

AMERICAN UNIVERSITY OF BEIRUT

VENTURE CAPITAL IN MENA: DOMESTIC BIAS &
SYNDICATION PATTERNS

by
MOHAMAD NABIL SABOUNEH

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submitted in partial fulfillment of the requirements
for the degree of Master of Business Administration
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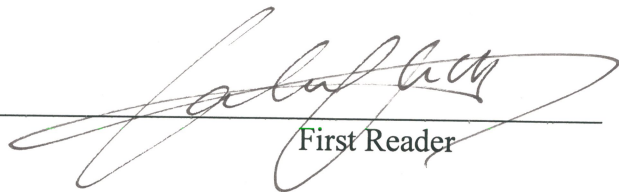
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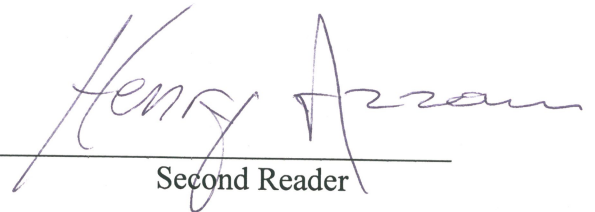
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AN ABSTRACT OF THE PROJECT OF

Mohamad Nabil Sabouneh for Master of Business Administration
Major: Business Administration

Title: Venture Capital in MENA: Domestic Bias & Syndication Patterns

Using a data set extracted from ThomsonOne Reuters on the Venture Capital activity in the MENA region for the last 15 years, this project seeks to understand the evolution of this industry in the region and identify any characteristics unique to this region. All aspects of the industry from fund raising, to investments and exits are analyzed. Special attention is given to the geographic distribution of the VC firms involved in the region.

This project moves on to analyze the syndication patterns between the local and foreign VC firms. For that purpose a unique scoring system is built, based on the paper by Lee et al. (2011), and applied for all firms involved in an investment in the region. This score is later on used in the syndication analysis in addition to several other independent variables.

The regression analysis and the Probit analysis on the probability of syndication and the number of syndicating partners reveal two main findings: the foreign VC firms do not invest in the region by themselves and seek a local partner to venture with into the investment. And two, the probability of syndication decreases with the increase of the firm's score. These two findings are coherent with the literature review that is also conducted on VC syndication as part of this project.

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CHAPTER I

INTRODUCTION

While Venture Capital (VC) Syndication was the subject of extensive studies in the United States and to a certain extent Europe also, it has received little attention in the MENA region. This undeserved unattractiveness of the subject is probably the result of the unavailability of data due to the poor reporting standards in the MENA, and especially in the VC industry. Also the VC industry, being relatively new to the region, didn't offer until recently, the necessary historical data depth that is required to build a solid analysis.

This project, using a set of data acquired from ThomsonOne and complemented with several other online resources, seeks in the first part to understand the VC ecosystem (throughout the stages of the VC cycle) in the region. The second part of the project is dedicated to analyze the VC firms' syndication patterns and the effect of their geographical distribution on their probability of syndication. The project's objectives are achieved by first presenting two hypotheses that are later analyzed based on regressions and Probit analysis of the ThomsonOne data.

The first hypothesis relates to the probability of syndication and the number of syndication partners in relation to the reputation and size of the VC firms. We suggest that the size and reputation of the VC firm affect negatively the probability of syndication and therefore the number of syndicating partners. The reasoning is that bigger firms do not feel the need to syndicate as they already have the sufficient resources and experience in-house.

The Second hypothesis touches on the relation between the geographical distribution of the firms and their syndication. We propose that foreign VC firms tend to avoid investing in the region by themselves and look for a local partner who is knowledgeable of the region with whom they can share their risk.

To support the testing of our hypotheses, a modified version of Lee et al.'s reputation score is built to fit the MENA region and the data availability. This score is a measure of the VC firms' size and reputation and will be used in the regression and Probit analysis as one of the independent variables beside other macroeconomic indices and variables extracted from the data.

Finally, after obtaining the results of the regression and Probit, we analyze them and present conclusions and future research directions.

CHAPTER II

THE MENA CHALLENGES

The MENA region is on the verge of a turning point for innovation and entrepreneurship. Today, half of the MENA population is under the age of 25, which makes it the second youngest population in the world behind the sub-Saharan Africa (Farzaneh, 2011). This segment of the population has the potential to become the backbone of the economy if it's armed with the proper education, and more importantly, provided with the necessary resources. Their role has become even more crucial with the currently spreading sense of youth empowerment.

However, this increase in the young population was also faced with peak level of unemployment, rough markets, and highly unstable political scene across the Arab countries. The youth unemployment rates stood at 18.8% in 2013, twice that of all adults, and one of the highest among world regions (The World Bank, 2013). Both the government and the private sector face a huge responsibility toward the youth to create new job opportunities and prevent their brain-drain.

Some MENA countries are already witnessing initiatives to support entrepreneurship and startups in terms of capital and non-financial resources. Several business incubator programs and specialized funds have been set up during the last decade to develop a local venture capital ecosystem, and these initiatives carry a strong potential for the region if run properly. Several SME support organizations also have been

established, reflecting a growing acknowledgment of their importance in the Arab economy.

SMEs play a major role in the fostering of innovation and employment. The World Bank called SMEs “*essential engines of growth that contribute to effective markets and reduce poverty in developing countries where populations were growing rapidly and jobs are desperately needed*”. However, the current SME support ecosystem suffers from severe drawbacks that hinder them from adequately supporting SME and unlocking their potential.

From the financing side, the region still faces severe domination by banks, an inadequate financial infrastructure, and insolvency and transparency issues. These considerably hinder the development of alternate means of financing such as Venture Capital (VC) despite the promising prospects of the region. Only 8% of the SMEs in MENA have sought to acquire funding from VC firms, while only 7% actually succeeded in getting it. In contrast to VC as a funding source, half of the SMEs sought banks or other loans, and 42% relied on their personal resources (Al-Yahya & Airey, 2013).

Venture Capital investments can play a significant positive role in the MENA region from an economic point view and help the region face its current challenges. VC investments create new job opportunities and help alleviate the unemployment rate by facilitating the coming into existence of new startups and helping the existing companies survive and expand. In fact, a study of the European VC industry showed that 90% of the companies who received a VC investment witnessed an increase in the total number of employees at an average of 46 employees per company (EVCA, 2002). In addition, 90%

without venture capital, they could either not have existed or would have developed more slowly, while 72% of seed/start-up companies stated that they would have never come into existence without the contribution of the VCs (EVCA, 2002).

The VC industry activity in an industry is also associated with significantly higher patenting rates according to a paper by Kortum and Lerner (2000), and even though the ratio of VC to R&D in the US is very low (average of 3%), their contribution could account to up to 8 % of the total industrial innovations (Kortum & Lerner, 2000).

