from the host country. The ostensible decline in TNE may reflect the challenges in sustaining TNE operations. The international branch campus (IBC) has been the most rapidly growing form of transnational education since the beginning of this century (Wilkins, 2013) with currently more than 311 branch campuses operating worldwide (C-Bert, 2017). Recent evidence from the US and Australia suggests decline in the rate of new branch campuses established (Altbach and De Wit, 2018; AusGov, 2018b; British Council, 2016) while in Europe over half of universities have no plans to increase their branch campus initiatives (EAIE, 2015). Whether this indeed represents a decline in one of the most advanced modes of TNE has however been questioned.

Wilkins and Juusola (2018) argue that rather than face decline IBCs will increase as a result of evolving new organisational forms and initiatives and will be driven by host country governments' requirements. The formation of strategic partnerships with host institutions are highly emphasised by a significant majority of universities (EAIE, 2015). Host governments still view IBCs as a cost-effective and efficient means to expand higher education capacity, while also positively impacting equity and participation, a reduction in the outflow of a nation's talent resources and workforce capacity building. At the start of 2017, at least 14 branch campuses were under development in emerging countries, such as Brazil, China, Mexico and Nigeria (OBHE/ C-BERT, 2016).

New forms of TNE programmes are evolving from existing forms as franchising programmes are becoming franchise universities and twinning programmes are transforming into double or multiple-degree programmes. Moreover, international joint universities have recently emerged as one of the newest forms of transnational education provision associated with broader trends towards partnership-led models and development of joint programmes that advance local agendas (Knight, 2017; British Council, 2016). Such universities have independent status however and are founded on collaboration between foreign universities and host country institutions or government. Some national approaches to the establishment of joint universities

have emphasised the formulation of new programmes, policies and practices (Knight, 2017). A key motivation for host countries is the ability to employ joint universities as local lighthouses for innovation and good practice in critical domains such as governance, quality assurance, pedagogy, research and funding. In most cases partner selection is approached in a highly discriminatory way by both host and foreign institutions based on possession of relevant programmes and expertise, and different perspectives, experience, knowledge and strengths (Knight, 2017).

Critically, the sustainability of future TNE provision depends on balancing the tensions between the goals and interests of partners within a more dynamic and competitive context. The challenge faced is emphasised by recent research showing consensus among TNE managers that TNE models were not sustainable or profitable because the host country develops its education capacity in the medium to long-term (Healey, 2018, p.247). However the extent to which this point is valid is contingent on two factors. Firstly, the host nations' education strategies and the pace at which it is able to introduce its own programmes that address local and regional and global education demands. This is a complex process and depends on a wide range of factors associated with the country's political, economic and social contexts. A second factor is arguably the extent to which TNE providers are able to offer programmes and partnerships that generate and sustain value-added contributions for the host nation. This is inextricably linked to many factors including the reputation and status of the TNE provider, the social capital it generates in the host country and managing resources to establish a competitive edge in the local market.

#### A Social Responsibility Perspective for Sustainability of TNE

The significance of sustainability is debated in the wider business context that sees long-term performance as critically dependent on a wider perspective that acknowledges social, economic and environmental dimensions (Elkington, 1997; Brundtland, 1987). TNE is inextricably linked to ethical and social dimensions that places focus on addressing the needs and goals needs of partner countries not only for sustainability but within the wider notion of social responsibility. In essence, *“Higher education institutions through their core functions (research, teaching and service to the community) carried out in the context of institutional autonomy and academic freedom – must also contribute to the education of ethical citizens committed to the construction of peace, the defence of human rights and the values of democracy”* (UNESCO, 2009, pp. 2–3). The sustainability of TNE is incumbent not only on addressing the development and social issues of host countries but in understanding the potential negative impacts on the home country and global priorities. Yet notably there have been few existing examples of transnational higher education partnerships convened to address development goals (Caruana and Montgomery, 2015). Rather, as noted by Wilkins and Juusola (2018), TNE providers weaken their domestic education market by undermining potential recruitment of foreign students by exporting the same programmes with no differentiation.

As the balance of power shifts in favour of host countries, there is clear and present opportunity for transnational education to apply the principles of social responsibility in addressing the development goals and social needs of developing countries. A desire to enhance local responsiveness has seen growing emphasis among sending institutions on engagement with institutional partners, students and the wider community in which they reside (Elisa and Loretta, 2012). High context and



investment in engagement strategies can promote diverse engagement and inclusion, helping to ensure that programmes address local needs. The significant rise in the employment of collaboration and partnerships in order to establish and progress strategic direction within organisations (Kraus and Brtizelmaier, 2012; Benn and Bolton, 2011; Pearce and Manz, 2011) emphasises the importance of engagement to ensure that partnerships fulfil the needs of both partners.

Partner and social relations are positively impacted by maximising opportunities for knowledge exchange and collaboration which promote higher levels of faculty, student and community engagement (Al-Sindi et al., 2016). Strengthening cooperation is also viewed as a means to minimise a trust gap between sending and receiving countries. Regional networks are potentially critical players in this regard by addressing the information and cooperation needs of countries and institutions, as they are well-placed to act as central repositories of information on HE systems, quality assurance approaches and institutional providers and could support international dialogue and cooperation on policy (Al-Sindi et al., 2016). Over time TNE institutions may develop and promote increasingly autonomous and co-operative practices and more diverse social interactions focused on socio-economic and socio-cultural goals. There should be an optimal and equitable balance between the home and host institutions that maximises the economic and social value contributing to institutional, national and social goals.

## Conclusion

This paper has presented a discussion of the rapidly evolving context of transnational higher education in the context of the sustainability of TNE provision. It is evident that the early dominant models of TNE provision based on the export of westernised and commoditised programmes of TNE to host countries is not sustainable in the face of changing power differentials and changing structures and diversification of TNE around the world. The emergence of new providers in the Asian region represents a significant force that creates a new and evolving competitive dimension driven by national and regional political, economic and social priorities. Thus the sustainability of TNE provision is critically dependent on design of programmes that accounts for development goals and the cultural identity of developing countries. This has major implications for the mode of TNE and programmes that reflect more equitable models of delivery in respect of institutional governance, pedagogy and curricula. Within the scope of the challenges outlined in this paper and the trend of evolving modes of TNE provision there is merit for future research to explore new mechanisms and models that allow partners to transition from standardised unilateral provision towards more equitable models that deliver more quality and sustainable outcomes for all stakeholders.

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# Factors influencing inter-organizational knowledge management in non-profit collaborations: example of Mexican food bank network

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## Abstract

*Currently one third of the food is wasted globally and food-banking model is one of the solutions to this problem. Food banks are non-profit organizations that collect food surplus in commercial sector and distribute it in food aid sector. Therefore, improving efficiency of food banks could have a positive long-term impact on the society, while enabling to support more people in need. One of the ways to address efficiency is through better management of knowledge both within single food banks and across multiple organizations inside of the food bank networks. Success of such initiatives highly depends on the implementation conditions. Consequently, it is essential to identify the factors that impede or facilitate a successful development of knowledge management activities specifically in this type of non-profit networks.*

*This qualitative study was conducted in the Mexican food bank network. Data were collected through semi-structured in-depth interviews both at network and member level. It is the first study that provides a framework of factors affecting inter-organizational knowledge management (IKM) in non-profit collaboration, while showing that IKM is different in non-profit and for-profit sectors. Some of the key factors affecting IKM in non-profit network are personal motivation and characteristics of individuals, organizational trust and social ties, network culture, structure and leaders.*

*Key words: inter-organizational knowledge management; non-profit collaboration; NGO; food bank network; factors.*

## Introduction

In September 2015 the United Nations adopted the 2030 Agenda for Sustainable Development and defined new 17 Sustainable Development Goals to be implemented worldwide during the following 15 years. The second goal of the list says: "End hunger, achieve food security and improved nutrition, and promote sustainable agriculture". Reducing food losses would be an effective way of substantial increase of food supply without using additional resources, considering that on average 1/3 of the food is wasted globally. One of the existing solutions to the problem is the food bank model. Food banks are non-profit organizations that collect food surplus in commercial sector and distribute it among charities and people in need.



Currently food banks have a leading role in the food aid sector and improving their efficiency could have a positive impact on society.

Some authors suggest that non-profit organizations need to know how to manage their knowledge in order to be operationally efficient (Lettieri et al., 2004, Reilly, 2005, Bedoya-Dorado, 2015, Cantu and Mondragon, 2016). Moreover, previous research shows that organizations benefit from knowledge exchange not only within, but also across organizations in collaborations and networks through inter-organizational knowledge management (IKM) (Bell and Zaheer, 2007, Van Wijk et al., 2008, Easterby-Smith et al., 2008, Lancini, 2015, Beeby and Booth, 2000).

The hierarchical structure of the food bank networks seems to create a positive environment for facilitated knowledge exchange among numerous food banks. However, success of knowledge management initiatives highly depends on the implementation conditions. If the research shows that the flow of information and knowledge is obstructed, the reasons should be investigated. It is essential to identify the factors that impede or facilitate a successful development of IKM activities specifically in non-profit networks. Consequently, this study analyses the Mexican food bank network and its inter-organizational knowledge management practices.

