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ISA's technology reaches the Middle East

When Intelligent Senses are needed Anywhere



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Learning is a journey. It never truly ends.

Nevertheless, this thesis represents the finishing line of my academic life, which would have not been accomplished without the contribution of several people.

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Abstract

Title: ISA's technology reaches the Middle East – When Intelligent Senses are needed Anywhere.

In the end of 2012, ISA – Intelligent Sensing Anywhere, a Portuguese technological-based company in the oil & gas and energy telemetry business which had started the operations of its International Joint Venture (IJV) in Cairo in the beginning of the year, was facing the tough decision on whether it should divest on the IJV.

Although the partnership was stable and the first implemented pilot projects had been a success, Egypt was living a social and political crisis since 2011. This crisis had been recently aggravated with the election of President Mohammed Morsi with 51% of the votes, in a straight division of the country between Islamist governance and the moderate Muslims, Christians and liberals. Underlying ISA's concerns were the security of its members, the decrease in investment regarding national projects, ISA's future success in the North Africa and Middle East regions and the best interests of its stakeholders. The dilemma on whether the firm should go on with its IJV is therefore the central issue of this dissertation.

In addition to the Case Study, this dissertation includes a Literature Review which provides the theoretical grounds for the proceeding analysis on the Teaching Note, exploring issues such as technological R&D, International Negotiation, Strategic Alliances and Sustainability in a SMEs internationalization context.

Keywords: ISA; SME; Middle East; Strategic Alliances; IJV; TR&D

Resumo

Titulo: A tecnologia da ISA atinge o Médio Oriente – Quando os sentidos são precisos em todo o lado

No fim de 2012, a ISA – Intelligent Sensing Anywhere, uma empresa portuguesa de telemetria cujas operações no mercado egípcio começaram através de uma International Joint Venture (IJV) no início do ano, deparava-se com a difícil decisão de continuar ou não no mercado.

Embora a parceria fosse estável até então e a implementação dos projetos piloto tivessem sido um sucesso, o Egito encontrava-se numa crise política e social desde 2011. Esta situação foi recentemente agravada com a eleição do presidente Mohammed Morsi com 51% dos votos, dividindo o país entre uma governança Islâmica e os muçulmanos moderados, cristãos e liberais. Subjacentes às preocupações da ISA estavam a segurança dos seus trabalhadores, a diminuição do investimento no que toca a projetos no país, o potencial sucesso da ISA nos mercados do Norte de África e do Médio Oriente e os interesses dos seus stakeholders. O dilema sobre se a empresa deve ou não manter a IJV é, portanto, a questão fulcral desta tese. Além de incluir um Estudo de Caso, esta tese inclui uma revisão de literatura que fornece as bases teóricas para a análise posterior no capítulo da Teaching Note, explorando questões como a Investigação e Desenvolvimento (I&D) tecnológicos, Negociação Internacional, Alianças Estratégicas e Sustentabilidade num contexto de internacionalização das PME portuguesas.

Palavras-chave: ISA; PME; Médio Oriente; Alianças Estratégicas; IJV; I&DT

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List of Terms and Acronyms

B2B – Business to Business

B2B2C – Business to Business to Consumer

B2C – Business to Consumer

BI – Business Intelligence

CRM – Customer Relationship Management

CSF – Critical Success Factors

EMS – Energy Management Solutions

ERP – Enterprise Resource Planning

GCC - Gulf Cooperation Council

GSM - Global System for Mobile Communications

IDV - Individualism versus Collectivism

IJV – International Joint Venture

ISA – Intelligent Senses Anywhere

JV – Joint Venture

M2M – Machine-to Machine

MAS - Masculinity vs Femininity

MNE – Multinational Enterprise

NYSE – New York Stock Exchange

OLAP - On-line Analytical Processing

OPEC - Organization of the Petroleum Exporting Countries

PDI – Power Distance

R&D – Research & Development

RDT – Resource Dependence Theory

SCM – Supply Change Management

SMDP – Strategic Management Decision Processes

SME - Small and medium enterprise

UAE – United Arab Emirates

I | Introduction

In November 2012, ISA – Intelligent Sensing Anywhere, a Portuguese technological-based company in the oil & gas and energy telemetry business, was required to make a tough decision on its internationalization process. A company born as a start-up in 1990 by the hands of engineering college students was now internationally recognized and awarded for its innovation in the telemetry market and was now listed in NYSE Alternext.

In order to compete internationally, ISA acknowledged the need to invest on technological R&D, to develop solutions which can remotely meter consumption in the areas of Oil, Energy, Environment, Transport, Security and Health Security and Automation. ISA was able to create innovative products and services in the market, and met the requirements of assuring higher energetic efficiency, cost reduction and real time information provided through business intelligence processes.

Its products can be found in more than 20 countries worldwide including Egypt, where ISA established ISA Middle East, an International Joint Venture with an experienced partner in the market, with the aim of getting the knowledge and the experience required to be successful, and to reach other markets in North Africa.

However, the social and political situation grew inversely to the development of the IJV. In July 2012, Mohammed Morsi won the elections in Egypt, against Ahmed Shafiq, with 51% of the votes, which caused the political and religious division of the country between Islamists and Moderate Muslims, Christians and Liberals.

For ISA's concern, the tension lived in Cairo would soon burst up and become a civil war. ISA's board would have to make a strategic decision that might change the path of that company in the Middle East

This dissertation has the aim to demonstrate how a Small to Medium Enterprise could achieve an international recognition in the technological market, through the process of Business Intelligence and the development of telemetry solutions for B2B and B2C markets.

Strategic alliances are going to be the core discussion of this paper. More precisely, this dissertation is going to be focused on how SMEs can enter with and sustain its strategic alliances in culturally challenging markets.

To accomplish this goal, this dissertation will be divided into three parts: the Case Study, the Literature Review and the Teaching Note.

In the Case Study, the firm, its vision, strategic moves and options will be presented. The Literature Review will contain specific frameworks and concepts with the aim of providing a theoretical basis that will be helpful in the analysis of the issues addressed in the Teaching Note. This last section aims to give guidance for an instructor on the described themes and help to stimulate the students' in-class participation.

In the Literature Review the strategic concepts and frameworks of relevant theorists which should be helpful for analyzing the questions proposed in the Teaching Notes section are highlighted. Finally, in the Teaching Note section an approach for the discussion of the Case Study is suggested. The goal of this section is to give a possible guideline for the instructor to use during class and to stimulate the class discussion. This last section is expected to be complemented with the instructor's own comments after the in-class discussion.

II | Case Study

Henrique Pereira was staring at the world map, drumming his fingers on the table on a sunny day of November 2012, in Coimbra, Portugal, just before a meeting he had called up with his team. ISA – Intelligent Sensing Anywhere, a small to medium sized company in the technological field, with a turnover of 5,4 million euros in the year of 2011, decided it was time to take a hard step. Henrique Pereira had been hired in December 2010 by the company to lead the company into a new market, and now he had a letter from the administration and another from the shareholders with financial data attached on his hands. On the header, in bold letters, it was written what they had been discussing for a few days: “Time to change”. The world map was on Henrique's mind all week. A huge world map was all written upon, not only with seas and countries' names but also with possibilities and market characteristics. Henrique gathered his team and told them: “It is time for us to go big or go home. Where should we go from here? Should we stay or should we go? How big a risk can we afford to run? This is a good day to make crucial decisions.”

The team went back through all the decisions they took the past few years in order to decide in which markets should they reallocate resources, and which markets were worth entering.

2.1. The Company

In 1990, four newly-graduated physics and computer engineering students at the University of Coimbra, with fresh ideas and knowledge in the development of solutions of acquisition and transmission of data and remote control, decided to create a start-up. ISA – Intelligent Sensing Anywhere, was soon to be a technology-based company, headquartered in Coimbra (see Exhibit 1).

After years of developing and implementing solutions for monitoring and environmental control and benefiting from the evolution of mobile communication, ISA had become the world pioneer in the launching of telemetry solutions through GSM applied to the monitoring of tanks, nets, and gas meters.