CHAPTER III

THE VC INDUSTRY IN MENA

A. Fundraising

VC is a nascent industry in the MENA, but one that is on the rise. Subsequently VC in this region hasn't received much attention either academically or professionally. Only recently did we start witnessing dedicated funds and hearing about VC deals. However, compared to the US and Europe, VC in this region of the world is still taking its baby steps. The figures below shows the number and amount of funds raised per annum in the US, Europe and MENA. *(All data regarding the VC in the MENA from this point and further has been extracted from ThomsonOne unless otherwise specified).*

The amount of funds raised for VC and the number of specialized VC firms in the MENA region is, at its peak, at around 3-5% of the same year's results in USA, and around 15-20% of Europe's. (Figures 1 & 2)

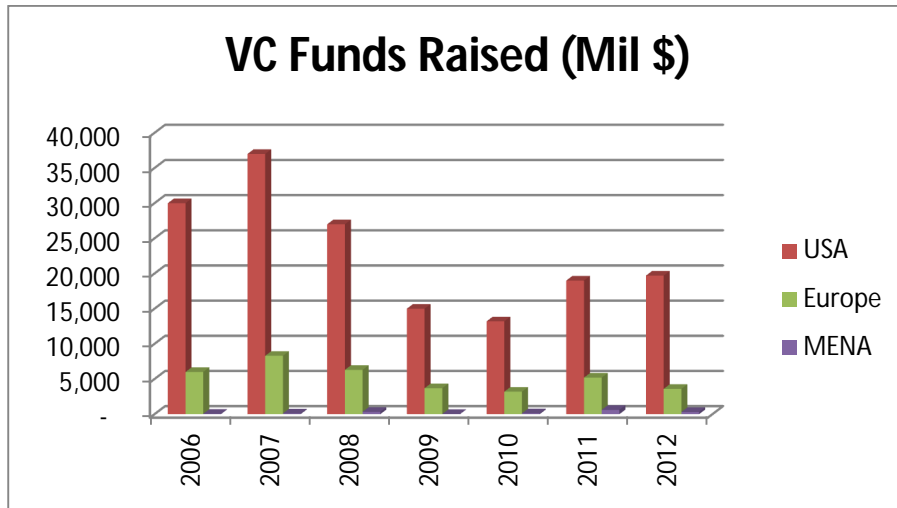


Figure 1 - Funds Raised in US, Europe & MENA (ECVA, 2014) (MENAPEA, 2014) (NCVA, 2014)

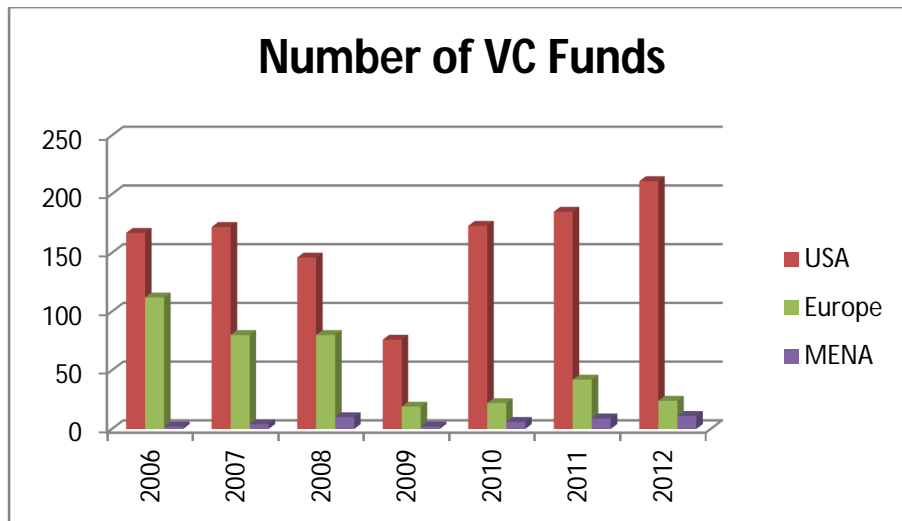


Figure 2 - Number of Funds in US, Europe & MENA (NCVA, 2014) (ECVA, 2014) (MENAPEA, 2014)

The current trend in funds raised, as shown in figure 3, suggests that the amount raised is accelerating again after a 2 years post crisis slow down. The cumulative growth in funds raised between 2010 and 2012 reached 104%.

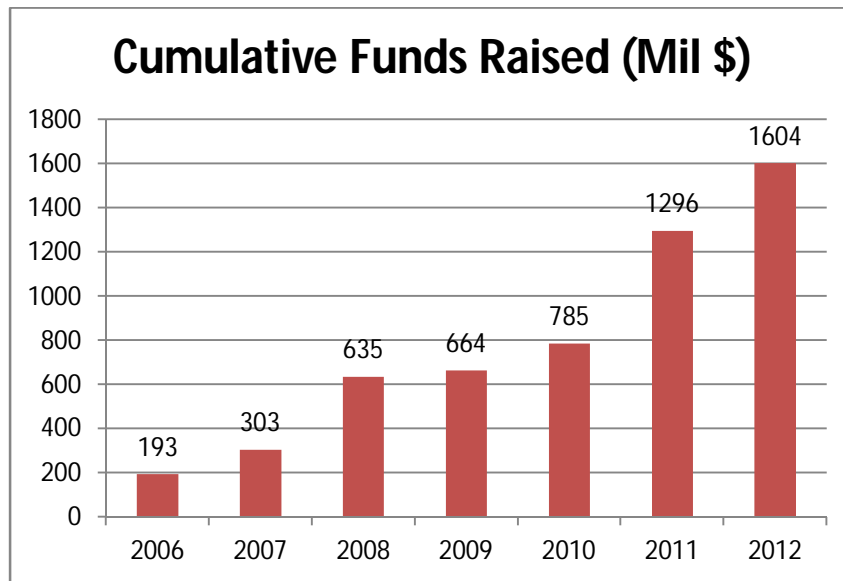


Figure 3 - MENA Cumulative Funds Raised (MENA Private Equity Association, 2013)

B. Investments & Exits

On the transaction level (figure 4), the number of VC deals steadily increased reaching a maximum of 34 investments in 2008. Post crisis, VC investments has been recovering and completely recovered in 2013 and 2014. However, the number of exits has been relatively stable along the years despite the increase in the number of investments, which might indicate difficulties in the exit opportunities.

We note here, that given the nature of the industry, some investments and/or their value may not be disclosed publically. Therefore we will focus on the number of investments/exits in our analysis rather than their value.