#### Literature review

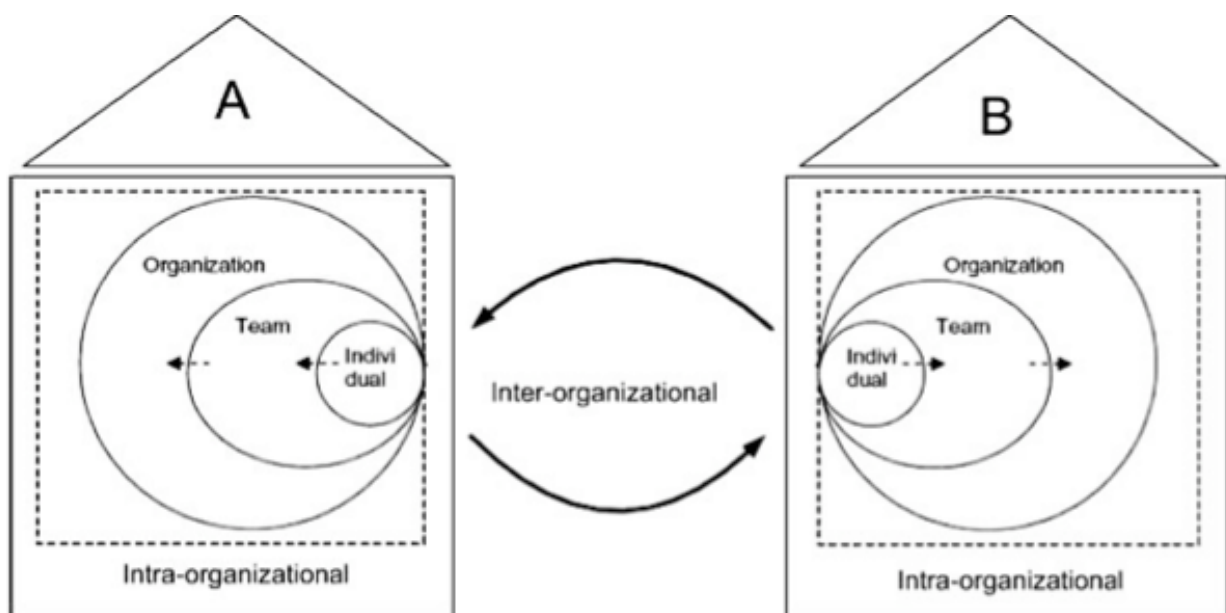
A number of authors suggest that knowledge is the most important resource and intangible asset of an organization and propose a knowledge-based view (KBV) of superior performance (Grant, 1996, Grant, 1997, Liebeskind, 1996, Conner and Prahalad, 1996). The management practice becomes more knowledge-focused (Carlsson, 2003) and organization's competitive advantage depends crucially on successful management of knowledge (Boisot, 1998). Holsapple and Jones (2004; p. 156) suggest that knowledge management is "concerned with ensuring that the right knowledge is available in the right form to the right processor at the right time for the right cost".

The capabilities and resources can be expanded beyond the boundaries of organization and combined in a unique way with the resources of collaborating organizations in order to obtain a greater competitive advantage (Dyer and Singh, 1998). Eisenhardt and Schoonhoven (1996) argue that collaborations arise when the organizations need the strategic or social resources that can get accessed through collaboration. Carlsson (2003) expands the idea to KBV and states that in today's knowledge economy organizations participate in networks and build inter-organizational relationships because they do not have all essential knowledge internally. Lancini (2015) shares the same point that organizations engage into inter-organizational knowledge management, when they search for knowledge that they do not possess in house. Inter-organizational knowledge management (IKM) is a network-focused knowledge management (Carlsson, 2003), which unites all the stages of knowledge management process among organizations.



Intra-organizational knowledge management, which is the management of knowledge inside of an organization, is not a simple process. However, inter-organizational knowledge management, which refers to knowledge management between organizations (Blecker and Neumann, 2000), brings even more complexity due to the nature of knowledge, collaborative environment, additional boundaries and different cultures (Mircea, 2015, Van Wijk et al., 2008, Easterby-Smith et al., 2008, Beeby and Booth, 2000). Moreover, for a better understanding of IKM it is important to be aware that knowledge exchange occurs at four levels (Figure 1): individual, group (or team), organizational and inter-organizational (Lertpittayapoom et al., 2007, Nooshinfard and Nemati-Anaraki, 2014, Kong, 2008, Soh et al., 2012).

**Figure 1: Levels of IKM. Source: Adopted from Nooshinfard and Nemati-Anaraki (2014)**



In order to guarantee that knowledge can be smoothly managed between employees in different organizations, it is important to understand the impact of context factors on inter-organizational knowledge management (Nooshinfard and Nemati-Anaraki, 2014). Systematic review of the KM and IKM literature (Table 1) helped to develop the conceptual framework of factors influencing IKM in non-profit sector (Figure 2).

**Table 1: Systematic literature review on factors affecting IKM. Source: Own elaboration.**

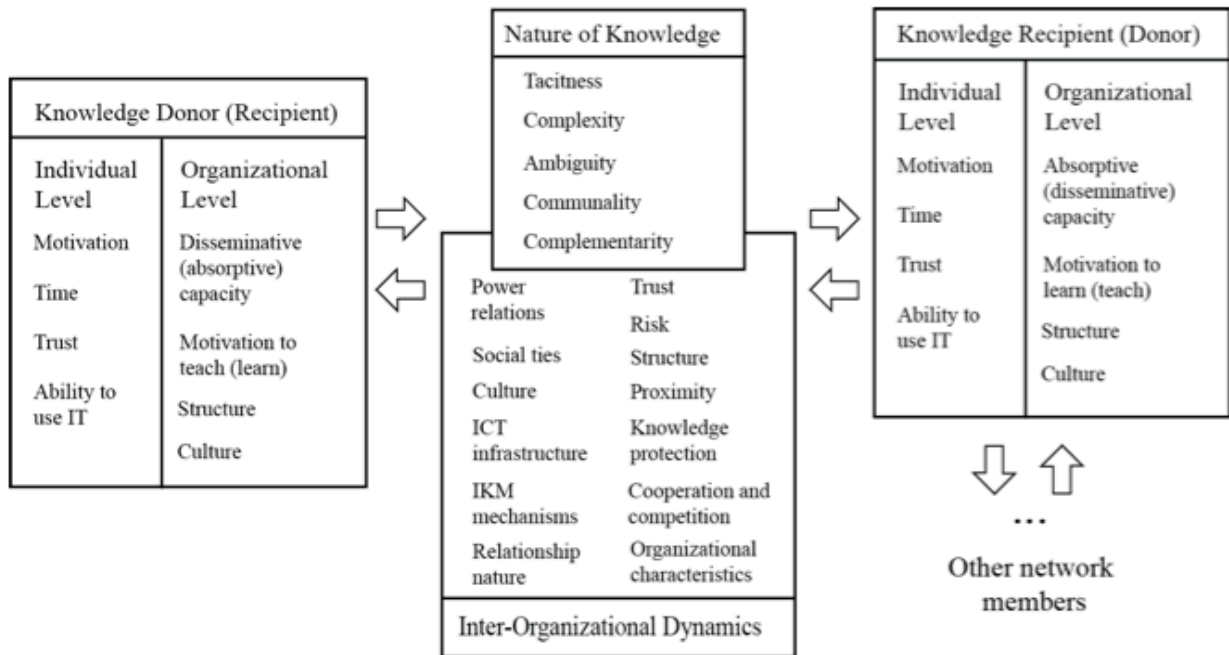
Factors	References		
D o n o r characteristics	Individual level:		
	Motivation	Nooshinfard and Nemati-Anaraki (2014); Ipe (2003); Szulanski (1996); Goh (2002); Argote et al. (2003);	
	Available time	Goh (2002);	
	Trust	Nooshinfard and Nemati-Anaraki (2014); Goh (2002); De Long and Fahey (2000); Al-Alawi et al. (2007);	
	Ability to use IT	Nooshinfard and Nemati-Anaraki (2014);	
	Organizational level:		
	Disseminative capacity	Mu et al. (2010);	
	Organizational structure	Nooshinfard and Nemati-Anaraki (2014); Goh (2002);	
	Organizational culture	Nooshinfard and Nemati-Anaraki (2014); Goh (2002); De Long and Fahey (2000);	
	Motivation to teach	Easterby-Smith et al. (2008); Nooshinfard and Nemati-Anaraki (2014); Martinkenaite (2011); Steensma et al. (2005);	
	R e c i p i e n t characteristics	Individual level:	
		Motivation	Nooshinfard and Nemati-Anaraki (2014); Ipe (2003);
Available time		Goh (2002);	
Trust		Nooshinfard and Nemati-Anaraki (2014); Goh (2002); De Long and Fahey (2000); Al-Alawi et al. (2007);	
Ability to use IT		Nooshinfard and Nemati-Anaraki (2014);	
Organizational level:			
Absorptive capacity		Mazloomi and Dominique (2008); Easterby-Smith et al. (2008); Grant (1996); Goh (2002); Cohen and Levinthal (1990);	
Organizational structure		Nooshinfard and Nemati-Anaraki (2014); Goh (2002)	

	Organizational culture	Nooshinfard and Nemati-Anaraki (2014); Goh (2002); De Long and Fahey (2000);
	Motivation to learn	Easterby-Smith et al. (2008); Nooshinfard and Nemati-Anaraki (2014); Mazloomi and Dominique (2008); Goh (2002); Steensma et al. (2005); Martinkenaite (2011);
Knowledge characteristics	Tacitness	Mazloomi and Dominique (2008); Easterby-Smith et al. (2008); Argote et al. (2003); Grant (1996); Beeby and Booth (2000); Ipe (2003); Simonin (1999); Becerra et al. (2008); Reagans and McEvily (2003);
	Complexity	Easterby-Smith et al. (2008); Mazloomi and Dominique (2008); Simonin (1999); Birkinshaw et al. (2002); Zander and Kogut (1995); Reagans and McEvily (2003);
	Ambiguity	Easterby-Smith et al. (2008); Fang et al. (2013); Van Wijk et al. (2008); Simonin (1999); Birkinshaw et al. (2002); Szulanski (1996)
	Commonality and complementarity	Mazloomi and Dominique (2008); Grant (1996); Simonin (1999); Tsai (2001); Cohen and Levinthal (1990); Lane and Lubatkin (1998); Reagans and McEvily (2003);
Inter-organizational dynamics	Power relations	Easterby-Smith et al. (2008);
	Trust	Easterby-Smith et al. (2008); Mazloomi and Dominique (2008); Nooshinfard and Nemati-Anaraki (2014);
	Risk	Easterby-Smith et al. (2008); Czakon (2009);
	Level of knowledge protection	Mazloomi and Dominique (2008);

	Social ties	Easterby-Smith et al. (2008); Van Wijk et al. (2008); Hansen (1999); Hansen et al. (2005); Granovetter (1983); Bell and Zaheer (2007); Levin and Cross (2004); Retzer et al. (2012); Reagans and McEvily (2003);
	Cooperation and competition	Hackney et al. (2005); Czakon (2009); Easterby-Smith et al. (2008); Loebbecke et al. (1999);
	Organizational culture of collaboration	Nooshinfard and Nemati-Anaraki (2014); Nieminen (2005); Whelan (2015);
	Organizational structure of collaboration	Easterby-Smith et al. (2008); Van Wijk et al. (2008);
	Nature of collaborative relationship	Chen et al. (2014a);
	Organizational characteristics	Gupta and Govindarajan (2000); Simonin (1999); Van Wijk et al. (2008); Park et al. (2015); Tsang (2002); Gulati (1995); Meschi (1997);
	Proximity	Bell and Zaheer (2007); Nooshinfard and Nemati-Anaraki (2014); Argote et al. (2003); Mason and Leek (2008); Hansen and Løvås (2004);
	I C T infrastructure	Nooshinfard and Nemati-Anaraki (2014); Lancini (2015); Sharratt and Usoro (2003); Carlsson (2003); Goh (2002); Hackney et al. (2005),
	I K M mechanisms	Easterby-Smith et al. (2008); Nooshinfard and Nemati-Anaraki (2014); Lancini (2015).