For more than 20 years, ISA has specialized in intelligent telemetry and remote management solutions. Its core business consisted of creating and developing products and solutions in order to create value in different fields such as fuel distribution, energetic and hydric efficiency, environmental monitoring and intelligent houses and cities (see Exhibit 2).

*“Intelligent Sensing Anywhere: **We want to take our telemetry systems to all corners of the world, to every home, every car, every person, and every environment! We want to measure the quality of the air you breathe and of the water that drink, your energy consumption, your health and the status and location of all your assets... and then process these data in an intelligent way, thus building a better world!**”*

The company’s vision stated the main goals that lead to the conceptualization of smart cities (Exhibit 3). Step by step ISA was aiming that every city would have a sustainable development that respected the environment by optimizing energetic efficiency through the offer of remote metering solutions that could make every health care, transportation and security company access information in real time.

Although the company’s rivals included multinationals such as Schneider, Siemens, ABB, Honeywell, Pacific Controls and Johnson Controls, these firms did not concentrate on small niches, but on mass markets, which did not require customized solutions, translated in added value for a company like ISA. Henrique clarified that ISA’s technology and incorporated know-how along with an almost exclusive market did not undermine companies with higher turnovers.

Thus, ISA’s general strategy focused on the dominance of a very specific niche, with a technology that was not replicated so far, due to the protection of its patents and know-how. This provided a favorable position for ISA, especially on its main area of Oil & Gas. ISA had a team exclusively dedicated to Business Intelligence¹ processes, which was able to raise the industry standards on Machine-to-Machine (M2M) communications in the segment of Oil & Gas. Telemetry, which is ISA’s core business, makes the bridge in M2M communications, reinforcing its great potential among international competitors.

2.2. The Core Strategy

ISA’s offer was very similar across geographical areas – energy management and monitoring solutions grounded on telemetry as a technological component. Through the continuous collection of a large set of variables of energy consumption, the company was able to find inefficient patterns and then to bridge the gaps to raise efficiency, and consequently to save energy and money, a solution that was offered to consumers as the Smart Logistics service, to which ISA constantly added value in order to optimize the use of telemetry by the consumer.

¹ Business Intelligence is the process of collecting, storing, treating and diffusing data that can add value and efficiency to a company

Henrique explained through a medical analogy that what defined and distinguished the company was ISA's approach to the problem: "a client of ours has a problem and consults a specialist. The majority of our competitors, by looking at our client, would immediately suggest solutions lined-up with their specialization – a surgery in case they are surgeons, for example. ISA prefers to do a complete and detailed diagnosis which identifies the existing problems and, based on this analysis, suggests better solutions. This not only saves money to clients, but also spares resources and promotes a different way of being efficient. If we see there is the need for surgery, we obviously will do it, but based on real data, not only on opinions and perceptions."

With this strategy ISA was able to successfully grow since its beginning. Although Henrique recognized that reality never happens exactly as planned, when confronted with cultural differences, the teams focused on the external markets endeavor to understand a different reality. In what concerns the Middle East and North African countries, the time required to close deals was larger than what they initially thought of.

Nevertheless, Henrique always believed in what he was selling and tried to spread that confidence among his team members by remembering them of what had made them successful that far. The Key Success Factors matched across countries: high return on investment, the attained percentage of efficiency and the ability to create value to ISA's clients (not only they are able to reduce costs, but are also able to differentiate from their competition and therefore give value to their own clients). Henrique highlighted to his team one factor that was particularly relevant for the Middle East: the importance of finding the right partner to be able to develop a trustful win-win business relationship.

Furthermore, the firm's strong efforts on Research and Development (see Exhibit 4) allowed to treat the information received from its clients and the macroeconomic environment and to turn it into innovative solutions.

On 2011, ISA was able to beat the external crisis on the world economic markets by increasing 40% of its total turnover (see Exhibit 5). This outcome was possible due to the opening of ISA Middle East and ISA South America (see Exhibit 6), as well as due to the enlargement of the spectrum of application of its technologies to new market and client segments².

² ISA's Annual report, 2011

2.3. The International Lever

The team was aware that swimming in a world of sharks would not be easy. The small sized company was well known in the Portuguese energy and oil industry, with clients such as BP, Shell, Mobil, Total, Repsol and Galp, which measured their reservoirs anywhere in the world using ISA's technology (see Exhibit 7).

But the fact was that, as Henrique stated, "out of borders the firm was a micro, or even a nano, international player". As so, the managers had to be extremely careful to avoid squandering the limited resources of the company.

The firm soon began to win relevant international contests, competing at the same level of other relevant players in the world market, and after 10 years it became the leader of the segment of multinational oil companies in what concerns the measurement of gas tanks worldwide.

Thus, the replication of the business model from fuel to water and energy, turned out to be the rising point of ISA and its international projection. ISA's presence around the 5 continents accounted for 70% of the company's production³. It was possible to find ISA's technology in 27 countries, as 52 thousand telemetry systems had been installed. For the company, "this is only a starting point, not a point of arrival".

In 2005, ISA realized that some geographical areas required not only its exports, but also the physical presence of the company in order to further exploit the market, and defined three year long term internationalization plans, revising and adjusting them annually. In 2008, the company opened its subsidiaries in Spain, France and Brazil. "We need to have people who not only know the market but also feel it, that are able to understand its dynamics" – said Henrique.

2.4. The Flashback

In December 2010, Henrique was deliberately hired to be the Managing Director of the Energy business area of the company, being later on transferred to the international business development as a required step to lead the expansion strategy. After one year Henrique started to be directly involved on the process due to his previous experience as a manager in IT companies with global operations.

³ Source: ISA's Annual Report 2011

On the beginning of 2011, the top management was considering which areas were more relevant for the international expansion of ISA. At that time the administration saw the huge potential of four regions: Brazil, as an opening door for South America; the Middle East, because of the potential of its market; China, as a lever for the Far East; and the United States for the dimension and maturity of the market.

The initial process for developing the entry strategy for a new market was already quite standardized. It consisted on revising the analysis of the firm's internal competences and strengths. Then, all the relevant strengths and weaknesses of these four markets and what might affect its entrance were analyzed. The certain successful factor was undeniable for Henrique: "Being in a lot of countries is an essential strategy to mitigate the risk... if one ship sinks, we still stand". However, he felt that doing an accurate realistic match was the hardest step to overtake.

All of these markets were probed before by sales representatives. In China, for instance, the firm had a commercial gateway since 2009 in Shenzhen. Its partner was, on a contract manufacturing basis, a supplier of required electronic equipment for the production of each unit, which in this way would only need to be assembled in Portugal. The process was profitable when one is dealing with high quantities, said Henrique. Twice a year, 2 to 3 employees were sent to Shenzhen to control production and to build network in order to prospect the possibility of establishing, in the future, a physical presence of its own in the market. Although the Chinese population had a high purchasing power due to their industrial capacity, manufacturing and cutting-edge technology, the country had endless energy and environmental problems due to the fast industrialization and slovenly control which added to a substantial discrepancy on the degree of external openness to trade, made it less appealing. However, the government was now taking measures in order to reverse the pollution it had been so criticized for. Moreover, China was growing at a strong rate being the second largest economy and might soon surpass the United States.

But "it was imperative to make a choice" – said Henrique. During the second trimester of 2011, the company had already prospected all markets and came to a consensus to make higher investments in only two of the options: Brazil and the Middle East. Henrique saw that the basis for this choice was mainly the opportunity for a faster entry in these markets and the difficulty to simultaneously focus on the four regions.

After the strategy was approved by both administration and shareholders, the following step was to define the implementation procedures.

2.5. ISA South America

In 2008, ISA had started a joint-venture in Brazil which did not pay off at the time as the firm had “the wrong strategy, the wrong partner and the wrong resources”, explained Henrique.