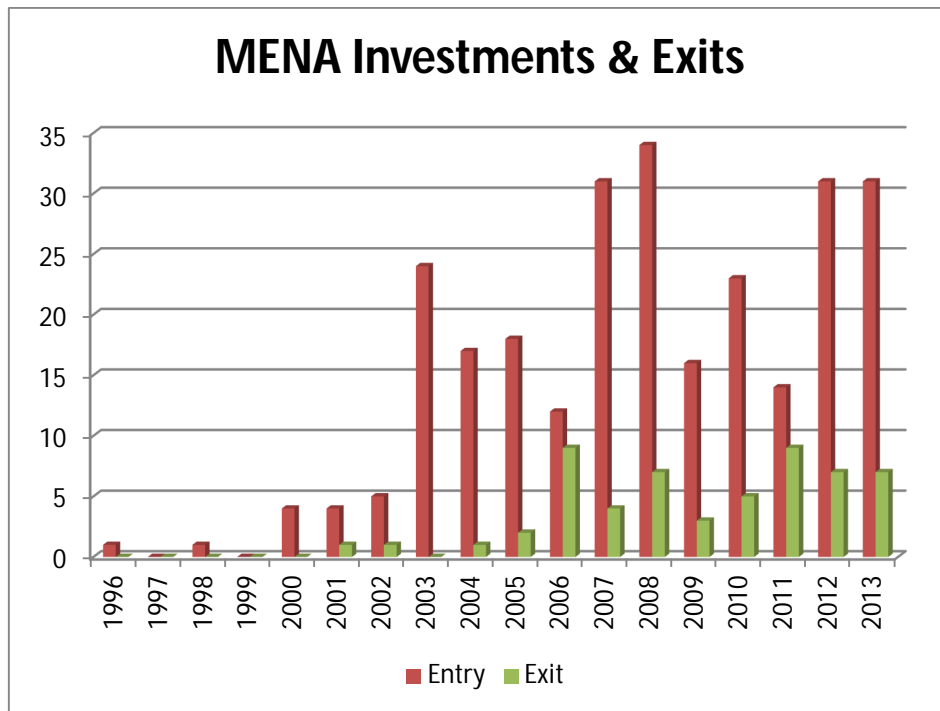


Figure 4 - MENA Investments & Exits

Taking a closer look at the transactions made since 1996 (Figure 5), we notice that the industrial/Energy sector and the IT sector make up around 50% of the total investments. This is quite natural given the oil driven nature of most of the region's economies in the GCC and the fact that VC usually seeks to invest in cutting edge technologies. The consumer products and financial services follow at 16% and 12% respectively. The highest growth of investments in one single industry is that of the IT sector (hardware and software) with their number nearly doubling from 2009 till today.

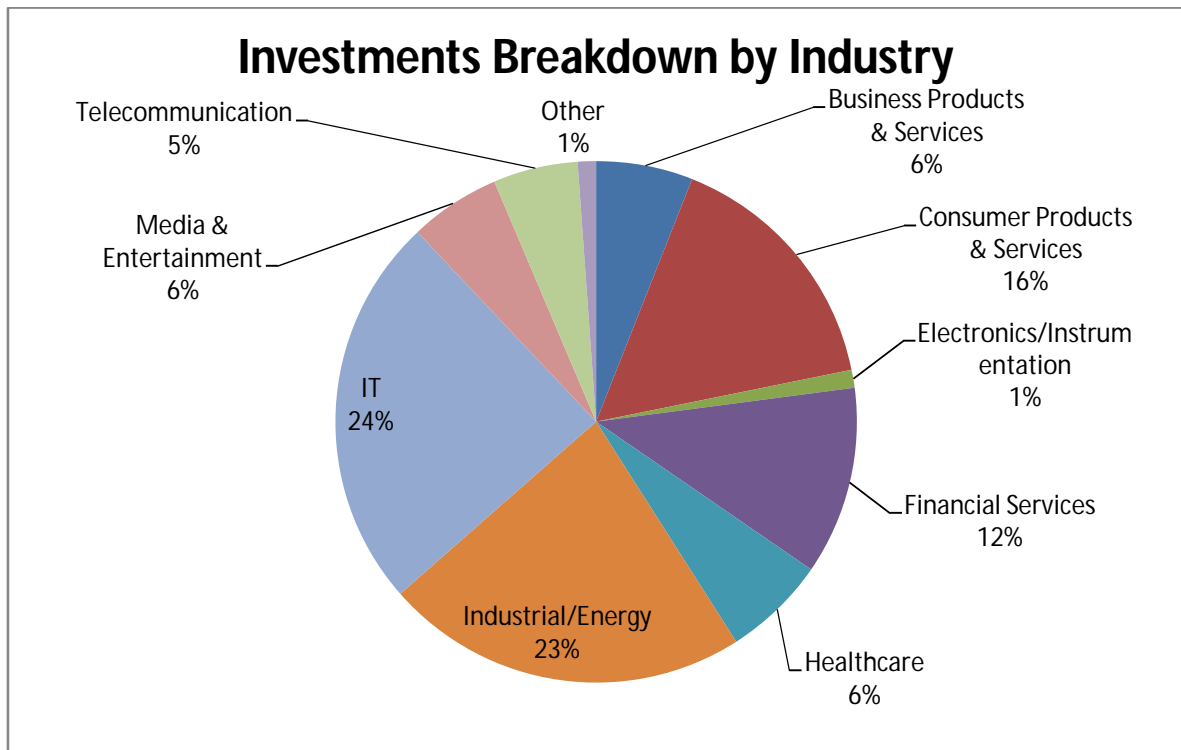


Figure 5 - MENA Investments by Industry

At the other end of the VC process, out of 266 investments since 2006, there have been a total of 62 exits and 13 defunct companies which translated into 23.3% exit rate and a 5% failure rate. The remaining are still active but the VC firm didn't exit these investments.

As for the type of exits, they were distributed at a ratio of 3 to 1 trade-sale to IPO. In 40% of the cases the listing location is the UK, with the remaining distributed among the MENA countries. The relatively underdeveloped stock markets of the MENA countries make them less of an attractive choice of exit and the firms probably prefer to list outside

the region if the portfolio company is capable of that. Otherwise the preferred exit route is through a trade sale.

C. Geographical Distribution

The UAE held by far the largest number of VC investments in the MENA region during the period from 1996 to 2013, accounting for around 30% of the total investments. Egypt, Jordan, Lebanon and Morocco are all more or less equal in terms of number of investments and each receiving around 10% of the total VC investments. (Figure 6)

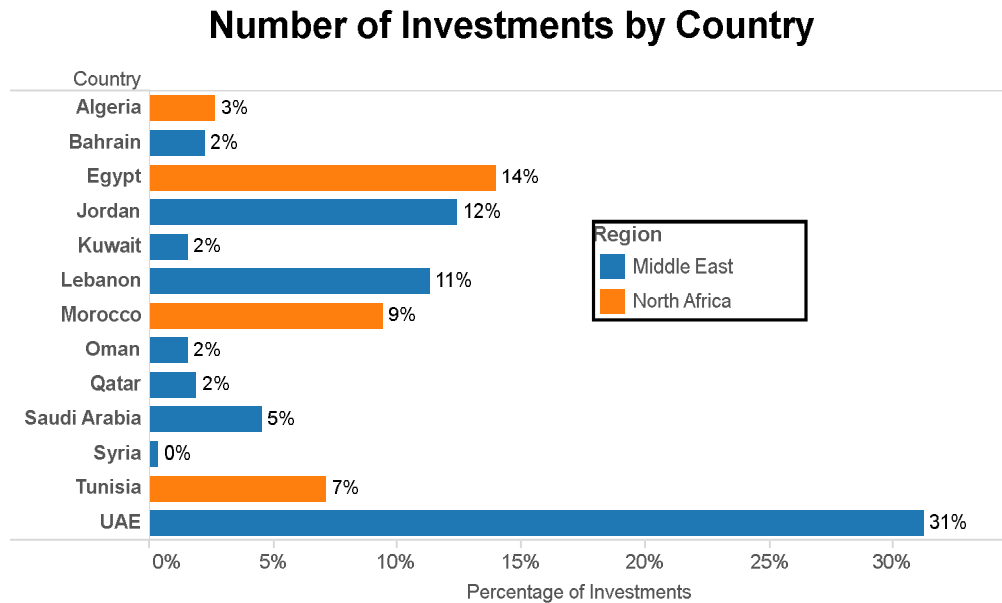


Figure 6 - Investments Breakdown by Country

However, what's more interesting than the simple geographic distribution of the investments across the MENA countries, are the participating VC firms and their country of

origin. This will lead us to the next step which is to understand if these firms syndicate together on certain investments and if there are any patterns or drivers to this syndication.