Conceptual framework (Figure 2) is inspired by the research of Easterby-Smith et al. (2008), in whose framework the knowledge management context is defined by the characteristics of the knowledge donor and recipient, dynamics among the organizations and by the nature of knowledge. Additionally, the framework is influenced by the work of Nooshinfard and Nemati-Anaraki (2014), who suggest the distinction of individual and organizational factors in donor (recipient) organizations (Figure 1).

**Figure 2: Conceptual framework of factors affecting IKM. Source: Own elaboration.**

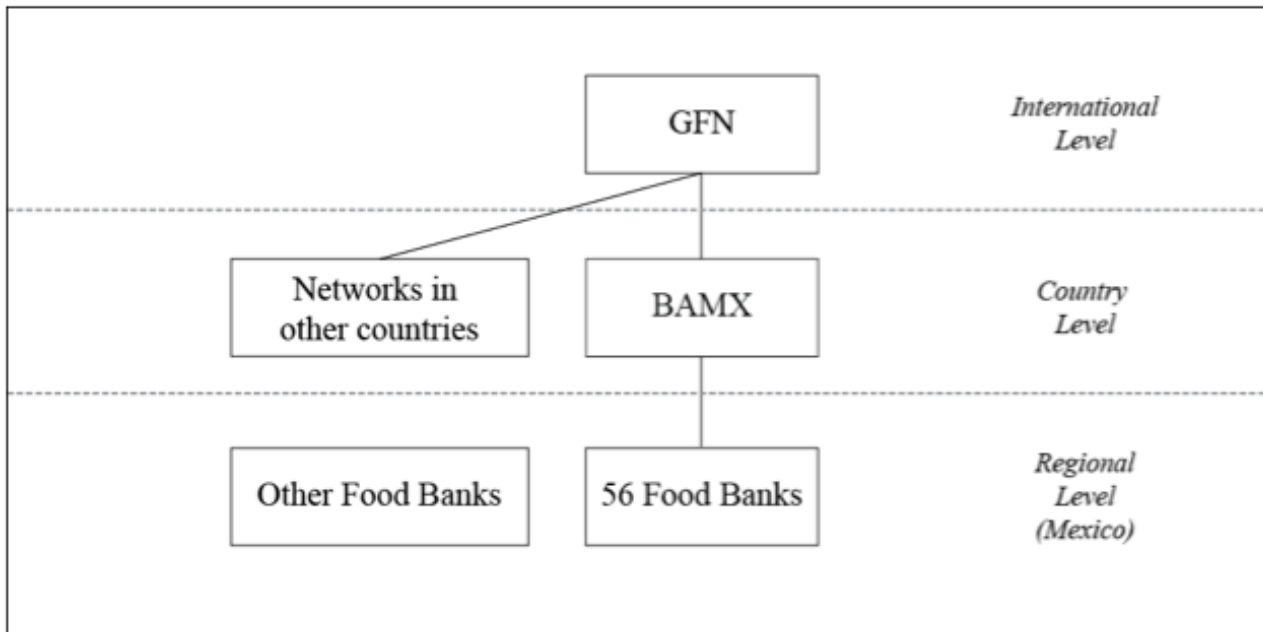


### Methodology and research design

Based on the expert consultation provided by Global FoodBanking Network (GFN), as the main unit of analysis was chosen the Mexican food bank network, called Bancos de Alimentos de México (BAMX). It is one of the oldest and most developed food bank networks worldwide (Bancos de Alimentos de México, 2017). It is structured as a confederation, which means that it has an umbrella organization (National Service Office, NSO) that supports, coordinates and provides services to the member organizations. The NSO is located in Mexico City from where they manage relationships with government and large corporations in food sector among others. The network is a civil association with corresponding association governance structure: general assembly as a supreme body, board of directors as a representative body and supervisory committee as supervisory body. In January 2017 the network counted with 56 members located throughout the country.

Figure 3 presents that food bank networks comprise of three main levels – international, national and single food bank level. The study focuses on country and regional level and analyses knowledge flows between central organization and network members.

**Figure 3: Place of BAMX in the food-banking sector (State: January 2017). Source: Own elaboration.**



The geographical proximity to the organization made possible a detailed investigation based on the face-to-face interviews and observations. A pilot study was conducted at the early stage of the research. It helped testing the plausibility of the initial conceptual model and further defining the procedures of the data collection plan, while developing the research design. The pilot data were gathered in parallel with on-going literature review and gave an important insight into the studied topic.

This qualitative research follows phenomenological methodological position, which implies that the researcher is interested in how research subjects experience the investigated phenomena in their natural setting (Brinkman and Kvale, 2015, Fossey et al., 2002). It can be reached in the best way by using in-depth interviewing as the main research method. The study focuses on the prolonged in-depth interviews with average length of one and a half to two hours, conducted either in one or over two sittings.

In the umbrella organization the research participants were chosen from the employees at management level of every department. Interviews in person were conducted with logistics manager, nutritionist, government projects manager, information technologies manager, director of finances and administration, and manager of the capacity building department. Additionally, one audio Skype interview was carried out with general director and one video Skype interview with fundraising manager. Interviews in the umbrella organization were conducted in November and December 2016.

The definition of network members was done in two steps. First, we identified two regions that were especially active and participative in the network.



Second, in each of the two regions we chose two food banks. President of the first food bank was on the board of directors of the network, which consists of nine vice-presidents (one from each of the nine regions) and executive committee. This person could personally represent the region during formal board meetings, which took place three to four times a year. Second food bank from the same region was not represented on the board of the network and depended on the information and knowledge shared by the president of the first food bank. Interviews in the member organizations were carried out between August and October 2017 after the permission was granted by the NSO. Among four interviews conducted in the food banks one took place in person, two through Skype and one on the phone.

The data gathered through interviews were transcribed in full. Despite of the large amount of interview data, the preference was given to a verbatim transcription of the respondents' exact words. Thematic analysis, or more specific "template analysis" as described by King (2004), was chosen as analytic technique for qualitative data analysis. For facilitation of the analysis stage current study uses NVivo software package.

## Research findings

Factors affecting inter-organizational knowledge management in non-profit collaborations are organized in three categories: nature of knowledge, umbrella organization and network members, and inter-organizational dynamics.

### Nature of knowledge

Data analysis confirms the influence of nature of knowledge on IKM in non-profit network. Such characteristics as commonality, complementarity and tacitness of knowledge have been previously discussed in the literature (Table 1). Current research suggests two new characteristics of knowledge. First characteristic is the relevance of knowledge circulating in the network. When new knowledge from other sectors is shared in the network without further adjustments, the network members see it critically. Second characteristic is the adaptability of knowledge. Due to the differences among the members in the investigated network, it becomes a prerequisite for shared knowledge to be adaptable to distinct environments (geographical, cultural, etc.). Not considering these two new knowledge characteristics can become an obstacle for IKM.

### Umbrella organization and network members

#### *Individual level*

Research shows that in non-profit collaborations at individual level, both in the umbrella and member organizations, a combination of two factors play a decisive role in the IKM: personal characteristics and personal motivation.

Personal motivation is a factor widely discussed in the literature (Table 1). In the investigated network the motivation of management of network members has a key role in the IKM. It is important to regard their attitude to IKM, since it

is their decision whether to promote knowledge sharing culture in the organization or not. Personal motivation of the team of the umbrella organization is another crucial factor. Research shows that, even when there are neither support mechanisms nor environment for the IKM in the network, motivated individuals still can reach positive results in knowledge exchange. Personal motivation in context of IKM seems to depend strongly on personal characteristics of the individuals such as eagerness to learn and open-mindedness. However, it is treated as a separate factor since it can be monitored and encouraged through a system of tangible and intangible rewards both at the local and network level.

Personal characteristics of the personnel and management is a new factor identified in the investigated network. All nineteen personal characteristics are grouped in five categories: demographics (age); background (education, professional experience); culture (regional mentality); values (devotion to cause, spirituality, insensitivity); and qualities (organized, committed, persistent, initiative, open-minded, curious, creative, narrow-minded, pleasantness, humbleness, emotionality, aggressiveness).

#### *Organizational level*

Organizational motivation is a factor suggested in the conceptual framework and confirmed as relevant one for the investigated non-profit network. It is composed of the personal motivation of employees and of the organizational motivation impregnated into the organizational culture. Lack of motivation from the side of the umbrella organization causes lack of promotion and development of the IKM in the network. When the network members lack motivation they are not engaging in the IKM activities and close themselves to knowledge interchange with other network members. However, low organizational motivation is often caused by lack of organizational processes and knowledge management systems and specifics of organizational culture, which does not support IKM.

Data analysis confirms the relevance of organizational structure of the umbrella and member organizations as a factor affecting IKM as suggested by some authors (Table 1). Organizational structure has three principal effects. First, limited staffing causes a high workload and lack of time for KM and IKM practices. Second, unclear organizational roles and responsibilities lead to under-prioritization of certain tasks, such as KM and IKM. Organizational roles have to be aligned to IKM strategy and formally communicated to the entire network; otherwise it creates a serious barrier for development of relationship between umbrella and member organizations. Third, rotation of personnel leads to loss of accumulated individual knowledge, which is mostly not captured due to the lack of KM practices. Moreover, rotation in management of network organizations affects dynamics and established relationships in the entire network.