Nevertheless, the growing Brazilian market could not be dismissed. As Henrique stated, “Brazil has it all – industry, research, growing knowledge and natural resources – the engine that Europe lacks”. However, Brazil had a strong protectionist policy. Firms that wanted to do business in Brazil had to settle there and to hire and train a minimum percentage of Brazilian workers, in order to increase local knowledge and employment.

ISA started in Brazil as a wholly-owned subsidiary and its new strategic plan included SABESP as the main client. The local state owned company that provides water and sewage services to commercial, industrial and residential users in São Paulo state, covers 50km of São Paulo’s region, easily reaching 26.7 million customers - or 60% of this State’s population. ISA also escalated faster in this market due to the law for mandatory sub metering installment in condominiums. SABESP connected one new client per day and had, at this point, more than 7 million active accounts, having ISA as its main supplier of telemetry systems.

Henrique had been giving support to the activities in Brazil until June 2012, when the firm hired a general manager, a Portuguese engineer that had been living in Brazil for the last twenty years, to locally control ISA South America. He stated that “the Brazilian market is mainly attractive for its scale”. But for how long? Although the utility market was by far more competitive than the Portuguese one, Brazilian clients had lower resistance to change and therefore, they easily changed suppliers. Henrique believed that the World Cup in 2014 and the Olympic Games in 2016 would be the peak of its growth rate. However, by then, Brazil would already have the technical knowledge and economic strength to continue growing, and to keep being the economic power house of South America.

2.6. ISA Middle East

For several months in 2011, the team had been prospecting the markets of the United Arab Emirates, mainly Dubai, as well as Jordan, Turkey and Saudi Arabia. For each of them the team had evaluated its maturity and potential, and negotiated the frames for suitable partnerships.

They thought of Jordan, “the poor parent of the Arab world”, in an attempt to leverage and find business in a sustainable area with the prospects of extending it to other countries. Nevertheless, the core reason was the inflated electricity price in the country that would

maximize ISA's competitiveness on the energy sector. In spite of being physically installed in the Middle East, the choice of having a partner with a big network was based on the need of being cost efficient at this early stage of the process.

The same happened in Turkey, which was growing at a rhythm close to 2 digits⁴. A huge market which might open the doors for the Asian world. It had a central location close to Africa, the Middle East and the Arab World and yet, it did not culturally fit in any of these continents. A country which raised doubts and controversy among the team for not having solid relationships with any of these geographies. Notwithstanding, it had the size and opportunities for being profitable on a stand-alone basis and ISA could take advantage of Turkey's strategic vector towards Brazil, to easily create a partnership. For the past few weeks, the team had also been evaluating business proposals and Henrique was confident they were going to have the first projects by 2013.

On the same stage, moving South, a giant was waiting for ISA. Saudi Arabia was a very interesting country for business once a person learned how to deal and respect the habits and culture. Nothing is more important for Saudis than a relationship built on trust, – said Henrique – and the best connection one can make in the country is with a respected and credible family. Moreover, although Saudi Arabia had a lot of historical conflicts with other countries, none of them was with Portugal, which could be beneficial for the company in the search for a complementary partner.

The team thought of Egypt to be a reasonable market choice since it had one of the largest populations in North Africa and the Middle East, and was a basis for covering all African countries.

ISA started establishing contacts with the Arab Portuguese Chamber of Commerce. The institution, which mission was to support and develop commercial and cultural relationships between Portugal and the 22 member countries of the league of the Arab States, was the main vehicle to find a partner.

An interesting opportunity was to create a joint venture with Wahid Tawfik, a well-known Arabian business man whom the ISA managers already knew from his former successful experience at the DuPont Group, and who was interested in the Portuguese company as a way to reach the Brazilian market. Wahid Tawfik was the CEO of Calensia, a consulting firm focused on business and operational development and investment advice which was already working

⁴ In 2011, Turkey's GDP growth rate was of 8,8%. Source: World Bank

with key markets for ISA, such as fuel distribution, telecommunications and agricultural production farms businesses. Henrique's team saw that the partner had good technical solutions and an extensive networking that ISA could benefit from - they could aggregate their complementary strengths in terms of business and value chain.

The main goal of the Joint Venture was to create local synergies which would allow the alliance to reach all the countries of the Persian Gulf and the Arab World. However, it did not take a long time for ISA to realize that it would be as impossible as "covering the USA through a joint venture established in México". Cultural differences and political barriers would be hard to surpass. Thus, after being established in Cairo for a few months and having some interesting partnership opportunities on their hands, Henrique and Wahid Tawfik considered the possibility of focusing the Egyptian joint venture on North Africa and to approach directly the Middle East from Portugal, for the market characteristics were highly differentiated between these regions. Therefore, in the first quarter of 2012, Wahid Tawfik took the chair of managing director of ISA Middle East.

Although the Arabic countries still had technical gaps, Henrique saw them as an opportunity to sell knowledge and services. The Portuguese team for the Middle East market, led by Henrique, saw a traditional but saturated market of oil and gas as a threat to its business, and consequently decided to offer energy efficiency solutions, to which potential clients were becoming increasingly responsive. In addition, Henrique claimed the market to be poorly exploited in terms of energy and hydric telemetry, which could lead to the increasing adoption of solutions which fit with ISA's offer. Moreover, it was important for the firm to enjoy the ease of acceptance Portugal had in their commercial relationships for its war conflict free past with Arab countries, and the geographical proximity advantage.

2.7. Local Presence and International Sales Process

During that meeting Henrique also wondered about which of ISA's employees he could suggest to execute the projects soon to be implemented, and who was prepared to face such a cultural impact while representing the company. In spite of having a strong team on the headquarters, ten employees were already sent to work in Cairo, to work closely on the projects.

The sales procedure always began by establishing B2B projects through the local partners' network, and therefore enhancing the importance of the relationship with his partners as a way to reach clients. Henrique was explaining how the need for a direct contact facilitated the initial process complementing their market segmentation for water and energetic efficiency,

which was mainly focused on Banking, Shopping Centers, Facility Management, Retail Stores, and Public Administration. The next step was to find opportunities that fit in ISA's offer through searching for gaps in the firms' value chain. As solutions were tailored to each client's needs, Henrique knew that project prices could vary between 50.000€ and 1.000.000€. The main difference between geographies ended up being the cost of imports for the equipment, which weighed more in Brazil.

Later on, the sales team discussed about a logical solution within the existent constraints, and finally reached a commercial proposal for providing the solution. This was negotiated with the client, with the aim of finding a point of approval in order to turn it into a real project. From this point on, ISA's representative in the country monitored the project execution and provided customer support along with the local partner, reporting relevant information directly to Henrique.

After rendering a successful project, ISA used it as a reference to begin new ones within the same market.

2.8. Magnifying ISA

As an internationalized company, ISA's decisions on entering new markets were not always crystal clear. There were, along the way, some tough decisions had to make without knowing what was at the end of the road. The company's attempt to enter the United States' market had been one of them. ISA had an approaching strategy that didn't pay off and had to quit. In 2010, the main reason was the regulatory barrier to the entry of new products in the market, which entailed specific certifications and modifications, and a lack of guidelines on the best way to do it. The fierce competition in the country was also threatening but Henrique was mainly concerned with whether they would be able to develop a product that could be commercialized in the USA in the foreseeable future.

But Henrique thought that sometimes numbers say gold, while reasoning says no. Angola for example, a market where many Portuguese companies were doing business, was not attractive for ISA for strategic reasons. "We are not in the business of giving money away in order to develop our business"– said Henrique. "It's a country where everything only moves under bribery, which allied to an overcrowded market and the security problem, turns it into a very unattractive market for Portuguese firms." ISA's strategic thinking always avoided going into markets which could obviously be dangerous for its business, such as Nigeria. Henrique explained that "it is crucial to understand a market; not even doing business in Brazil is clear-

cut. And when you go to the Arab world this factor of difficulty multiplies by 10 or 100 due to cultural discrepancy.” In these countries, business develops much slower, as the Arab speaks in the eyes and the relationship takes such a big role.