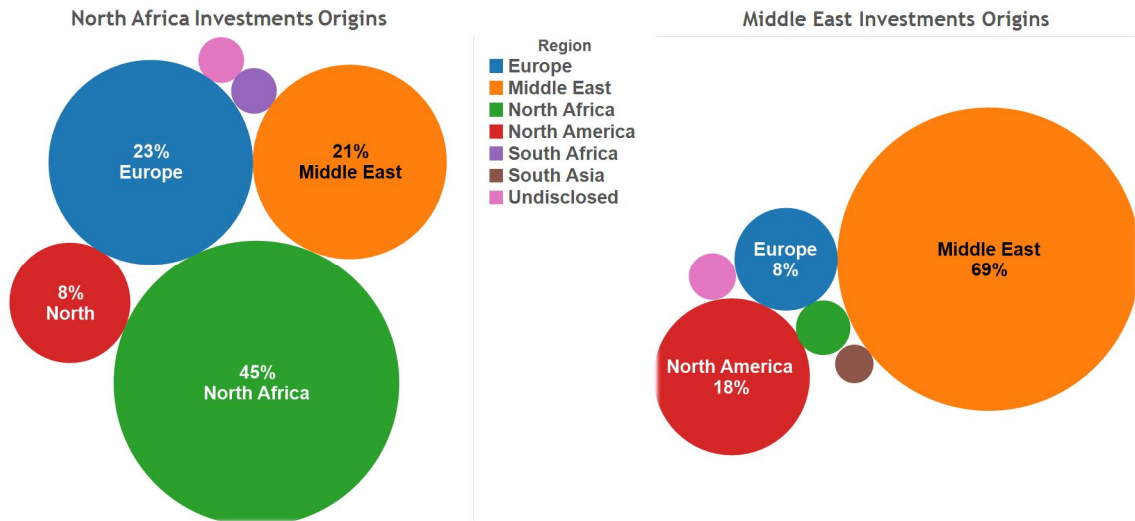


Figure 7 - Investments Origins Breakdown by Region

As shown in figure 7, in both the case of the Middle East and North Africa, the main bulk of the investments came from within the region itself. However, the remaining Middle East investments originate from North America and Europe as investors in these two regions are drawn into the potential that the GCC have to offer. The North Africa remaining investments originate from Europe and the Middle East mainly, probably because of their proximity and the historical relations between two regions.

Furthermore, we can examine the involvement of the local firms versus the firms from outside the region in the MENA's VC investments. As figure 8 shows, local firms started investing in 2000 and their involvement increased until it was hit by the crisis and

has been recovering since then. The foreign firms' involvement is limited and mostly stable up until 2008 where it increased probably influenced by these firms' desire to invest in the emerging markets and to move away from the that period's unstable stock markets.

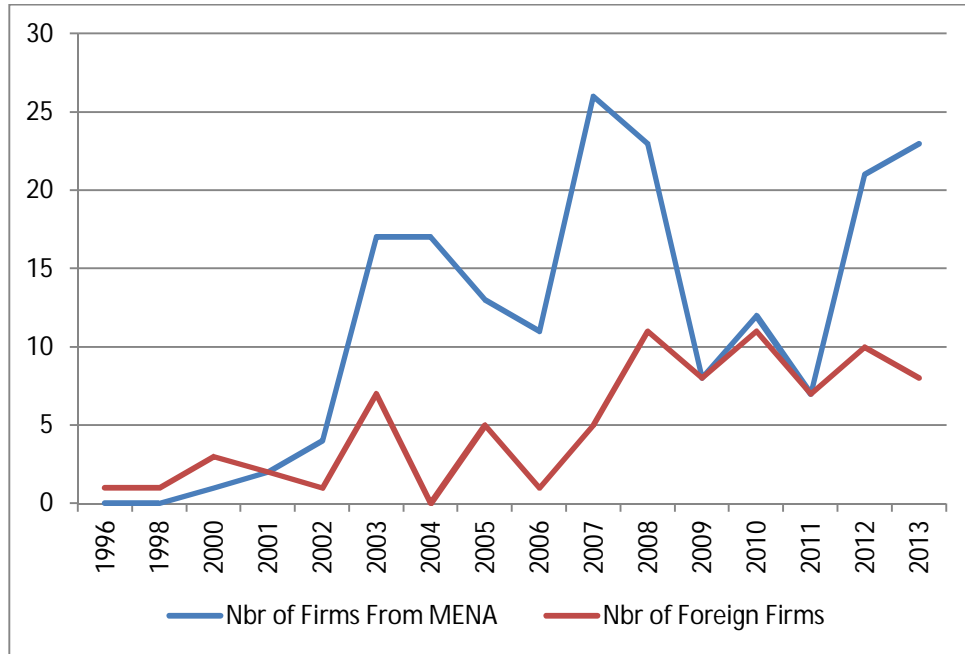


Figure 8 - Local vs. Foreign VC Firms Involvement in MENA

D. Syndication

Investment syndication between two or more firms is common in the VC industry. The motives, causes and other aspects of this behavior will be explored in the literature review chapter.

The ThomsonOne data lists 205 VC companies in the MENA region since 1996, out of which 22 companies that have syndicated investments. The average number of syndication partners is 2.5 to 2.8 for the different rounds of investments.

The ThomsonOne data has been consolidated into one excel sheet that starts with the portfolio company and its characteristics (region, industry, round year, status, etc...) and continues to show the different rounds of investments and the participating firm at each round. We added two additional variables, GDP per capita and firm score, to the excel sheet to analyze the syndication patterns and attempt to link them to the characteristics of the VC firm and the country.

CHAPTER IV

VC SYNDICATION THEORY

VC Syndication is defined as the temporarily alliance of two or more firms for the purpose of handling a large transaction that would be otherwise hard individually. It's important to differentiate between two levels of syndication: simultaneous in the same financing round or sequential in different financing rounds. Four key elements of the syndication process have been identified by Mikko Jääskeläinen (2012) as illustrated by figure 9.