Organizational culture is the next factor suggested by conceptual framework. Data confirm organizational culture of the umbrella and member organizations to be a crucial factor affecting the IKM in the investigated non-profit collaboration. Research suggests that in order to create an organizational culture that supports IKM umbrella and member organizations should

guarantee the following: management support of knowledge management activities; integration of knowledge management strategy into organizational goals; adequate environment for communication and knowledge sharing; and organizational values supporting knowledge exchange in the network.

Speaking about values, it is important that umbrella organization has own mission and vision as organization, which are independent from the mission and vision of the network. Both statements should reflect its supporting function as a central office in order to prioritize attendance and professionalization of the network members. In case of the network members there is a connection between the way they see the main reasons for being part of the network and their organizational values. They need to see the value of network knowledge in order to appreciate learning and exchange opportunities.

Organizational maturity of network members is a new factor suggested by this research. Respondents discuss different levels of development and professionalization among the network members, which affect their ability to participate in the IKM activities. Maturity is defined informally through comparison with other network members and formally through network diagnostics and certification process. It should be considered in the moment of knowledge diffusion in order to guarantee a better absorption of knowledge by all members.

Conceptual framework suggests absorptive and disseminative capacity as the final factor affecting IKM at the organizational level. Absorptive and disseminative capacities are linked to intra-organizational knowledge management, which is considered by this research as a more relevant factor both in the umbrella and member organizations. Data prove that the problem of dissemination and absorption of knowledge in the network is primarily caused by the lack of mechanisms and strategies for management of internal knowledge. Inefficient KM causes accumulation of knowledge in individuals. Due to a lack of systematization of this knowledge, it is difficult to verify what network-related knowledge already exists.

#### Inter-organizational dynamics

Out of the thirteen factors suggested in the conceptual framework at inter-organizational level, research data confirm the influence of ten factors on IKM in the investigated non-profit network. Additionally, research suggests one new factor based on the obtained data. All eleven factors are organized into three new categories: relationships, environment, and knowledge flow.

Network relationships are regarded at two levels: between umbrella and member organizations and among the network members. Such factors as trust, risk, knowledge protection, cooperativeness, social ties and proximity play an important role in IKM. One of the main barriers for development of the productive relationships, which was identified in the investigated network, is the lack of trust between all parts. Lack of trust in goodwill of other organizations represents a serious obstacle for the development of cooperative relationship and causes a protectiveness of knowledge. The main

risk of knowledge sharing is seen in the loss of donors and donations, which would impede the fulfilment of the core activities of the food banks. This risk is more relevant for the food banks located in the same region, due to their proximity and limited number of donors in each region. Therefore, most of the types of knowledge are shared more easily when the members are located in different regions and there is no direct competition for beneficiaries and donors. However, being located in different regions makes it more complicated to meet and develop strong social ties, which are essential for transfer of both tacit and explicit knowledge. Social ties can be built organically or through the involvement of the umbrella organization. Umbrella organization offers network members meeting and networking opportunities and initiates common projects at the regional and national level. In this way some social ties are developed inevitably through network activities. Interestingly, strong ties between food banks that were developed through involvement of the umbrella organization (as opposed to organic relationships) and some network activities, not necessary result in cooperative relationships leading to knowledge sharing. When the projects are happening in the same region, it might lead to development of coopetition. Network members are forced to communicate and cooperate in order to advance with the common project. However, at the same time they believe that they need to compete in order to gain more beneficiaries and donors in the region. Umbrella organization needs to balance such a complex dynamics of the network in order to be able to develop IKM.

The network environment is characterized through four factors: network culture, network leaders, network structure, and information and communications technology (ICT) infrastructure. It is essential for network to strengthen and promote its values, build a sharing network culture and support the sense of belonging through a common network identity in order to be able to develop a positive network culture for effective IKM. Network leaders also have a great influence on the IKM in the investigated network and represent a new factor suggested by this research. Network leaders are key network members (organizations) and network experts (individuals), who are important elements of the network ecosystem. Key network members act as a role model in the network. They might be considered to have, for example, best operational or management practices, infrastructure, personnel, or information systems. Moreover, these members are cooperative, support network values and ready to share their experience and knowledge with other members. Network experts are affiliated with the member organizations and have network-specific knowledge that is acknowledged by other members. Knowledge of these experts represents an important part of the knowledge base of the network and needs to be considered in the IKM.

Network structure is another factor suggested by the conceptual framework, which, however, is often ignored by researchers. Data prove a strong influence of the network structure (civil association built as confederation) on the knowledge flow in the investigated network. As a result, knowledge circulates through two inter-organizational knowledge management cycles (I-KMCs). I-KMC is a cycle sequence of network knowledge processes – a model that transfers KMC of Evans et al. (2014) to a network setting. The I-

KMC 01 is an informal knowledge flow that occurs at operational level between the umbrella and member organizations and among the network members themselves. The I-KMC 02 is a formal cycle at governing level that includes governing bodies and management of the member organizations.

ICT infrastructure is the last factor belonging to the network environment. Analysis of the data shows the need of network-level knowledge management systems (KMS), which are ICT systems that assist in management of individual and organizational knowledge. However, development of the KMS without corresponding network culture would not facilitate the IKM.

Knowledge flow category regards the IKM mechanisms. Data show that the lack of IKM mechanisms and procedures is a serious obstacle for IKM. It causes efficiency reduction, lack of insight into network activities, obstructed flow of knowledge, and unstructured knowledge. Therefore, it is essential to create formal IKM mechanisms that become a part of the organizational practices promoted by the NPO management.

#### Discussion and conclusions

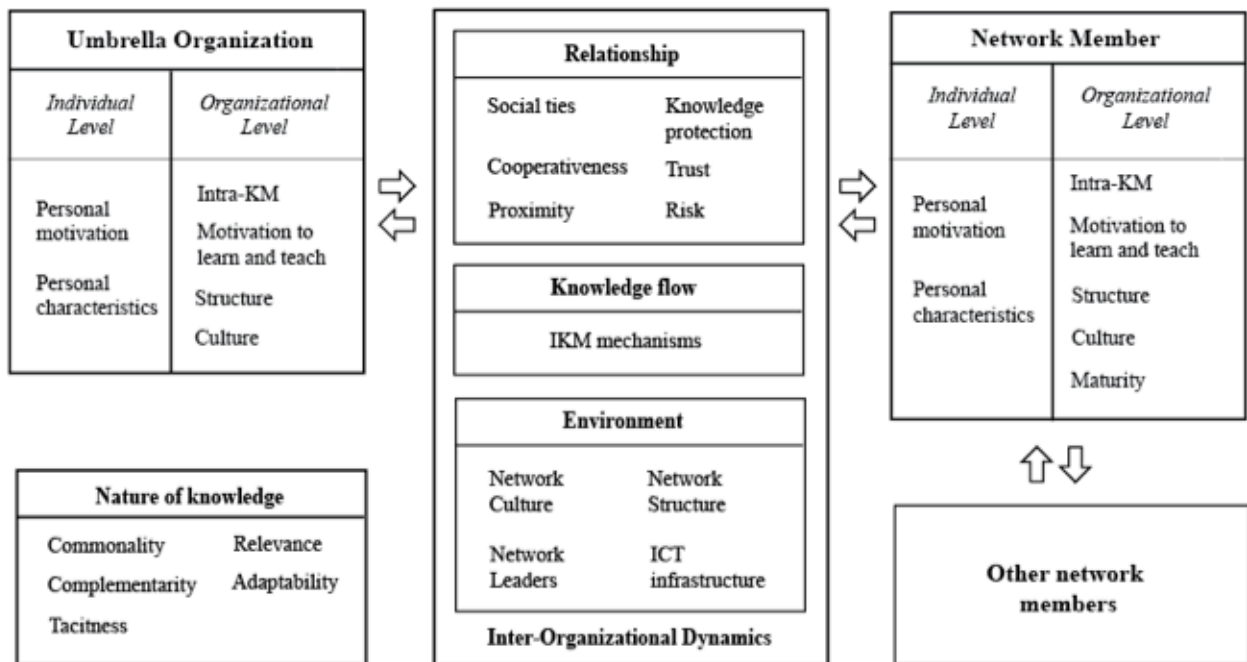
The success of knowledge management initiatives highly depends on the implementation conditions (Heisig, 2009) and factors that impede or facilitate a successful development of IKM. New factors suggested by this research are: relevance and adaptability of knowledge; personal characteristics of individuals both in the umbrella and member organizations; organizational maturity of the network members; network leaders as a part of network environment.

Modification of the original framework of factors affecting IKM in non-profit collaborations is presented in the Figure 4. Some of the key factors are personal motivation and characteristics of individuals, trust and social ties, network culture, structure and leaders.

The impact of personal motivation and characteristics stands out in comparison to the research in for-profit sector. Especially important appears to be the motivation of food bank directors to exchange knowledge with the umbrella organization and other network members. It is a crucial factor due to the centrality of their position in the network. They are not only intermediaries inside of their own food banks - between the board and operational team - but also the main contact for the NSO team and other network members. The motivation of the food bank directors to participate in the IKM varies and strongly depends on two parameters. First parameter is the personal characteristics of the director and his/her education, age, professional experience, openness and pleasantness among others. It is a new factor identified in the investigated food bank network. Second criterion is the perceived value and relevance of knowledge. It is a subjective opinion of director about the quality of knowledge circulating in the network. Relevance of knowledge for specific sector where operates the NPO is another factor introduced by this study.



**Figure 4: Framework of factors affecting IKM in non-profit collaborations structured as confederation. Source: Own elaboration.**



One more important aspect is concerned with the relationships in the network. The findings strongly corroborate prior research on IKM (Van Wijk et al., 2008, Goh, 2002) that trustful relationships and strong ties facilitate the knowledge exchange between organizations. Trust factor results being as critical in non-profit collaborations as in for-profit ones.