However, what seems to be cross-cutting and a must for every country is a good support system both in Portugal and at the local market, a well-conceived realistic plan and, last but not the least, an appropriate investment on a considerably long timeline. According to Henrique, the reason for the long timeline lied on the fact that “Portuguese companies are never going to be a dominant player in the international market, as Portugal does not have a very strong internal market”. The difficulty of most companies in the Middle East, he explained, was that they only make 6-month investments. After that semester, they realize that it was a very short time to develop the necessary commercial relationship and had already spent their available capital, forcing them to leave the market.

2.9. NYSE Alternext

The international image of the firm had improved in the last years. Since Henrique entered the firm, all employees and managers worked together to understand what had to be fine-tuned, aligning their internal departments to move forward.

As so, in June 2012, they were able to reach the milestone they have been working on for the last years. ISA was the first Portuguese company to be admitted at the NYSE Alternext, the equity trading market for small to medium sized companies. On Henrique’s perspective, there were three main reasons why this was so desirable:

Firstly, for a matter of internal standards. A listed company has far more obligations of strictness and discipline, which meant additional quality for the whole firm.

Secondly, for the image it conveyed to the market, a credibility measure for showing up with a particular background. It was a differentiation factor that eased the approach to the market, showing the barriers they crossed over to reach this target. The administration desire was for this to work as an international certification.

Thirdly, as for most companies, for financial issues. The shareholder structure had been modified 2 years before and was still very stable. Nevertheless, the administration was being cautious and forearming future investments on new markets. Adding up to the possible need of new investors, the existence of a far more transparent and visible operation was very important for trust issues.

However, not everything was bright. Being on display for the whole world to see was a two way street. When something went wrong, the firm was injured. Moreover, for competitive issues, competitors had access to ISA's data and strategic plans that they did not have previously.

2.10. The Unforeseen

However, in July 2012, the game turned against the company. Looking back, Henrique saw a difficult market that has been slowly opening to ISA since the first fuel tanks solution being installed in Egypt⁵, reaching a time of elections. For the first semester of 2012, its entrance in the market had actually exceeded its expectations. The pilot tests were successful and the team, which included two Portuguese engineers of ISA and six Egyptians, was also establishing new contracts.

The instability lived in all the North African and Middle Eastern countries since the Arab Spring⁶, were mainly due to the attempt to overthrow the regime of President Hosni Mubarak. Millions of protesters participated in the Egyptian Revolution in 2011. President Mubarak stepped down in February 2011 and the Air Force's chief, Ahmed Shafik, assumed the government's chair. At the same time, the Muslim Brotherhood⁷, an Islamic organization of great influence in Egypt, became legal and founded the Freedom and Justice Party which was led by Mohammed Morsi.

In July 2012, Mohammed Morsi was the first president being democratically elected in Egypt beating Ahmed Shafiq with 51% of the votes⁸. At the inaugural ceremony, Morsi stated *"Today we start a new chapter in the history of Egypt. We turn an old page of an ugly era."*

To ISA's concern, the straight division of the country between Islamist governance and the moderate Muslims, Christians and liberals could only trigger a civil war.

2.11. Next Steps

On the day after the meeting, Henrique was going to fly back to Egypt. ISA continued having a special relationship with the Arab World. For the last year, he had been spending most of his

⁵ ISA installs its first equipment in the Middle East – (artigo)

⁶ Korotayev A., Zinkina J., (2011)

⁷ "What is the Muslim Brotherhood?", CNN, June 25, 2012

⁸ "New President: Egypt turns page to new era", CNN, June 30, 2012

time between Jordan, Egypt and Saudi Arabia in order to develop his local relationships as he knew that it was essential to continue meeting with his partners who already trusted him.

Henrique stood up from his chair, and did a circle around North Africa and the Middle East. He knew that at this point these markets were very important for ISA and he could not dismiss them.

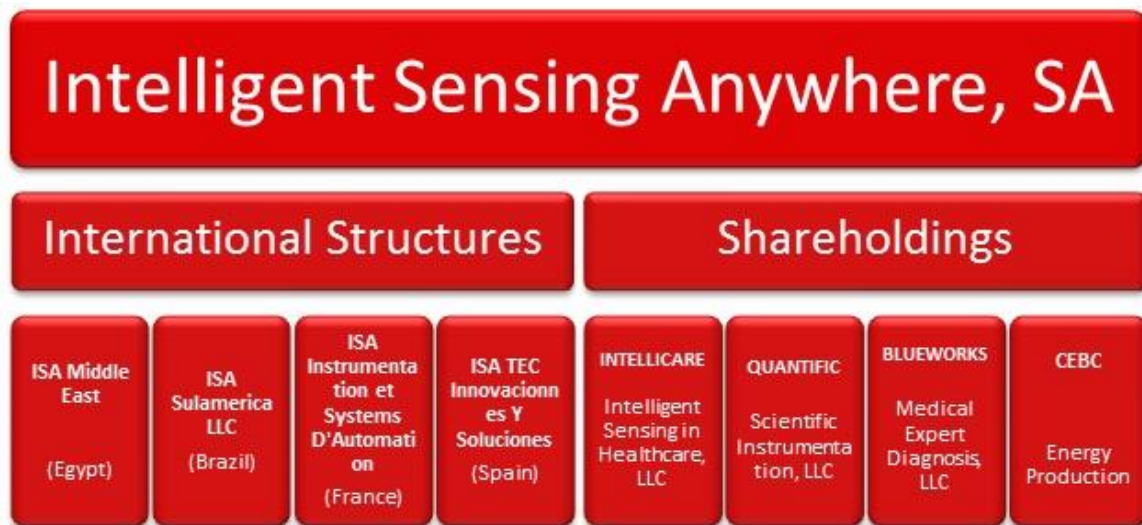
The future could become dangerous to a joint venture which had recently entered the market and now was facing political and economic insecurity. The anxiety on this matter spread not only within the members of ISA Middle East but also between shareholders, who were soon requesting ISA to take action. Moreover, potential clients were not ready to invest in new contracts as the instability in Egypt would certainly reduce foreign investment and affect the whole economy for an undefined period of time. As for now, the population was living a nightmare. One for which they could not afford to think further than assuring their own survival.

Before flying back to Cairo, Henrique knocked on the office door of the CEO, José Basílio Simões, to discuss the outputs of the meeting. He had several options on his mind, and none of them seemed the perfect choice.

After talking for a few hours, the CEO stressed out the importance of this decision for the company's future and how reluctant on the future of the Persian Gulf he was. The region was undoubtedly promising but the social and economic conflicts were constraining all business activities.