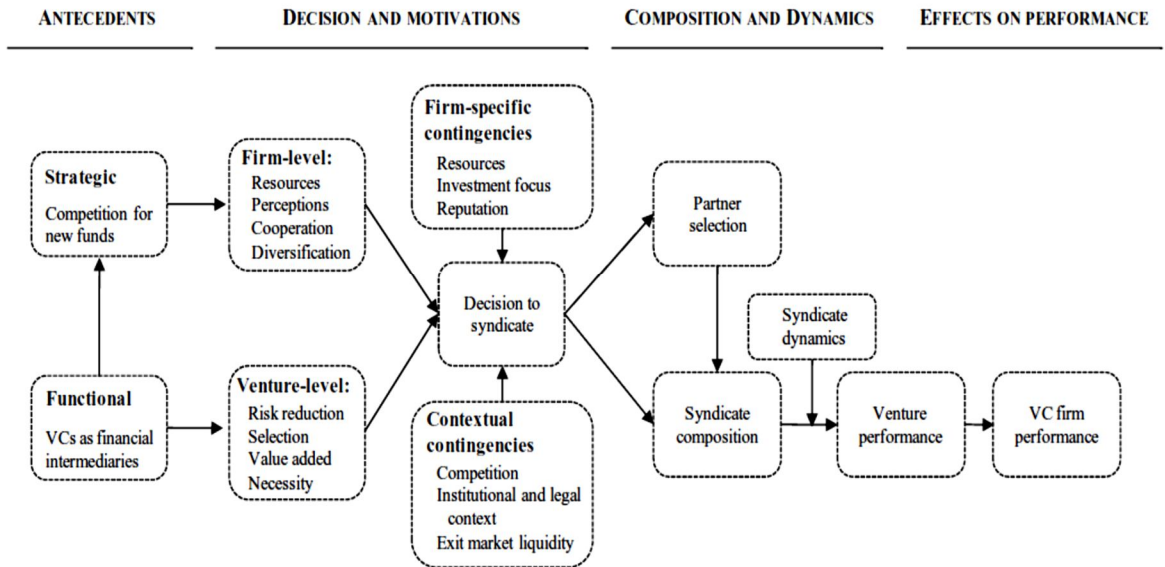


Figure 9 - Schematic structure of the syndication process (Jääskeläinen, 2012)

A. Antecedents of syndication

The difference between the antecedents and the motivation of syndication has to be highlighted before proceeding with the details of each. While the motivations can be understood as the effects that the VC firms seek as a result of the syndication, the antecedents are seen as the causes of why the VCs seek these results.

Syndication antecedents fall within two categories: Functional and strategic. The functional antecedent refers to the VC's role as financial "informed" intermediaries between the investors and the ventures. The increased amount of information and skills that result from syndication enhances the value of the investment by reducing the information asymmetry and agency costs between the VC firm and the venture. This added value increases their functional efficiency and thus is the first antecedent for syndication

The strategic antecedent is the equivalent of the functional antecedent but to the LPs side. The willingness of the LPs to invest in subsequent funds with the same VC is dependent on the VC's ability to generate returns positively comparable to their competitors. Therefore, VCs syndicate in order to improve their performance as a strategy to improve their chances of survival and the fundraising of subsequent funds.

B. Decision and Motives of Syndication

Motives to explain VC syndication are divided into two levels: the level of the management of the whole fund (Firm level) and the level of the management of a single investment (Venture level) (Manigart, et al., 2006).

From the management of the fund as a whole level, syndication may be viewed as a way of risk sharing via portfolio diversification. Ex-ante information asymmetry, illiquidity and the current performance effect on future fund raising all contribute towards the VC firm's desire to share the risk through syndication (Lockett & Wright, 2000). Also, by syndicating, VCs seek to limit underperformance with their peers (window dressing). Alternatively, VCs try to syndicate with other successful VCs to increase their chance of raising funds in the future, and to push the other VCs to reciprocate the gesture and thus increase their future deal flow (Lockett & Wright, 2000).

From the single investment management level (resource based perspective), the VC firm is regarded not only as a financial intermediary, but also as a "collection of productive resources" (Lockett & Wright, 2000). The syndication process can be therefore regarded as a method to access other firm's resources in order to reduce the risk associated with the investment. This results in a reduced adverse selection through improved screening, due diligence and decision making (Manigart, et al., 2006). When VCs syndicate, both firms have to approve the investment and only superior investments are selected. Post investment monitoring is also improved as a result of the syndication and resources sharing between the syndicated VCs (Manigart, et al., 2006). At the time of entry, syndication could increase

the VCs negotiating power towards the entrepreneur while, at the exit, it will enhance certification and thus lower underpricing of the portfolio company (Manigart, et al., 2006).

The importance of the syndication motives varies according to two dimensions: the stage of the investment (early vs. later stage) and the experience and size of the VC firm (Manigart, et al., 2006). Several papers undertook the task of understanding these characteristics and their variation across countries. A snapshot of the result in each country is described hereafter.

Lockett & Wright (2000) UK based research suggests that the motives for syndication are much more financial rather than resource driven. However, the resource based motivation gains importance in the case of early stage VC transactions and that, both perspectives lose importance when dealing with later stage VC.

Hopp & Rieder (2011) study about German VC investments concludes that both motives need to be considered simultaneously and that they act in a complementary manner. They also note that the more experienced the VC firm, the lower the level of syndication. This is explained by the fact that the added value from syndication may no longer justify the additional costs of coordinating and monitoring the deal with the other less experienced members of the syndication.

Manigart et al. (2006) paper on European VCs support the theory that overall fund management motives (diversification, enhanced deal flow) are more important than the specific deal level motivation (selection and post-investment value adding). On the stage of the investment dimension, the finance motive is equally the most important in both early

and later stage investments. However the finance motive loses ground for the more experienced firms as they are less restricted by their fund size and are able to diversify without the need for syndication.

These studies show that there are differences in the VC industry between the US and the European countries (Manigart, et al., 2006) and therefore the extent to which these findings can be transferred to the MENA region is still to be discussed. Since the VC industry is affected by a wide range of economic, legal, cultural and institutional factors, conclusions drawn on the US or the European environment are not necessarily applicable to the MENA region. Appendix A recaps the main motivations for syndication and the corresponding academic literature.

C. Composition and Dynamics of Syndication

After the decision is made to syndicate an investment, the questions revolve around the choice of partners and the structure of the syndication. The structure of the syndication is outside the scope of this thesis and therefore the concentration will be on the choice of VC partners.

Joining the syndicate as a non-lead investor offers 2 main advantages over leading the investment syndicate. On one hand, it allows the non-lead investor to diversify its portfolio with less management commitment compared to if it invested by itself.

(Jääskeläinen, et al., 2006) On the other hand, joining a VC syndicate is considered an

additional source of deal flow beside the deals that the VC directly receives (Jääskeläinen, 2012).