Network culture is a factor that has been suggested in literature, but did not receive deserved attention. Research shows that in non-profit collaborations the network culture is one of the most important network-level drivers of successful IKM. It should be one of the first steps in development of IKM to create a network atmosphere where members feel like a team with a common aim. When the members act individualistically and not as a network, it is very difficult to motivate them to exchange knowledge and contribute to the growth of other members. Umbrella organization needs to promote the value of belonging to a network and the role of every member in the achievement of the network's mission. This should also have a positive effect on the development of trust and stronger social ties.

Network structure has not been widely discussed as a factor in IKM literature. However, current research shows that it plays a crucial role. Organizational structure creates the opportunities and spaces for communication and networking, while defining the knowledge flow through the network.

Network culture and structure also rely a lot on the network leaders. It is a new factor identified in the investigated food bank network that should be also relevant for other non-profit collaborations. This factor is interconnected with personal motivation and characteristics. Becoming a key member or network



expert requires a certain level of dedication to the cause, openness, and desire to share expertise and to take a leading role. The strength of the network proved to depend on these informal leaders, their cooperativeness and mutual support, which served as an example to follow for the rest of the network.

The study has several limitations that should be taken into consideration. First, research is based on one unit of analysis and might lack generalizability. In order to address this issue the investigated organization is disclosed and described in details. Second, only a limited number of network members participated in this research and it would be beneficial to obtain a wider picture of IKM by interviewing more food banks. Third, the study was conducted in Global South and the findings might not be directly applicable to the NPOs in developed countries.

This research study suggests that adoption of IKM practices is a way to increase efficiency of food bank networks and, as a consequence, to serve more people in need. However, in order to make the implementation of IKM possible it is important to take into consideration all the factors that have positive and negative effects on the establishment of knowledge management practices. Therefore, the framework of the key factors affecting IKM in non-profit collaborations is the major contribution of this research to the IKM-NPO field.

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## Internationalisation of SMEs – A framework to determine their cost of equity capital

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### Abstract

*The Internationalisation of capital markets as well as (cross-border) mergers and acquisitions are just two reasons for the need to determine the cost-of-capital rates of companies. Cost-of-capital rates are also needed to calculate imputed interest and to carry out investment appraisal calculations and to implement value-based management.*

*Cost-of-capital rates consist of cost of debt and cost of equity, usually calculated as weighted average cost of capital (WACC). To determine the cost of debt is a lot easier as the cost of equity since in almost every case the conditions of credit contracts and bonds are based on contracts and hence legally binding. While stock-listed companies are able to use capital market oriented methods to determine their cost of equity such as Capital Asset Pricing Model (CAPM) or Arbitrage Pricing Theory (APT) other companies – such as SMEs - have to follow different approaches. Existing literature on cost of equity capital focuses on calculation methods for large companies, which also still demand further research. Moreover, practical links literature seems to be rather rare.*

*The aim of this paper is to develop and to present a framework to determine the cost of equity for SMEs with a focus on Internationalisation.*

*As this paper discusses the cost of equity capital in the context of SMEs, the concept of SMEs needs to be defined and characterized. Despite the economic significance of SMEs, until now, there is no uniform definition of SMEs. In science and business practice several concepts have been established in order to distinguish SMEs from other companies. Basically, those approaches can be divided into quantitative and qualitative definition concepts. Based on recent publications on SMEs a combination of quantitative criteria to demarcate SMEs from microenterprises and qualitative criteria to distinguish them from large-scale companies is derived.*

*Regarding an investment, the cost of capital represents the rate of return on capital employed expected by the corresponding investors. Consequently, an investment at least has to meet this expectation of return in order to attract capital. From the investors' perspective the cost of capital has the characteristics of opportunity costs. By allocating capital to a specific investment, they forego providing capital to alternative investments with comparable risk structure and duration and therefore also relinquish the related returns. With growing risk the expected return and hence the cost of capital increases. From the company perspective the cost of capital represents the minimum rate of return expected as adequate compensation by the providers of equity and debt capital. Hence, the company cost of capital is divided into cost of equity and cost of debt, representing the expected returns of lenders and investors in isolation.*



*Since the cost of debt can be calculated easily this paper focuses on the cost of equity.*

*Based on literature review and the analysis of a number of studies the paper displays also the design and the results of a study and a case study in Baden-Württemberg. The study focuses on the degree of application of cost of capital calculations in SMEs and the methods used to determine the cost of equity. It also shows the relevance of the topic to SMEs especially to larger ones with an international focus.*

*The paper presents and discusses several approaches to determine the cost of equity for SMEs, quantitative and qualitative approaches. A special focus is given on specific risks for SMEs and specific risks out of internationalisation. Out of the presented framework methods for the individual use case can be chosen to follow a mixed-methods approach.*

*Areas for further research are manifold in this domain. Further research could focus on larger samples in order to gain validity. Comparative case studies could reveal interesting aspects of the practical implementation in different firms. The publication of further case studies could help practitioners to cope with the issue.*

*Keywords: Cost of capital, cost of equity capital, WACC, CAPM, SME, Internationalisation*

## Introduction

Cost of Capital (COC) is important for a number of issues in companies. These include company valuation (M&A, IPO, purchase price allocation, impairment test), investment appraisal, value-based management (VBM) and the determination of imputed cost of interest (AIR, 2010). It is a topic for all kinds of industries. COC is used as the discount rate for projecting present values of the future cash flows in business valuation, for calculations in value-based management metrics (e.g. Economic Value Added, Shareholder Value for setting the imputed cost of interest as well as a hurdle rate for accepting new investments (Stewart, 1999). Studies show that the difficulty of calculating the COC is in determining the requirement of return of the equity holders – cost of equity capital (CEC) (Geginat et al., 2006; KPMG, 2012; Britzelmaier et al., 2015)). CEC is the profit that investors have to give up instead of investing elsewhere. It has two elements in it: a) the timing of the expected returns and b) the risk of alternative investments (Young and O'Byrne, 2001). The estimation of the cost of equity is difficult because there are many uncertainties to consider (Britzelmaier, 2013). This is true for all companies, but leads to difficulties particularly for non-listed companies. The reason is that the calculation of CEC for publicly listed companies is possible with established models such as Capital Asset Pricing Model (CAPM) or Arbitrage Pricing Theory (APT), which however requires that the company is listed on a stock market in order to derive the data needed for the model. This is a condition, which clearly does not exist for private companies. Among private companies small and medium sized companies build the majority.

Existing literature on cost of equity capital focuses on calculation methods for large companies, which also still demand further research. Moreover, practical links literature seems to be rather rare. The aim of this paper is to summarize and update research papers published during the last couple of years dealing with the relevance and application of cost of equity in SMEs (e. g. Britzelmaier et al., 2013; Britzelmaier et al., 2014; Britzelmaier et al., 2015; Britzelmaier, 2019) and to add thoughts on how internationalisation might affect the determination of CEC. After the brief introduction the characteristics of SMEs are discussed. The internationalisation process is introduced and discussed. An overview on studies and publications on SMEs and foreign directed investments is given in order to justify the relevance the topic of the paper. A critical overview of fundamentals and common calculation methods of the cost of equity capital is provided. Specific SME risks are addressed with particular reference to internationalisation. A case study report is shown. A conclusion and an outlook are given.

### Characteristics of SMEs

As this paper discusses the cost of equity capital in the context of SMEs, the concept of SMEs needs to be defined and characterized. Since a big part of this paper is based on German research results I first focus on German SMEs.

SMEs economically play a very important role in Germany (Mac an Bhaird, 2010). Small and mid-sized enterprises are not exhaustively defined. However, there are qualitative and quantitative characteristics of such. The IfM Bonn (German SME research institute) defines firms with at maximum 50 million Euro revenue and less than 500 employees as SMEs, whereas the EU sets the threshold at 250 employees. Furthermore, these are usually owner-led and have a flat hierarchy; often rather low standards in information processing can be found (Pfohl, 2013). The enormous importance of SME is expressed through the following figures: In 2015 there were 3.45 million SMEs in Germany, which accounts 99.6% of all German companies. Those employed 58.5% of the German labour (IfM, 2018a). Hence, they have a structural, environmental, political as well as social significance and represent the regional and economic German backbone. In addition, SMEs have the comparatively highest importance in Germany compared to other European countries (BMWV, 2014; Statistisches Bundesamt, 2012; European Commission, 2017). Within the European Union SMEs accounted for 67% of the employment and 57% of the value added in the nonfinancial business sector (European Commission, 2017).

However, there is no legal and generally valid definition for the concept of SMEs. That makes a comparability of studies on SMEs complicated (Curran and Blackburn, 2001). However, two definitions are used in science and practice: the SME definition of the European Commission for all European SMEs as well as the above mentioned one for German ones of the "Institut für Mittelstandsforschung (IfM) Bonn" (Reinemann, 2011).

The definition of SMEs by the European Commission (2003) is based on a subdivision into micro, small and medium-sized enterprises. It uses the criteria number of employees (< 250), turnover (< EUR 50 million) and the balance sheet total (< EUR 43 million). But the most widely used definition in Germany is the one of IfM Bonn (2016a). It also refers to quantitative criteria, but only considers the

criteria number of employees (< 500) and turnover (< EUR 50 million). The advantage of using purely quantitative aspects is the simple determination and availability of statistical data (Reinemann, 2011). However, the actual classification of SMEs often does not take place through purely numerical differentiation criteria, but also takes into account qualitative and structural aspects, which sometimes allow a differentiation from large enterprises without size limits. Similar to the quantitative analysis, there is also no consensus in determining the relevant qualitative criteria.

According to literature, one of the most important qualitative criteria is that SMEs are characterized by the unity of ownership and management (Schäfer, 2004; Reinemann, 2011; Britzelmaier et al., 2009). Additional characteristics are flat hierarchies and personal relationships between the company and its environment. Also the legal independence, which means the exclusion of group-dependent companies from the circle of SMEs, is always taken into account (Becker et al., 2008; Reinemann, 2011; Schäfer, 2004).