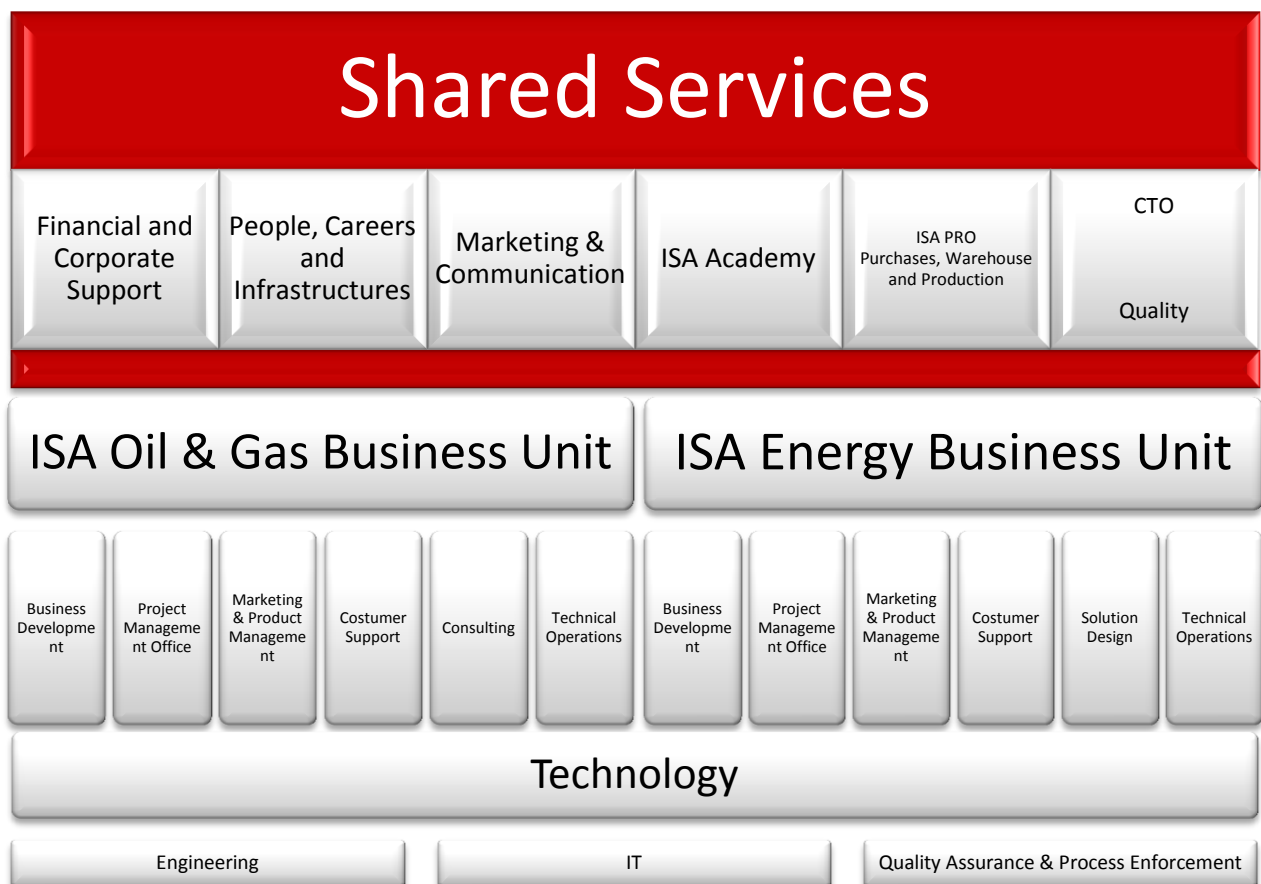
The CEO was going to meet with the board during the next days and it would be on their hands to decide whether it made sense for ISA to divest in the North African and the Middle East markets and where it would make sense to have the green lights on.