From these two significant advantages to VC firms, we can assume that there is no difficulty in finding a VC partner willing to syndicate on a given investment and this raises the question of how the VC firms choose their syndicate partners. (Jääskeläinen, 2012)

The partner selection mechanism can be attributed to two rationales. The first rationale stems from the syndication's functional antecedent where the lead investor chooses his partner based on the added value that these partners will bring to the venture in terms of resources and expertise. The second rationale is aligned with the strategic antecedent and states that the lead investor chooses to partner with VCs based on the relationship-specific contributions that they offer. The lead investor prefers to work with VCs with whom they (1) have previous experience and consequently mutual trust, (2) are strategically aligned, and (3) have a central position in the VC network (Jääskeläinen, 2012).

Both rationales have streams of related articles to support them. However, for the purpose of this thesis, and given the nature of the data that is in our possession we will concentrate on the first rationale (functional antecedent) to understand how the partners' selection is conducted in the MENA region. For this purpose a rating system for all VCs involved investments in the MENA will be constructed based on the work of Lee et al. (2011). More details on this subject in the following sections.

D. Effects on Performance

While the evidence of the effect of syndication on the performance of the venture is well established academically, the effect on the level of the firm or fund is still inconclusive.

The effect of syndication on the venture level is attributed to two primary mechanisms. The first mechanism is the result of the pooling of the resources and expertise of the participating VC firms which induces greater value creation post investment. The second mechanism relates to the positive signal that syndication attributes to the venture at the time exit. Syndication contributes to the positive perception of the venture and adds to its reputational capital which in turn helps certify its quality. The correctness of the pricing and the returns on investment are positively affected at the time of exit. (Jääskeläinen, 2012)

From the firm point view, syndication allows the VC firm a better access to a larger pool of resources and a better deal flow. It also allows the management to share the post-investment workload with their partners. In theory these two factors should contribute to better investments and therefore enhanced performance. However, literature on this topic is limited and detailed analysis of these two factors is practically non-existent.

E. Presented Hypotheses

The existent literature summarized so far enables us to present two hypotheses. The first hypothesis is regarding the probability of syndication and the number of syndication partners, while the second relates to investment of foreign firms in the region.

The logic behind the first hypothesis is that smaller firms seek to syndicate to gain access to a bigger pool of resources and expertise (functional antecedent), and would also want to instigate other firms to reciprocate the opportunities to increase their future deal flow (Strategic antecedent). Alternatively, bigger firms find that the additional cost associated with the syndication outweighs its benefits and are established enough to generate their own deal flow without the need for the help other firms. The first hypothesis can be therefore formulated.

(1a) The probability of syndication and the number of syndication partners is negatively affected by the increase in reputation and size of the involved VC firms.

The second hypothesis seeks to understand the investment pattern of the foreign firms in the region. We postulate that foreign firms do not invest by themselves in the region and seek to partner up with local firms. From a functional antecedent, the syndication is explained by the fact that foreign firms want to gain access to expertise and resource specific to the region. They can therefore reduce information asymmetry and improve their screening methods. From a strategic antecedent, the syndication provides the foreign firms with a foothold in the region and builds strategic partnerships with local firms that help them increase the local future deal flow.

(2a) Foreign firms do not invest by themselves in the region and therefore increase the probability of syndication and the number of syndicating partners.

These two hypotheses will be tested by conducting regression and Probit analysis in the following section. However, in order to account for the reputation and size of the VC firms, we first begin with building a reputation score based on the work of Lee et al. (2011)

CHAPTER V

VC FIRMS SCORE

As discussed earlier, selection of the VC partners can be attributed to either one of two rationales, the first based on the added value in terms of resources and expertise that the partners bring to the investment, while the second is based on the relative position of the VC firm within the VC network. The previous chapter also mentioned how the syndication can send positive signals to other firms and investors about the health and quality of the venture.

The successful selection of the partners that will add value to the deal in both rationales is therefore highly dependent on how market participants perceive each other. Among the mechanisms that aim at quantifying and managing this perception, the firm's reputation score has emerged among a variety of other mechanisms as easy and reliable. Reputation scores are useful for reducing perceived uncertainties as they are based on historical data of the service they are offering and the quality of these services. (Lee, et al., 2011)

High reputation VC firms can help their portfolio companies via their resources, their management skills and their corporate relationships; all the while positively signaling to the market about the quality and potential of this venture. Therefore we should expect higher returns for these ventures.

A. The Variables

Lee et al. (2011) created a reputation index that captures the true value of the firm's reputation while reducing errors caused by randomness by considering multiple items in this index. The items that Lee et al. chose to include in his index capture three dimensions: (1) the intensity of the VC's investment activity, (2) the VC's ability to acquire investment capital and, (3) the VC's output quality.

The intensity of the VC's investment activity is best captured by two variables: (1) the total number of investments per year and (2) the total funds in dollars invested per year. The intensity of the VC firm in terms of count and size is an important component of its reputation as it enhances the visibility of the firm in the market. The more active the VC is, the more prominent it is in the market and the more it is in contact with market participants which positively builds reputation. These two factors are applicable for the MENA region and are available from ThomsonOne.

The VC's ability to acquire investment is demonstrated by 3 variables: (1) the total investment dollars raised, (2) the number of investment funds raised, and (3) VC firm age. The VC firm's survival and ability to raise future funds is contingent on its ability to generate returns for the investing LPs. Therefore the number and size of funds raised can be considered as an indication of the fund's historical performance. The age of the VC shows that the VC has been able to survive and maintained a certain success rate. These 3 variables are applicable to the MENA region, however only the age of the VC firm is available from ThomsonOne.

Finally, Lee et al. uses the number of portfolio companies that the VC firm took public through an IPO as an indicator of the output quality of the firm. The IPO is the most profitable and most visible way to exit an investment, and therefore can directly showcase the VC's capabilities and achievements and build upon its reputation. However we chose to disregard this factor because of two important points. First, given the relatively underdeveloped stock markets of the MENA region, exit through an IPO is less of an indication of the outcome of the investment. Add that to the fact that the majority of the VC investments in the region happened within the recent years and didn't have the time to reach the exit phase yet. Future research on this subject could gather data on the performance of their investments directly from the VC firms and include it in the score.

Out of the 6 variable chosen by Lee et al., we decided on disregarding 3 either as a result of unavailability of the data or inapplicability. The remaining factors are: (1) the number of investments per year, (2) the amount of investments in dollars per year, and (3) the age of the VC.

B. Data & Computation

ThomsonOne was the primary source of data for the calculation of the index. Breakdown of the investments' number and value is available on each firm's profile sheet on the website of ThomsonOne. In a few instances, missing data from ThomsonOne was complemented from other online resources such as the website of the firm or other online

articles. However, some entries still show some missing data in either one of the 3 factors and should be complemented by contacting the firm directly in future research.

The earliest recorded VC deal in the MENA region goes back to 1996 and therefore we started computing the firm's reputation score starting that year.

For each factor, creating the score is a three step process. First, we begin by taking the 5 years rolling average ending with the focal year. Taking the average allowed us to exclude the effect of the cyclicity in the VC industry and any fluctuations in the investment activity of the firms. Second, for comparability purposes, we normalize all factors by transforming them into z-score. And finally we transpose them into a 0-100 scale in order for the score to be easy to read and comparable across the years (Lee, et al., 2011).