### Internationalisation of SMEs

Internationalisation is a growing topic for SMES. Several studies and publications show the relevance of global networking, cooperation and the resulting added value for SMEs. The IfM study of 2016 tells that internationalisation plays a growing role for SMEs (IfM, 2016b). KfW (2012) gives a good overview on the internationalisation of the German „Mittelstand discussing the current situation and future prospects. Söllner (2016) presents the foreign trade activities of SMEs and gives an overview of the extent to which small and medium-sized enterprises are controlled by parent companies abroad. KfW (2017) show in of their research papers that foreign direct investment is an important factor of growing internationalisation but conclude that up to now only a few German SMEs are ready and willing to invest abroad. In addition to the high risks, financing difficulties are likely to be a central obstacle for many companies (KfW, 2012). Pu and Zheng (2015) present a literature review on the foreign direct investments of small- and middle-sized enterprises which shows among other topics the motives of conducting foreign direct investments and financial constraints. Tan and Tan (2015) deal with a huge number of topics and aspects in their book about FDI and SMEs.

The internationalisation process as shown in figure 1 and described by Rugman and Collinson (2009) explains that foreign markets can be entered in different ways. The final stage of foreign involvement - associated with high cost, high risks and opportunities as well as high control - is undertaking FDI (Rugman and Collinson, 2009; Stonehouse et al, 2004). According to the free market view, FDI is an instrument to increase overall efficiency of the world economy (Hill, 2017).

**Figure 1: Foreign market entry - the internationalisation process (Rugman and Collinson, 2009)**



FDI is often seen as an outcome of existing location advantages (Rugman and Verbeke, 2009; Fuchs and Apfelthaler, 2008 following Dunning's categorization of 1992) differentiate between four motives for the engagement in FDI as shown in figure 2. The motives and key determinants are:

**Figure 2: Types of FDI (Sevil Tülüce and Dogan, 2015)**

Motives of FDI	Key Determinants
Natural resource-seeking FDI	Abundance and cost of natural resources Physical infrastructure (ports, roads, railways, etc.) Price movements
Market-seeking FDI	Market size and purchasing power (per capita income) Market growth Access to regional and global markets Tradability of product/service Structure of markets
Efficiency seeking, export oriented FDI	Quality and cost of human resources Physical infrastructure (ports, roads, telecom, etc.) Trade costs Quality of suppliers, clusters, etc. Regional integration agreements
Strategic asset-seeking FDI	Presence of firm-specific assets Ease of cross-border M&As Efficiency and transparency of financial markets

### The need to determine cost of capital for SMEs

SMEs need like large companies not only to determine their cost of capital in order to calculate imputed interest for costs accounting or to carry out investment appraisal calculations but also to value companies for corporate transactions. As mentioned above there is some interest for SMEs in FDI to strengthen their international standing but there's also a need to value businesses because of business successions. In Germany alone, it is estimated that some 30,000 companies will be sold per year between 2018 and 2022 because their owners are leaving the companies for personal reasons (KfW, 2018b). Deloitte (2012) show in their report on SME-related mergers and acquisitions the relevance of the topic in Germany too. This is also the case for m&a monitor (2016). There are only few empirical studies, which specifically cover the topic of application and calculation of the cost of capital in companies (Geginat et al., 2006; Weißenberger and Ulmer, 2004; KPMG, 2012).

However, since those studies either mainly refer to large-scale enterprises or do not separately disclose particular results for SMEs, their outcomes are not very relevant for the topic of this paper. For this reason, it seemed necessary to

undertake a survey among SMEs to find more about the relevance and application in SMEs. Britzelmaier et al (2015) published the results of an online-based survey among SMEs in the southwest of Germany. Therefore research hypotheses were derived from literature review and existing studies (Britzelmaier et al, 2015). In total, 75 analysable responses were received, whereas 61 companies could be classified as SMEs according to the research definition. While 58 of those SMEs fulfilled the qualitative criterion of family ownership, 3 companies were classified as SMEs solely due to the quantitative definition criteria. Hence, the sample almost exclusively consists of family-owned enterprises. Additionally, none of the SMEs in the sample is a listed company or part of a listed group. When classifying those SMEs according to their related industry, 86% pertain to the manufacturing sector, whereas 7% were each assigned to the commercial and the services sector. 51% of the sampled SMEs apply cost of capital in cost accounting and/or capital budgeting, the proportion between SMEs using cost of capital in at least one of both areas and those not applying cost of capital needs to be considered largely balanced. The application of the cost of capital across the application areas is distributed as follows: while 49% of the sampled SMEs do not apply capital costs, 16% apply them only in cost accounting, 8% only in capital budgeting and 26% in both areas. In the later case, for both areas uniform cost of capital are applied by a vast majority (62%). Still, it needs to be considered that the cost of capital is applied only irregularly among SMEs. The empirical findings also show that the probability for the application of cost of capital increases with the size of a SME. The survey also reveals, which calculation methods for the cost of debt and the cost of equity are applied among the sampled SMEs. Of the 21 determined cost of equity in the sample, either directly applied as the cost of capital (7) or as part of the weighted average cost of capital (14), 48% are based on the rate of return on equity required by the company owners. Other methods are considerably less common. It is very interesting to see, that heuristic methods seem to dominate. In case capital market based models were not applied, the reasons for this were queried in a second step. Here, multiple selection as well as free input of additional reasons was possible. The survey reveals that 59% of the given explanations refer to the high effort and complexity of capital market based models, thus confirming that those models are generally hardly applied among SMEs for being mainly considered as too complex and elaborate. The results of the survey show that the topic "cost of equity" is relevant to SMEs. It shows on the other hand side, that the methods being applied for large companies do not suit SMEs.

The topic seems to be relevant in other countries too. Moro et al (2010) present in their paper "Small and medium sized enterprises, and their cost of capital" a model to calculate the cost of capital. Bertrame and Cappelletto (2013) and Bertrame et al (2014) determine the cost of capital for SMEs from an Italian perspective. The Fédération des Experts Comptables Européens published a business valuation guide for SMEs already in 2001 including some sentences on the determination of the cost of capital.

We also can find several books and dissertations on the valuation of SMEs (e.g. Schütte-Biastoch, 2011; Ihlau et al., 2013; Sonderegger, 2013). When using a DCF approach, the calculation of the cost of capital is indispensable.

Reasons for evaluation, existing studies and literature on the topic indicate that it is of practical relevance. Hence this paper aims to develop and present a framework to determine the cost of capital of SMEs with an international



perspective. Since it is not too complicated to determine the cost of debt this paper focuses on the cost of equity.

### Fundamentals and common calculation methods of the cost of equity capital

Regarding an investment, the cost of capital represents the rate of return on capital employed expected by the corresponding investors. Consequently, an investment at least has to meet this expectation of return in order to attract capital. From the investors' perspective the cost of capital has the characteristic of opportunity costs. By allocating capital to a specific investment, they forego providing capital to alternative investments with comparable risk structure and duration and therefore also relinquish the related returns. With growing risk the expected return and hence the cost of capital increases (Pratt and Grabowski 2010; Stewart 1999). From the company perspective the cost of capital represents the minimum rate of return expected as adequate compensation by the providers of equity and debt capital (Brealey et al. 2016). Hence, the company cost of capital is divided into cost of equity and cost of debt, representing the expected returns of lenders and investors in isolation (Britzelmaier 2013).

Studies show that most companies use WACC for the calculation of the cost of capital (Britzelmaier, 2017; Geginat et al., 2006).

#### Formula 1: Weighted Average Cost of Capital

$$WACC = \text{equity} \times C_{\text{equity}} + \text{debt} \times C_{\text{debt}} \times (1 - \text{tax rate})$$

where  $C_{\text{equity}}$  and  $C_{\text{debt}}$  are the costs of equity and debt capital, respectively.

Whereas all components of WACC can be calculated relatively easily and do not prepare complications in the practice, the cost of equity capital is the pain point of the formula.

The cost of equity represents the expected return of an investor in comparison to that from alternative investments with a similar risk and payment structure (e.g. Hostettler, 2002; Khadjavi, 2005). Different models add a risk premium to a so-called risk-free yield. These models include the following (Britzelmaier, 2013):

- Capital Asset Pricing Model (CAPM)
- Arbitrage Pricing Theory (APT)
- Market-derived Capital Pricing Model
- Dividend Discount Model

Among these models the CAPM is the most frequently used one for estimating the cost of equity in practice (Copeland et al., 2002; Dillerup and Stoi, 2016; El Hedi Aurori et al. 2012; Pratt and Grabowski, 2010). Da et al. (2012), for instance, point out that 75.0% of finance professors suggest using the CAPM to estimate the cost of capital with regard to capital budgeting. Furthermore, a similar proportion of CEOs state to use the CAPM. The bases for the CAPM are the portfolio theory of Markowitz and the separation theorem of Tobin, and it was developed by Sharpe, Lintner and Mossin (Britzelmaier, 2013). The basic idea is

that, in equilibrium, the cost of equity is equal to the yield of a risk-free investment plus a risk premium, whereby the risk premium is equal to the market risk premium multiplied by the company-individual risk, the so-called beta (Vélez-Pareja, 2005). The equation can be expressed as follows (e.g. Britzelmaier, 2013):