Exhibit 1 | Group Structure in 2012



Source: ISA, Annual Report 2011

Exhibit 2 | Internal Structure



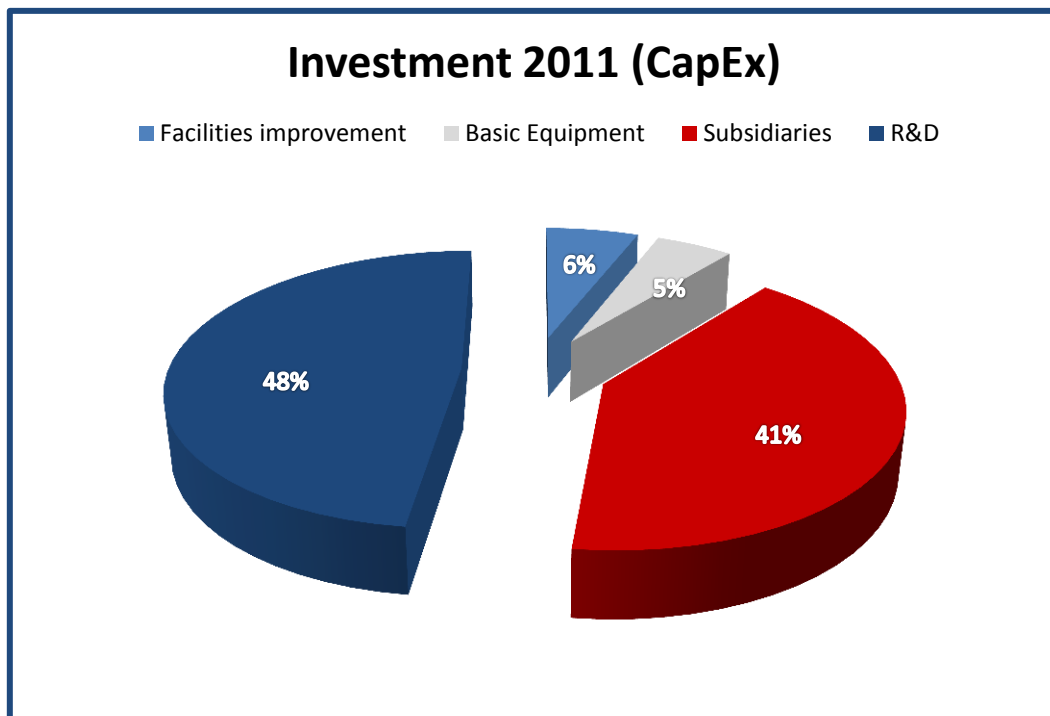
Source: ISA, Annual Report 2011

Exhibit 3 | ISA's representation of a Smart City



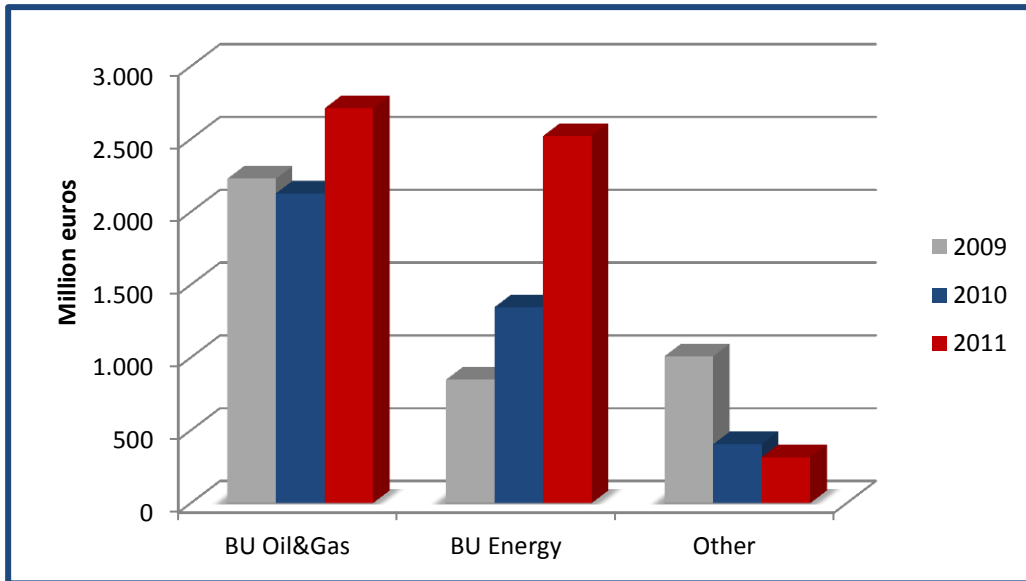
Source: ISA, Annual Report 2012

Exhibit 4 | Investment in 2011



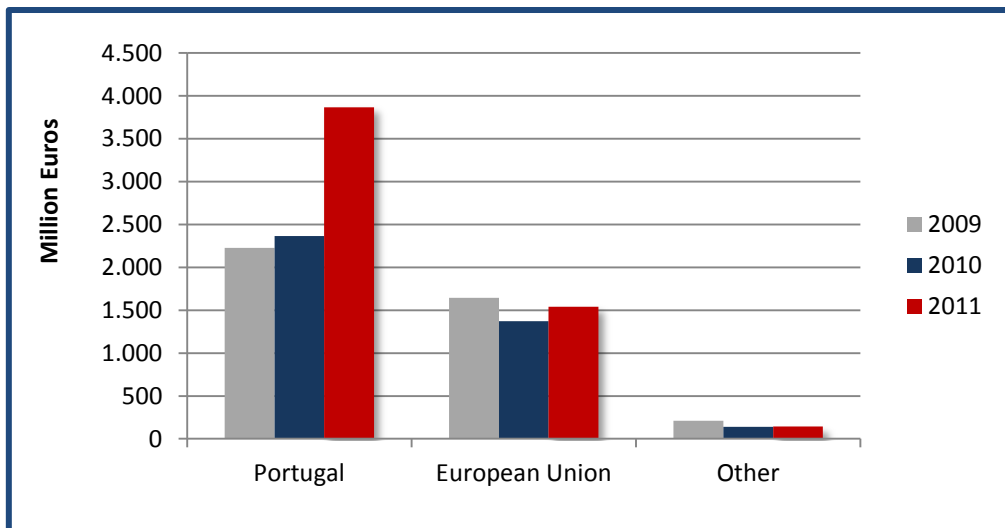
Source: ISA, Annual Report 2011

Exhibit 5 | Turnover Evolution per Business Unit



Source: ISA, Annual Report 2011

Exhibit 6 | Turnover Evolution per Market



*The atypical growth of turnover in Portugal from 2010 to 2011, given the company’s history, was “mainly justified by the Energy Efficient project implemented in the country in 2011” (Source: ISA, Annual Report 2011).

Exhibit 7 | Main Clients in the Portuguese Market



Source: ISA, Annual Report 2012

III | Literature Review

The main goal of this chapter is to review theoretical frameworks concerning the case study.

Consequently, this section encompasses four main issues: Innovation and TR&D, International Negotiation, Entry Modes and Sustainability.

It is important to notice that the information presented in this section mostly concerns the perspective of technological Small to Medium Enterprises (SMEs) when applying an internationalization strategy, focusing on the challenges these have to surpass in the achievement of success.

3.1. R&D and Innovation in IJVs

3.1.1. Innovation as a Competitive Advantage

In 1942 Schumpeter defined innovation as the concretization of original ideas for products and processes differentiating it from invention, which in its turn was the action prior to innovation, the creation of these ideas and processes. Innovation can take the form of new inventions or the form of more effective means of organization and production which improve the traditional logistics (Ayyagari et al., 2011). The last form is commonly seen in emerging countries where processes which are already in use in developed countries are adjusted and applied to the reality of these economies.

From a strictly rational point of view, innovation generates unique organizational competences that lead to competitive advantage (Teece et al., 1997; Eisenhardt and Martin 2000; Zollo and Winter, 2002 as mentioned by Hall and Martin, 2005). However, some authors argue that when the intensity of competition increases, a firm's freedom to deviate from its competitors by applying innovative processes might decrease as that might not be well understood by their customers and therefore incur in unexpected costs whenever these actions fail (Ayyagari et al., 2011). Moreover, this increasing competition might increase the innovation in incumbent firms which are technologically advanced and decrease its growth for the less efficient ones (Aghion et al. 2009, as mentioned by Ayyagari et al., 2011).

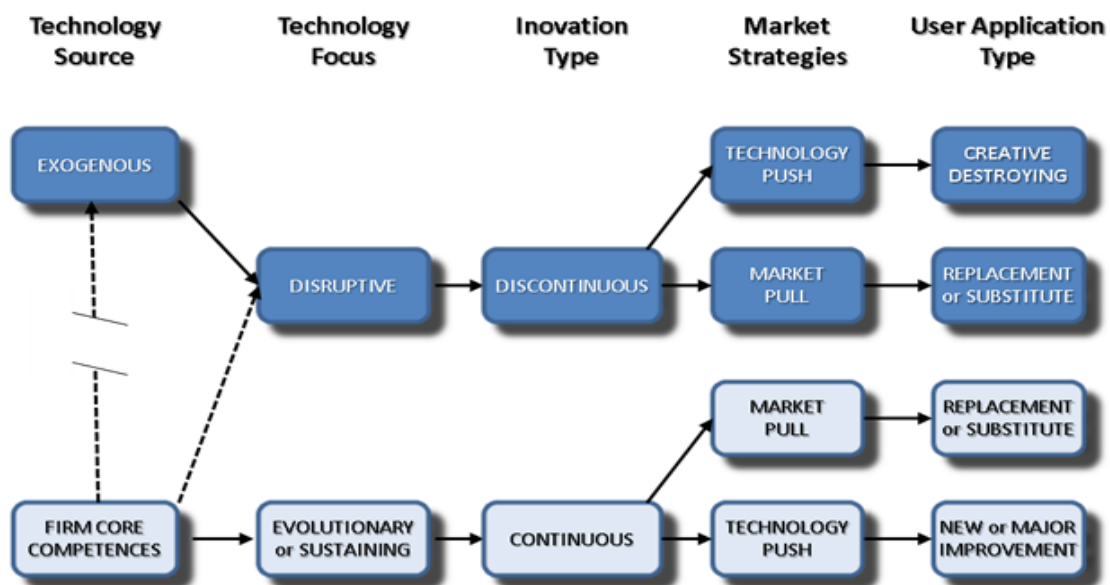
There is common ground in literature on the importance that innovative responses to changing economic environments have on economic development. In developing countries, SMEs are considered to be the main contributors of innovation. However, in their study, Ayyagari et al. shown that generally the most innovative firms tend to be the larger and younger ones, with

highly educated managers which have some managerial experience and where the exporting activity and private ownership also show to be relevant. The ones with more access to external financing, the ones competing internationally and the firms which borrow in foreign currency indicate higher levels of innovation. On the other hand, state-owned firms showed to be the least innovative, *ceteris paribus*. The exposure to foreign markets' competition forces both MNEs and SMEs to innovate in order to survive to changing environments mainly in countries where governance is ineffective.

3.1.2. Disruptive and Sustaining Technologies

Disruptive technologies can be defined as the technologies that break through the traditional market capabilities and generate a new competitive environment (Kassicieh et al., 2002). On the other hand, sustaining technologies improve the already established practices and add value to the value chain (Kassicieh et al., 2002).

Figure 1 - Disruptive technology innovation model⁹



Clayton M. Christensen, the pioneer of this view, stated that as disruptive technologies have different attributes from market products, these may not be valued by its existing customers and therefore have higher risk for their resistance. Moreover, Freeman (1982) categorized innovation uncertainty concerning four fields: technological feasibility, commercial viability, organizational capability and social acceptability (Hall and Martin, 2005). Consequently, this reinforces the need for strategic flexibility, by pulling and pushing discontinuous developments in a firm's environment and building dynamic capabilities to better use their resources in order to answer the needs of changing markets (Walsh & Kirchoff, 2002).

⁹ Source: Walsh & Kirchoff, 2002

As we can see in the above scheme (Figure 1), new technologies might come from the inside of the industry, originated by the core competencies of a firm. These are intended as the knowledge and capabilities underlying a firm's activity and that provide a competitive advantage to the firm (Prahalad and Hammel 1991, as quoted by Walsh, 2002). Although this source tends to create only evolutionary technology, R&D efforts within the firm can also create radical technologies.

When technologies are originated exogenously, they break through the existing industry and create new markets for their products, as it is risky to compete against existing technology that is already familiar to the consumer. These technologies create discontinuous innovation as they are a product of disruptive inventions, which are harder to commercialize due to the risk of newness: It is difficult but mandatory that consumers create new habits to take all the benefits of the technology and that can be done through proving (mainly to lead user groups), that they perform better and are less costly (Walsh & Kirchhoff, 2002)

Regardless of their difficult commercialization, disruptive innovations are protected by intellectual property which leads to competitive advantage and sustainability until its patent duration ends and, at that time, the disruptive technology will have turned into evolutionary as it is already familiar to consumers (Bower and Christensen, 1995).

In what concerns the flow of the evolutionary technology, it produces continuous innovations as an improvement of established processes, in result of consumers' behavioral change who demand better products (Walsh & Kirchhoff, 2002).