To compute the final score, we calculate the arithmetic average of the normalized factors (0-100 score) assuming that they have equal contribution to the overall reputation score of the firm.

C. Results Analysis

We begin by taking a look at the geographical distribution of the newly created firms that are involved in VC deals in the MENA region. Table 1 and figure 10 show the results.

| | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
|--------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| ME Firms | 10 | 10 | 11 | 11 | 14 | 16 | 18 | 19 | 22 | 28 | 32 | 36 | 37 | 41 | 42 | 43 | 45 | 45 |
| NA Firms | 4 | 5 | 5 | 7 | 7 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 9 | 11 | 12 | 12 |
| MENA | 14 | 15 | 16 | 18 | 21 | 24 | 26 | 27 | 30 | 36 | 40 | 44 | 45 | 49 | 51 | 54 | 57 | 57 |
| Other | 23 | 23 | 27 | 30 | 35 | 36 | 36 | 36 | 37 | 37 | 37 | 38 | 38 | 38 | 40 | 42 | 42 | 42 |
| Total | 37 | 38 | 43 | 48 | 56 | 60 | 62 | 63 | 67 | 73 | 77 | 82 | 83 | 87 | 91 | 96 | 99 | 99 |

Table 1 - Newly Created VC Firms

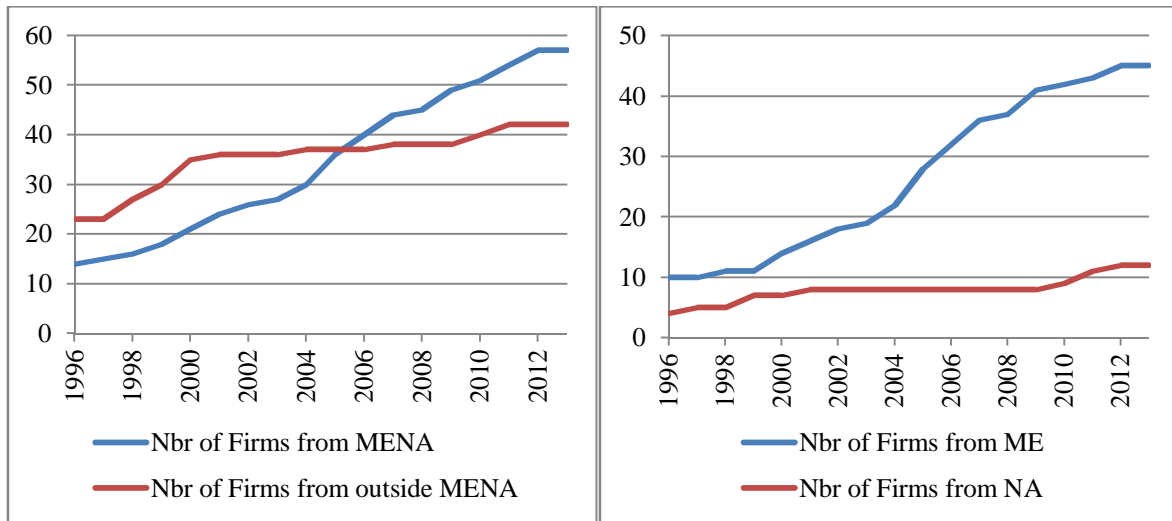


Figure 10 - Number of Firms in the MENA vs. Other Regions

As indicated by figure 10, MENA has witnessed a rate of birth of new firms involved in VC deals twice as high as other regions. More specifically, the Middle East contributed to the creation of the highest number of firms with 35 out of 43 companies born in the MENA between 1996 and 2013. The number of firms in North Africa on the other hand showed no significant increase in the number of VC firms.

This high increase in the number of firms in the MENA region has affected our scoring system by decreasing the median, average, and the standard deviation. Since the

bulk of companies in the region are recently established, the scores are compressed in the lower range, the median therefore dropped from 16.68 in 1996 to 9.47 in 2013. Average dropped from 18.21 to 13.07, and standard deviation from 14.3 to 12.55 during the same time interval.

The birth of these VC firms has a twofold meaning for the MENA VC scene in general, and specifically for the Middle East area. For the foreign firms, this indicates their increased interest in this market and them seeking to invest in it. Second, the substantial increase in the local (especially Middle East) firms reflects the local investors' acknowledgment of the importance of VC and its potential in the region. The local investors are therefore seeking to establish themselves early on in the market.

CHAPTER VI

SYNDICATION ANALYSIS

After completing the univariate, the testing of the two hypotheses is conducted by means of a Probit analysis in the case of the probability of syndication. However a regression is applied to the number of syndication partners.

The independent variables that we choose are: the Average firms score for round 1, number of foreign VC firms in the syndicate, 3 dummy variables to indicate the location (GCC, North Africa except Egypt, Levant and Egypt), and finally the GDP per capita of the portfolio company's country.

We should note here that the firms' reputation scores are tightly distributed and skewed towards the lower side due to the fact that the majority of VC firms of the region are newly established. To understand the effect of higher reputation scores on our two hypotheses, we add the squared average firms' score to the independent variables of the regressions. This has the effect of spreading the scores over the whole spectrum of possible scores and allows us to observe the effect of higher scores on the probability of syndication and the number of syndication partners.

The GDP per capita independent variable is added in order to account for the macroeconomic conditions of the portfolio company's country. This allows us to observe if these conditions have any influence on the syndication patterns.

A. Univariate Analysis:

A simple univariate analysis is applied on the non-binary variables. The results are shown in table 2.

| | Nbr of Investors | Nbr of Rounds | Average Firm Score in Rd 1 | Nbr of Foreign Firms in Rd 1 | Investment Year |
|---------------|------------------|---------------|----------------------------|------------------------------|-----------------|
| Variable Type | Real | Real | Real | Real | Date |
| Min | 1 | 1 | 0 | 0 | 1996 |
| Max | 5 | 3 | 73.47 | 3 | 2013 |
| Average | 1.19 | 1.11 | 13.20 | 0.29 | - |
| Median | 1 | 1 | 7.77 | 0 | 2008 |
| 1st Quartile | 1 | 1 | 3.94 | 0 | 2005 |
| 3rd Quartile | 1 | 1 | 15.91 | 1 | 2010 |

Table 2 - Univariate Analysis

As mentioned before, there are 22 occurrences of syndication out of 205 total companies between the year 1996 and 2005. The univariate analysis is in line with this limited number of syndications. In fact the number of investors and the number of rounds are in the majority equal to 1 (1st and 3rd quartile equal to 1).

On another hand, we can see that the median year of investment is 2008 with 75% of the investments occurring after 2005. This confirms the high growth that the VC industry is witnessing in the last decade.

Finally, and as discussed in the previous section, the firms' scores are tightly packed and skewed to the lower side. That is also confirmed by the fact that 3rd quartile is equal to 15.91 while the maximum value is 73.47.