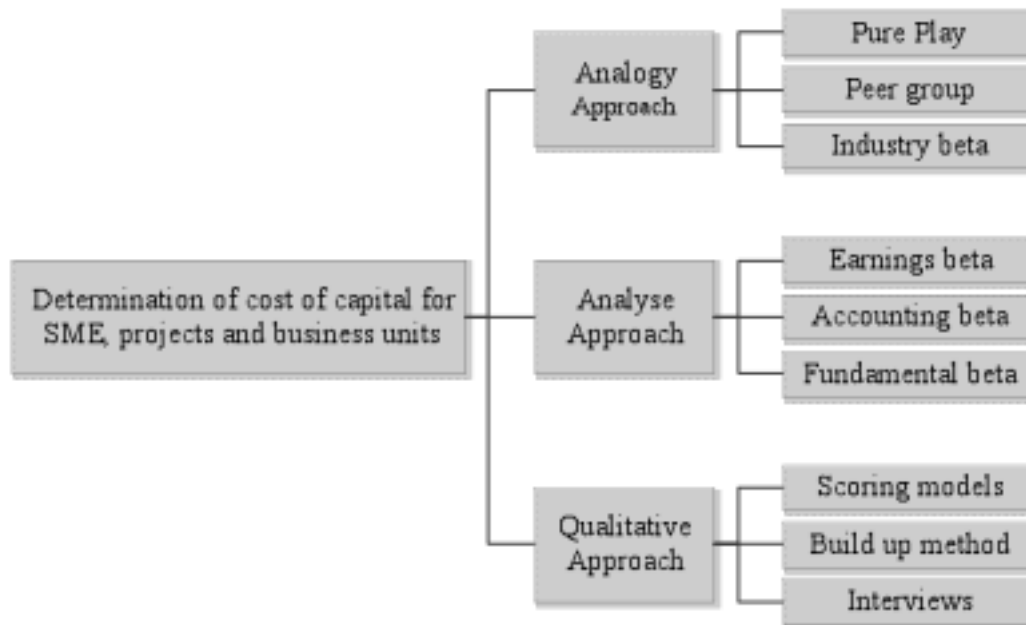
**Formula 2: Capital Asset Pricing Model (CAPM)**

$$r(\text{equity}) = \underbrace{r(\text{risk-free})}_{\text{risk-free rate}} + \underbrace{r_m - r_{\text{risk-free}}}_{\text{market risk premium}} \times \underbrace{\beta}_{\text{beta}}$$

As with many other models, the CAPM is based on different assumptions (e.g. Britzelmaier, 2013), which result in some limitations (Pratt and Grabowski, 2010). In practice,  $r_{(\text{risk-free})}$  and  $r_{(m)}$  can be relatively easily derived from long-term government bonds or market indices, respectively; hence, the evaluation of the company-specific is the crucial factor in the calculation (Steinle et al., 2007). For companies that are not publicly traded, relevant capital market figures cannot be derived (Günther, 2013) and such approaches are therefore not valid for these types of companies without adjustments (Vélez-Pareja, 2005). Similar problems arise by the determination of company divisions that are typically not publicly traded independently (Pfister, 2003). Therefore, the following section will discuss alternative ways to determine the cost of equity and, in particular, the beta factor for SMEs.

As illustrated in Figure 3, there are several methods to determine the  $\beta$ -factor and hence the cost of equity for SMEs without stock market listing. Those can be divided in 3 categories: analogy approaches, analysis approaches and qualitative approaches.

**Figure 3: Alternative approaches to determine the beta for SMEs  
(Peemöller, 2005; Pfister, 2003)**



### *Analogy approaches*

Analogy approaches in general derive the  $\beta$ -factor of a non-listed company from  $\beta$ -factors of comparable listed companies (AF, 1996). The basic requirement for the projection of  $\beta$ -factors on non-listed companies is the existence of listed enterprises that are similar concerning operating activities, business environment and capital structure (Peemöller, 2005). Based on the number of reference companies, 3 methods can be distinguished (Steinle et al., 2007): Pure play, Peer group and industry beta.

The pure play method compares a non-listed company with a single listed company whose  $\beta$ -factor can be determined, using market data. Therefore, the systematic risk of the reference company needs to be equal to that of the underlying company due to a comparable company structure (Pfister, 2003). The main difficulty of this technique is the identification of a reference company with comparable systematic risk based on objective (size, industry, capital structure) as well as subjective (e.g. competitive positioning) criteria. In case a fully comparable company cannot be identified, adaptations need to be made in order to match both companies (AF, 1996).

The second method is based on the transfer of the average  $\beta$  of listed companies within a specific industry to a non-listed company of the same industry. The basic assumption in this concept of industry  $\beta$  is that the systematic risk of a company substantially depends on the industry it belongs to (Peemöller, 2005).

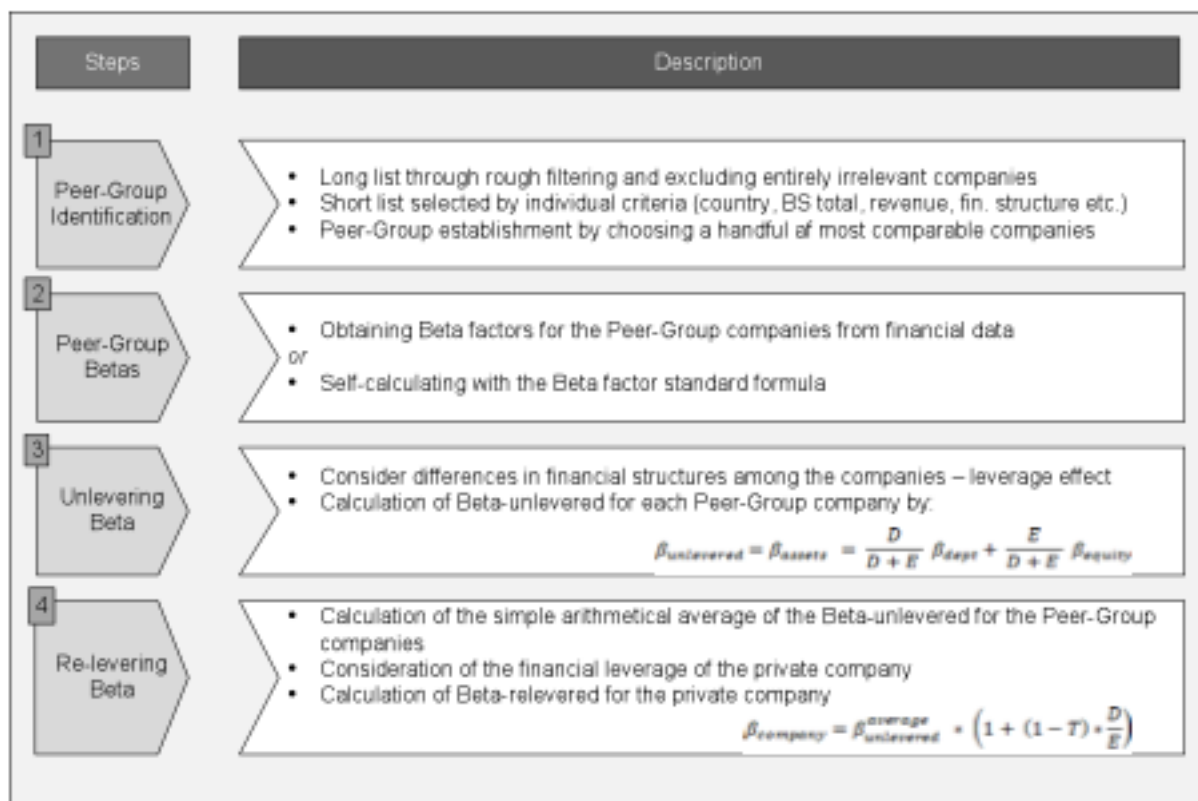
The third technique within the analogy approaches is the peer group method. Similarly to the industry  $\beta$  approach, this method transfers the average  $\beta$  of a group of listed companies to a non-listed company (Steinle et al., 2007). However, the reference companies are not selected because of the belonging to

the same industry but due to a high degree of homogeneity compared to the underlying company concerning factors like company size, products, cost structure, markets and strategic orientation (AF, 1996).

The main advantage of the latter methods over the pure play technique is the reduction of statistical estimation errors as well as the balancing of extreme values (AF, 1996; Peemöller, 2005). Nevertheless, all approaches are related to the issue of identifying comparable companies and reliable information (Peemöller, 2005; Steinle et al., 2007). The main problem of the analogy approaches is the selection of comparable companies (Chua et al., 2006; Bufka et al., 2004).

As the Peer-Group approach is the most widely used here the standard approach of the Peer-Group calculation is demonstrated (for a detailed description see Britzelmaier et al., 2014):

**Figure 4: Calculation Steps for Peer-Group Beta (Britzelmaier et al., 2014)**



**Analyse Approaches**

In case reliable market data of comparable companies is not available, analytical approaches represent another possibility to determine the β-factor of a non-listed company (Bufka et al., 1999). The existing techniques in this area (earnings β, accounting β, fundamental β) all derive the systematic risk of the underlying company and hence its β from economic determinants (AF, 1996).

In these approaches it is attempted to find a relationship between accounting-based measures of systematic risk and the market-based systematic risk measures (Erhardt and Bhagwat, 1991; Bufka, et al., 1999). It is thereby assumed that the accounting data are influenced from the same events and information as the market price data (AF, 1996). The underlying approaches are the Earnings Beta, the Accounting Beta and the Fundamental Beta.

In Earnings Beta, the changes in quarterly earnings of the private firm are regressed against changes in quarterly earnings for an equity index (S&P 500, DAX etc.) to estimate the Beta factor (Damodaran, 2012a).

### Formula 3: Earnings Beta

$$\Delta \text{Earnings Private Firm} = a + b \Delta \text{Earnings Equity Index}$$

The slope of the regression – the parameter  $b$  – is the Beta for the firm. The limitation of this approach is that the private firm's earnings are usually available only on one-year basis, which will result in limited statistical power. Moreover, the mismatches resulting from accounting principles among firms might lead to wrong Betas (Damodaran, 2012a). In the case of the Accounting Beta approach more than one accounting measure is taken into consideration. The principle is however the same as that of the Earnings Beta. The Fundamental Beta approach tries to find specific characteristics of the firm, which have a relation with the systematic risk. Many researchers have tried to find a relation of various measures of publicly listed firms to that of private firms in the attempt to estimate Betas for private firms. Such measures can be earnings growth, debt ratio, company size, and foreign income or dividend payout. The weakness of this approach is that it is assumed that the Beta factors of different companies would react the same way on the changes of these fundamental factors (Damodaran, 2012a; AF 1996).

The Analytical Approaches are generally plausible models, but the calculations are complex and not easily applicable in practice. However, the main issue in these models can occur when the company has experienced a great external growth through acquisition in the prior years. Often the acquisitions are done gradually and the consolidation decisions have a legal or tax background. This can significantly distort the regression results of the analytical methods, as these models require a large amount historical data, preferably quarterly financial measures, which can be statistically biased.