The scheme suggests that the commercialization of technologies should be done in a different way, as they imply distinctive efforts to attract demand. There is also a difference between the goals of each of them. Firms that place their stakes on disruptive technologies are more concerned on their products' success and on R&D support whilst the ones applying sustaining technologies focus on the existing market potential and on increasing their revenues (Kassicieh, 2002). As products resulting from the former are usually more practical and simpler, this can lead them to exceed what the market demands and ultimately to occupy the lower end of the traditional market (Christensen, 1997).

In this line of thought, Stephen Walsh (2002) focus on Madiquis idea recognition model (1969) who differentiates two sources of innovation: recognizing technological feasibility, called "technological push" or recognizing potential demand for an invention, known as "market pull", stating that both of them can lead to sustainable competitive advantage.

Walsh perceived a stream of profits deriving from the market pull view, where the loyalty and dependence of a consumer is superior due to continuous innovations built on existing technologies which in their turn are the outcome of long-term R&D efforts.

On the other hand, building on Bower and Christensen (1995) perspective, Walsh reinforces the risk of commercializing disruptive technologies for the resistance to change which might affect the technological transfer. However, the inexistence of an established customer base can provide flexibility to new firms. The user application type of disruptive technologies based on a technological push strategy is stated to be, as Schumpeter (1942) emphasizes in his work, a result of “creative destruction”, as existing markets are eliminated or enlarged and new ones are created for the new technology, which he refers to as an important driver of economic progress and capitalism. Adding to Schumpeter’s work, “Innovation without creative destruction implies finding new markets and thus creating new consumer demand” (Burke et al 2009:21).

Successful disruptive technologies are said to dethrone the industry leaders as incumbents do not know how to compete in an emerging field (Cooper and Smith, 1992 as quoted by Utterback, 2005). Utterback (2005: 5) states that “the change from one technological paradigm that has shaped a firm to a new paradigm formed by economic and social change presents a significant challenge for incumbent firms”.

Christensen alleges that establishing new market segments is a means of delivering the new technology to early adopters and that once this innovation reaches most users it begins to compete with the older products of the traditional market (Christensen 1997, as quoted by Utterback 2005).

Moreover, Christensen (1995) claims that investments in disruptive technologies by established firms would not bring benefits as the existing customer base would not be able to use them, these technologies offer lower margins and these firms are not acting on an emerging market. As so, he states that firms willing to create disruptive growth should attempt to win the layer of non-consumers as it is much easier than stealing from competition.

3.1.3. Innovation & Stakeholders

It is also important to enhance the relationship between innovative companies and its stakeholders. For this purpose, Donaldson and Preston (1995) distinguished the role of a firm’s stakeholders for their importance and involvement with the firm. In their literature, they have considered the normative approach to be the one concerning corporate stakeholders, to which

the firm has a moral obligation and direct involvement (Philips et al., 2003), such as the firm's employees, investors, customers, suppliers, financiers and local communities. On the other hand, instrumental (Donaldson and Preston 1995) shareholders are viewed as the ones to which the firm has no moral obligation (Philips et al. 2003) but should also be managed as they can affect the firm in a positive or negative way. This group which among others includes the media, activists and competitors, can enhance a firm's competitive advantage if the firm is able to establish trustful relationships (Hall and Martin, 2005).

In this line of thought, identifying which stakeholders present higher power of influence, higher legitimacy among the society and higher urgency degree, is seen as a primordial issue in the design of innovative solutions mainly for the ethical issues at stake (Mitchell et al., 1997 as mentioned by Hall and Martin 2005).

According to Hall and Martin (2005: 276), "a key challenge in radical technology development is the ability to accommodate such pressures (...), to exploit the potential benefits as well as assess, manage and minimize the perceived or unforeseen unintended negative consequences of the technology".

Consequently, the authors conclude that social feasibility represents another barrier to overcome in the path of developing successful disruptive technologies.

"The key to innovative success is to minimize the disruption within the innovation value-added chain"¹⁰

3.1.4. The Contribution of Technological R&D for Innovation in SMEs

Innovative SMEs who invest in improving their R&D competences are more propitious to develop technological alliances and the required cooperation to acquire external resources which will bring them to a high standard, leveling them up to compete on the level of big companies. Audretsch and Vivarelli, 1996, as quoted by Barajas, Huergo and Moreno, 2012).

The firms' dimension is not the only variable that determines its impact on possible technological alliances. A R&D unit previously running inside the firm, the knowledge of the

¹⁰ Source: Hall and Martin, 2005: 274

R&D personnel, the number of patents and the previous experience in partnerships are also positive influencers of a firm's success. Furthermore, the decision to make a technological R&D alliance derives from "a combination of internal capacity and external needs". (Barajas et al., 2012:5).

"Following the resource-based theory, cooperative and in-house R&D activities are considered complementary strategies aiming to increase technological capacities of firms." (Barajas, et al., 2012: 5). In conclusion, "economic performance seems to be more influenced by the type of technological partner, the distance to the market of the cooperative project and the type of firm" (Colombo et al.,2009).

3.1.5. The innovation value curve

The value curve is a very common tool used across all types of companies. It represents the level at which a firm operates on all the characteristics of the industry that are valued by its customers and draws the position of its competitors on the same characteristics, allowing a comparison.

In its turn, the innovation value curve brings new ground for determining which of the existing value drivers need to be repositioned or even dropped and whether some new value drivers should be introduced in order to determine a firm's optimal positioning (Narasimhalu, 2007). The importance of each value driver will depend on the cost sensitivity of consumers on that specific matter. As "an innovation is only as good as the value it creates for the customer" (Narasimhalu, 2007: 556), it is important to balance the effective cost of a innovation by upgrading the most valued drivers and downgrading the least valued ones.

For this matter, two methods are proposed by the author: To begin by placing all available funds on the most preferable drivers until they reach the desired level by consumers and continue down the scale, and if two or more have the same importance, to begin where the unit upgrade cost is lower or to place an equal amount of funds to each valued characteristic and therefore, to upgrade them equally.

3.1.6. Business Intelligence Processes

In the complex world of data gathering, Business Intelligence (BI) aroused as a solution for treating the collected information and for making it useful for decision making processes. This process of collecting, treating and diffusing information is crucial to keep up with changing enviro

onments and having information about it on your hands brings easiness to apply realistic tactics and strategies. The success of these processes mainly depends on the reliability of the collected data as well as the way it is converted into important information. For increasing the effectiveness and the efficiency of the companies' logistics, knowledge and resources, BI has the potential of increasing firms competitiveness (Zeng et al. 2006).



Figure 2 - Generic Business Intelligence Framework¹¹

For understanding how Business Intelligence works in practice, it is important to know the different stages and succeed in all of them. The first step is acquiring data, which can be done through observing consumers behavior and preferences, the supply chain and the streams of information across the organization through integrated systems such as Customer Relationship Management (CRM), Enterprise Resource Planning (ERP) and Supply Chain Management (SCM). Afterwards, this complex information is stored on the Data Warehouse, and analyzed by on-line analytical processing (OLAP) techniques. After the information is organized, the next process is known as Data Mining, the identification of patterns which will help solving specific business problems through predictions, clustering and estimations.

These platforms support companies with easy-to-use applications across all employees, providing them important tools to understand customers and markets leading all the organization to make better decisions and therefore, leading to higher competitiveness. For this purpose, it is crucial to understand that all of these processes should be undertaken, as investing efforts in the first stages without deploying the analyzed data won't bring the ultimate expected results (Zeng et al., 2006). "The business value of BI lies in its use within management processes that impact operational processes that drive revenue or reduce costs, and/or in its use within those operational processes themselves" (Williams and Williams, 2003: 3). As so, to create value through BI, the firm should be strategically aligned and the business questions that require an answer should be clear, so that BI can deliver value by anticipating future changes and needs. (Williams and William, 2003).

¹¹ Source: Zeng et al. 2006: 4722

3.2. International Negotiation

Gerard Hendrik Hofstede once said that "Culture is more often a source of conflict than of synergy. Cultural differences are a nuisance at best and often a disaster." For as long as the human being has its roots, globalization cannot overcome the impact of managing style and strategic behavior as related to one's cultural background (Dimitratos et al., 2011).