B. Probit & Regression Results:

The first dependent variable is the syndication dummy (binary variable) that indicates if the transaction is syndicated or not (1 if syndicated, 0 otherwise). The second dependent variable is the number of syndication partners in the transaction. Results of the Probit and regression analysis are shown in table 3.

| | Probability of Syndication (R² = 0.222) | Nbr of Syndication Partners (R² = 0.204) |
|------------------------------|---|--|
| Average Score Round 1 | 0.143*** | 0.014* |
| | <i>0.055</i> | <i>0.009</i> |
| Squared (Average Score Rd 1) | -0.003*** | -0.000** |
| | <i>0.001</i> | <i>0.000</i> |
| GDP / capita | 0.442 | 0.135 |
| | <i>0.372</i> | <i>0.101</i> |
| Nbr of foreign firms in Rd 1 | 0.736*** | 0.409*** |
| | <i>0.273</i> | <i>0.090</i> |
| GCC Countries | (dropped) | -0.337 |
| | | <i>0.266</i> |
| North Africa (Exc. Egypt) | 1.129 | (dropped) |
| | <i>0.982</i> | |
| Levant and Egypt | 1.595 | 0.105 |
| | <i>0.986</i> | <i>0.135</i> |

*** , ** , * : statistically significant at the 1%, 5%, and 10% level respectively;
Standard errors are in italic

Table 3 - Results of Probit & Regression

At a significance level of around 10%, we can disregard the GDP/capita variable and the location dummies as having no significant influence on the probability of syndication. As anticipated in the hypothesis the most influential variables are the firms' score and the presence of foreign VC firms in the investment.

C. Testing of the Hypothesis:

In line with hypothesis (1a), the regression and Probit analysis are coherent and demonstrate that the probability of syndication and the number of syndication partners are positively related to the average firms score in round 1, as long as this average is not too high. Indeed, the coefficient of the squared average firms score is negative, while the coefficient of the firms score is positive. This indicates that once passed a certain score threshold, the probability of syndication starts decreasing. This result is coherent with the syndication literature that stipulates that bigger and more reputable firms do not feel the need to syndicate as they probably have the required resources in-house and don't have to bring on partners to reduce their risk exposure, contrarily to the smaller firms.

However, the effect of firms' score on the number of syndicating partners is less significant than on the syndication probability which indicates that there might be further factors affecting it (size of the investment, industry, specialization of the VC firms). Further investigation on the topic should be conducted to determine the most influential factors.

Thus hypothesis (1a) is not only confirmed, but we can also predict that the relation between the syndication probability and the firms' score is concave (increasing up to a certain threshold and decreasing afterwards). The relation between the number of syndicating partners and the firms' score follows the same pattern.

As for the second hypothesis, we find that the number of foreign firms in the syndicate also increases the probability of syndication and the number of syndicating partners. Indeed, the coefficients for this variable are positive in both the syndication

probability and the number of partners. This indicates that foreign firms prefer not to invest in the region by themselves and look for partners. This finding confirms hypothesis (2a) and is aligned with the theory discussed earlier.

CHAPTER VII

CONCLUSION & FUTURE REASEACH DIRETCIONS

Using the data collected mainly from ThomsonOne on the VC activity in the MENA region during the last 15 years, the analysis this paper has made allows us to confirm the two presented hypotheses. The first conclusion is that the firms' reputation score is negatively correlated with the syndication probability and the number of syndication partners in the first round of investments. This conclusion is aligned with the theory whereas bigger more experienced VC firms do not seek to syndicate because, besides having all the necessary resources in house, they find that the added value from that syndication does not cover the additional cost that syndication entails. The smaller firms however, benefit from syndication on both the functional and strategic antecedents discussed earlier.

The second conclusion relates to the foreign VC firms. This paper established that the presence of a foreign VC firm in an investment increases the probability of syndication and the number of partners. From a functional antecedent perspective, having local partners will provide the foreign VC firm with the region necessary "savoir-faire" and connections. From a strategic perspective, it could be that the foreign is seeking to penetrate the MENA market and find it necessary to associate with a local partner to gain foothold in the region.

However, one critical limitation with several implications has to be mentioned. As mentioned in the introduction, the region suffers from severe problems when it comes to

the reporting standards. Add to that, the VC industry's relatively short history diminishes the available data and these two factors combined reduce somehow the robustness of our analysis. The recent data also could infer the possible existence of a survivors' bias in the reporting as the number of failed ventures is extremely low (5% of the total number of ventures) which is unusual for early stage VC investments. This bias prevented us from getting reliable results when analyzing the effect of syndication on the probability of failure of the companies in this project.

It is therefore important for the future researches to acquire the data from reliable sources, and the most reliable source remains the VC firms themselves. In fact, the VC firms can provide data that is more complete and within a broader scope than the one available on ThomsonOne.

Another important point is to complete the firms' reputation scores computation. The three remaining variables (the total investment dollars raised, the number of investment funds raised, and number of IPOs) can be collected from the VC firms and the calculation of the score can thus be completed.

Finally, the effect of syndication in the first round on subsequent funding rounds, the performance and the exit route can be looked at, but only when a couple of year have passed in order to allow for more VC firms to exit their investments.

APPENDIX

Literature on motivations to syndicate on VC firm, portfolio and deal levels.

Firm-level motivations

| | |
|--|--|
| Leveraging existing / compensating for lacking resources | Deal flow: Bygrave (1987); Manigart et al. (2006); Fritsch and Schilder (2008) Selection expertise and capabilities: Casamatta and Haritchabalet (2007); Dimov and Milanov (2010) Value-adding capabilities: Jääskeläinen et al. (2006); Manigart et al. (2006); Dimov et al. (2007); De Clercq et al. (2008); Dimov and Milanov (2010); Deli and Santhanakrishnan (2010), Verwaal et al. (2010), Dal-Pont Legrand and Pomet (2010); Hopp (2010a, 2010b; Hopp and Rieder, 2011) Market-specific knowledge: Mäkelä and Maula (2008); Meuleman et al. (2009) Financial resources. Ferrary (2010); Gottschalg and Gerasymenko (2008)* |
| Managing perceptions of the VC firm | Reputation-building: Lerner (1994) |
| Managing interorganizational relationships | Entry deterrence: Hochberg et al. (2010) Networks: Castilla (2003); Fund et al. (2008); Keil et al. (2010), |
| Managing portfolio | Reducing risk of underperforming peers: Lerner (1994); Lockett and Wright (2001) Diversification: Lerner (1994); Lockett and Wright (1999) Lockett and Wright (2001); Manigart et al. (2006); Kaiser and Lauterbach (2007) |

Deal-level motivations

| | |
|-------------------------|---|
| Venture-related factors | Selection: Brander et al. (2002); Cumming (2006a); Dimov and Milanov (2010); Cestone et al. (2007)* Value added: Brander et al. (2002); Manigart et al. (2006); Dimov and Milanov (2010) Risk reduction: Manigart et al. (2006) |
| Necessity | ASymmetric information between VCs: Admati and Pfleiderer (1994); Lerner (1994); Fluck et al. (2009)* Asymmetric information between VCs and ventures: Hellmann (2002); Huang and Xu (2003); Schmidt (2003); Bachmann et al. (2006)*; Fluck et al. (2009)* |

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