#### *Qualitative approaches*

Qualitative approaches, as third possibility for an alternative determination of  $\beta$ , evaluate the systematic risk of a company qualitatively and based on the subjective assessment of several risk indicators (Steinle et al., 2007). These include scoring models, the so-called build up method as well as the qualitative interviewing of investors and managers (Peemöller, 2005; Pratt and Grabowski, 2010; Damodaran, 2012b).

The common characteristic of scoring models is the derivation of the systematic risk from a structural analysis of business activities and business environment (AF, 1996). Probably, the best-known approaches are the ones by Fuqua Industries (Gup & Norwood, 1982) and Boston Consulting Group (Bufka et al., 2004). The scoring model developed by the Boston Consulting Group determines the cost of equity directly by adding risk discounts or premiums to a predefined basic risk. The amount of discounts and premiums is deduced by a qualitative assessment of the company using a criteria matrix with criteria like market, competitors, products/concepts, market entry barriers and cost structure (Lewis, 1995). The build up method adopts a similar approach. Here, the cost of capital is determined by adding subjectively defined risk premiums to the yield of a risk-free investment. The risk premium includes a premium for the general risks of equity, for risks related to the company size and for company specific risks (Pfister, 2003; Pratt and Grabowski, 2010).

Another very pragmatic method is the questioning of investors and managers on their estimation of risk. Since the cost of equity is defined as expected risk-adequate return on capital employed by the investors, the basic idea is that direct consulting of the investors would lead to good results (Damodaran, 2012b). Additionally, managers can be queried, as they have the best knowledge about the operational and strategic direction of the company and thus should give a good estimate on the systematic risk (Copeland et al., 2002). For the final assessment of the introduced qualitative approaches, it needs to be stated that all of them have clear benefits due to their simplicity and practical feasibility, whereas the high degree of subjectivity in all of those approaches is considered as a major drawback (Pfister, 2003; AF, 1996).

### Specific risks

The approaches described above can be applied for any kind of non-stock-listed company. For smaller companies specific risks might needed to be taken into account as well as specific risks out of internationalisation. Those kinds of risks can be included in the calculation as a kind of add-on-premium for quantitative approaches and as a specific risk in qualitative approaches.

### *Specific SME risks*

In practice, corporate transactions often have constellations in which the usual valuation standards do not lead to satisfactory results; premiums and discounts may be necessary (Sonderegger, 2013). The following discounts and premiums might be considered:



**Figure 5: Discounts and Premiums on company's value (Cheridito and Schneller, 2008)**

Discounts and Premiums	Surcharge / Discount on company's value	Basic idea
Control premium	Surcharge	For the control of a company
Small Cap Premium	Discount	For small companies with deeper capitalization
Minority Discount (opposite of control premium)		For the lack of control over a business
Marketability Discount		For the lack of marketability of a company's titles
Illiquidity Discount		For the lack of liquidity in the trading of the title of a company
Key Man Risk Discount		If the success of the company depends to a large extent on one person or a small group of people
Conglomerate Discount		For the strong diversification/missing business focus

The premiums and discounts on the enterprise value shown in the table above lead to discounts and premiums on the cost of equity. A premium on the enterprise value is equivalent to a discount on the cost of equity; a discount on the enterprise value corresponds to a premium on the cost of equity. Higher equity interest rates lead to lower present values and thus a lower enterprise value when discounting the relevant cash flows.

#### *Risks out of internationalisation*

If it comes to internationalisation several factors can influence the cost of capital (Britzelmaier, 2010), mainly:

- Country risks
- Currency exchange risks
- Inflation risks

Country risks can be political and economic risks. They affect all companies operating within a specific country. Among the political risks are profit transfer risks, money transfer risks, inconvertibility of the currency, corruption, war, political instability, legal instability, macroeconomic fluctuations, bureaucracy and a tendency to buy local products (Copeland et al, 2002; Schmeisser et al, 2009; Damodaran, 2009; Madura and Fox, 2017; Padberg and Padberg, 2006). Political risk is the risk that a government will unexpectedly change the rules of the game under which companies in that country operate. Economic risk is the likelihood that drastic changes will happen that would adversely affect profits of a particular company. Economic risk consists of both internal and external factors. Internal factors include monetary stability, type of currency exchange system (fixed versus floating), government spending policies and the country's resource base. External economic risks consist of uncontrollable events such as supply shocks, currency fluctuations, trade deficits, natural disasters, and the health of the overall global economy. How well a nation responds to the impact of external economic shocks will vary from country to country (Price, 2005). Country risks are rated by several institutions (e.g. "Country Credit Rating" of Institutional Investor - <http://www.institutionalinvestor.com>).

Country risks can be included either in the free cash flow (numerator) or in the cost of capital (denominator). If Capital Pricing Model is applied only a premium for systematic risk should be included in the cost of capital. From a global investor's perspective most country risks can be diversified (Damodaran, 2003). Country risks hence should be included in the free cash flow. Madura and Fox (2017) recommend incorporating forms of country risks in a capital budgeting analysis to estimate how cash flows would be affected by each form of risk. Copeland et al (2002) suggest including country risks in probability-weighted scenarios.

Currency exchange risks include translation exposure, transaction exposure and economic exposure. Exchange rates between currencies can change no matter if we're talking about free floating currencies or fixed exchange rates. When a company conducts transactions in different currencies, it exposes itself to risk. Besides the transaction risk that can be hedged against using forward currency contracts there is the translation risk arising from accounting and reporting perspectives. It is very difficult to predict exchange rates. Forward rates might help but usually they aren't available for long terms. If there is no actual forward rates available one can use synthetic ones (Koller et al., 2015).

Related to currency risks are inflations risks. Especially emerging Markets often show high inflation rates (Copeland et al., 2002). Hence it is difficult to analyse historically and to do forecasting (Koller et al., 2015). High inflations rates cause higher cash flows without any increase in volume or price. Real cash flow growth can only be achieved if the cash flow growth rate exceeds the inflation rate. Koller et al. (2015) recommend combining real and nominal approaches in financial modelling.

Inflation risks should be included in the cost of capital (Pereiro, 2002). Auxiliary calculations linking real and nominal values should be executed to fulfil all needs (Koller et al., 2015).

Specific SME risks and risks out of internationalisation can be included in a CAPM-based model for instance as follows:

**Figure 6: Calculation of cost of capital - example**

Risk-free interest rate	2.0%	D e b t r a t i o 50%	WACC 10.8%
Market risk premium	6.0%		
Beta premium (beta factor 1,5)	3.0%		
Country risk premium	3.0%		
Illiquidity risk premium	2.0%		
Cost of equity	16.0%		
Cost of debt rate	8.0%		
Tax shield (30%)	-2.4%		
Cost of debt	5.6%		

### Case study

To gain an insight view in companies a case study was made (Britzelmaier et al., 2013). The basis for the case study was a project in cooperation with a privately held enterprise that showed the typical qualitative characteristics, namely, the absence of capital market orientation and therefore limited financing possibilities. The firm belongs to the manufacturing industry and is located in southwest Germany. Interviews and group meetings with managers and staff from the finance departments have been a pivotal part of the project. The case study is based on exemplary measures in order to assure confidentiality.

The calculation of the cost of capital was based on the CAPM. For reasons of simplicity, taxes are only considered on the company level in this case study. The different components for the CAPM were determined as follows:

- The basis for the risk-free yield is the 10-year federal securities with annual coupon payments. To eliminate errors resulting from a specific reporting date, the arithmetic mean of the last five years (on a monthly basis for 2007-2011) was used as risk-free rate. The result was 3.49% (Deutsche Bundesbank, <http://bundebank.de>).
- The market risk premium, the difference of the market return and the risk-free yield, was defined as 4.5%. This assumption is based on the recommendation of the German Institute of Public Auditors (Peemöller, 2005).

For the determination of the company-specific beta factor, a combination of analogy and qualitative approaches was used. In the first step, traded

companies, as well as industry fields, that are comparable in terms of the product range were selected. The beta factor was calculated on the basis of MSCI World Index (<http://mscibarra.com>, 2012) and adjusted according to the capital structure of the company. For the industry beta, MSCI industries were evaluated. As a result, the pure play method, the peer group method as well as the industry beta showed similar figures; therefore, the decision was made to use a beta of 0.95. In a second step, the cost of equity was adapted to the specific risk situation of the owner due to the unlimited liability with respect to the build up method. This risk extension was considered with additional 3.0% estimate. This represents the individual risk situation of a privately held company, which is not given in a traded company with a heterogeneous owner structure and limited liabilities.

$$r(\text{equity})=3.49\%+4.5\% \times 0.95+3.0\% \approx 10.8\%$$

Cost of debt (4.0%) is either based on contractual agreements and/or historical data. The WACC based on the target capital structure of 70% equity and 30% debts was thus calculated as follows.

The calculated WACC of 8.4% is the basis for the calculation on the group level. For associated companies or different business units within the company, adaptations are made.

The case study has shown that a combination of approaches may help to improve defining cost of capital in SMEs. Due to a lack of resources, it is of great importance to develop theoretically sound but at the same time lean approaches, which are applicable for smaller firms. The case study has further implicated a stepwise approach, which can be applied or adjusted by other SMEs.

### Conclusion and outlook

It can be argued that capital market derived methods though rooted for calculation of cost of equity capital in listed companies, may not be the one and only approach for SMEs. Subjective approaches of cost of equity capital can be applied instead or additionally saving further assumptions and complexity in already doubtful and assumption flooded finance formulae, the most common of which is the CAPM. Most importantly, CEC should consider the business and finance risk of the company and represent the expected return on the invested equity by the entrepreneurs. Premiums can be used for SMEs for specific SMEs risks and risks out of internationalisation. As illustrated in the case study, one can recommend using a combination of different approaches to avoid a biased and subjective estimation. The case study further provides a stepwise approach, which can also be applied and adjusted by other SMEs.

Areas for further research are manifold in this domain. Comparative case studies could reveal interesting aspects of the practical implementation in different firms and different countries. Research could be carried out to determine which internationalisation premiums make sense and to what extent, and how internationalisation diversification effects can be treated by determining the cost of

capital. The publication of further case studies could help practitioners to cope with the issue.

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