Thus, it is important to realize how culture affects strategic management decision-making processes (SMDP) in an international context in order to avoid ineffective strategic moves in business relations (Tse, Lee, Vertinsky, Wehrun 1988, as quoted by P. Dimitratos et al. 2011)

SMDP involves steps and tactics that go from the identification of stimulus for action and end with its commitment. It is therefore crucial for the success of long-term performance and the achievement of competitive advantage which require reconfiguration of resources and competencies within the firm (Dimitratos et al. 2011).

Based on the approach of Dimitratos et al. (2011), a relationship between Hofstede cultural dimensions and three dimensions of SDMP is shown here:

- Hierarchical decentralization, which refers to the extent of authority and power across firms in the SMDP;
- Later communication, which examines the contribution to the SMDP of each business unit and department and the internal communication effectiveness;
- Formalization, concerns the extent to which organizational policies and plans are integrated in the SMDP

3.2.1. Hofstede dimensions

On his extensive research in forty countries, Hofstede (1980) considered that the four main dimensions of distinctiveness in cultural background that impact international negotiation concerned power distance, individualism vs collectivism, uncertainty avoidance and masculinity vs femininity, as can be seen in Figure 3. However, in 1988, Hofstede and Bond developed a new element due to the discovery of specificities in Asian countries: the long-term vs short-term orientation, which complement the framework dimensions.

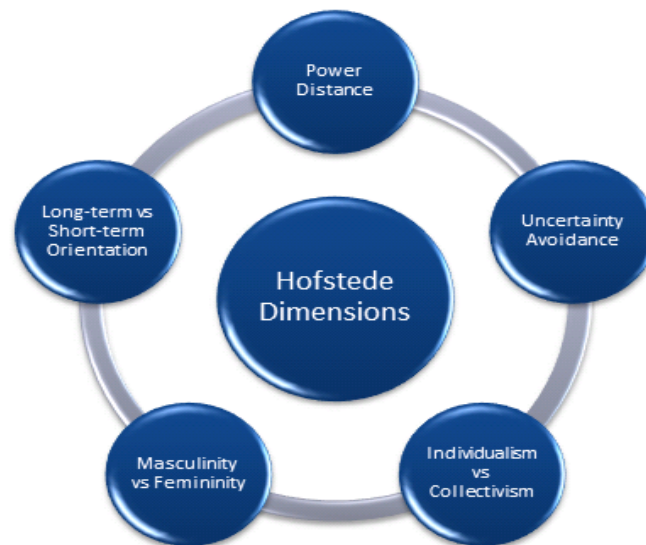


Figure 3 - Hofstede's Cultural Dimensions Theory¹²

The first dimension, power distance, refers to the degree of acceptance and expectation of a hierarchical order within firms. The higher this element scores, the more is the inequality in power distribution.

Uncertainty avoidance concerns the extent to which individuals in a country deal and tolerate risk and the unknown. A country with high score on this matter will be a sign of strict rules and laws implemented to avert uncertainty.

In its turn, individualism relates to the lack of concern of one person with others. Working as a group and celebrating achievements with others is a characteristic of collectivist cultures.

The fourth dimension, masculinity, concerns the degree of gender differentiation and therefore has a high impact on women' rights in the society and on their careers. A society where women have no decision power and have unequal opportunities would imply a high masculinity degree.

The fifth and most recent dimension, long or short-term differentiation, is mostly related to how societies face change. A high long-term differentiation indicates that the country is highly attached to traditions and values, has a strong work-ethic and prioritizes social obligations.

Hofstede considers that power distance and uncertainty avoidance are the main dimensions as they can "influence the success of the SMDP by shaping expectations and commitment of organizational participants" (Dimitratos et al, 2011: 196).

¹² Source: Hofstede and Bond, 1988

As so, Dimitratos (2011) concluded in his research that high power distance in the international firm location has a negative relation with hierarchical decentralization for what concerns international SMDP of that firm. Furthermore, individualism was not found to be negatively related to lateral communication. Although individualistic cultures' concern is focus on the self, these tend to pro-actively gather information and consequently use the information gathered in the SMDP. Ultimately, formalization in SMDP was found to be correlated with uncertainty avoidance as higher control levels are required in processes to preclude risks in these cultures.

3.3. Entry Modes

On a daily business work, companies face the need to make several decisions on their budget for marketing implementation, on the launching of new product lines, on their human capital needs, etc.. Nevertheless, when it comes to planning for future long-term outcomes, there are some decisions that portray higher responsibility and one of them is the decision of entering new markets. The reasons underlying the decision of entering new markets are usually related to an attempt of minimizing the risk by diversifying the geography where the firm works, or increasing sales and production volume (economies of scale) in non-saturated markets where the company sees an opportunity to succeed (Arnold, 2003).

For deciding on the path to “go global”, there is not a singular way that fits every company. On the contrary, firms should decide on the basis of the transaction cost theory (Brouthers and Nakos, 2004) which can lead them to the following decisions:

- Direct or Indirect Exporting
- Franchising,
- Licensing,
- Joint-venturing,
- Management contracting
- Contract manufacturing
- Wholly-owned overseas subsidiaries
 - Green-field investment: 100% owned subsidiary, creating a new entity
 - Full Acquisition: Acquiring 100% of a local firm
- Partially-owned overseas subsidiaries
 - Partial Acquisition
 - Joint Venture

The transaction cost theory has been widely used across different literature of internationalization, as a tool to determine the entry mode choice. This theory concerns three variables from which both MNEs and SMEs can take valuable conclusions. The first one, Asset Specificity, is related "to the physical and human resources, which may lose value in another use, that a company employs to complete a specific task" (Brouthers and Nakos, 2004:3). For example, when the expertise of a technician is high, the danger of losing it to competition and replacing it is higher. Secondly, firms are required to safeguard themselves from possible opportunistic behaviors of the foreign firms through the use of legal control tools and learning experience. This type of threat has the name of Behavioral Uncertainty. Lastly, the hostility of the market and its political risk cause Environmental Uncertainty to the new entrant. (Brouthers and Nakos, 2004).

Research has proven that equity modes of entry are preferred not only by SMES that make larger asset-specific investments but also by the ones perceiving lower environmental uncertainties in the target market and by the ones with advanced internal control, for a matter of risk and internal control (Brouthers and Nakos, 2004).

3.3.1. Strategic Alliances

"Few companies have everything that they need. You may need money, customers, or product. No matter what you need, there is someone who has it. That someone is a potential Corporate Partner." - Curtis E. Sahakian

Strategic Alliances are partnerships in which two or more firms join their efforts and complement each other in order to achieve what would be impossible or less profitable without a partner. The imperative duration, the quantity of required resources and the degree of autonomy within the alliance vary according to each case, therefore creating different types of alliances which can go from a simple collaboration, to a strategic partnership, the creation of a joint-venture or of a group structure until the merger of both companies which represents the higher degree of a strategic alliance (Yan, 1998; Hanvanich, 2003).

However, it is highly important to weight the risks, knowledge and skills of the potential partner to assure its feasibility and profitability, as several problems may arise. Cultural differences, for example, "make an IJV more susceptible to termination than a wholly-owned subsidiary" (Hanvanich et al., 2003: 6).

3.3.2. International Joint Ventures

A firm wants to form an International Joint Venture (IJV) only if expected benefits outbalance the additional costs of shared compromise, conflict, decision making and coordination of partners when they engage in this activity (Beamish & Banks, 1987, as quoted by Geringer 1991).

For this matter, Hanvanich et al. (2003), building on Makino & Beamish (1998) model classified five ownership structures of joint-ventures in their research:

- Domestic JVs
- Tri-national – home-country and third-country based firms;
- Cross-national IJVs – unaffiliated home-country firms;
- Home-country traditional IJVs – JV between home-country based and foreign-based firms located in the home country
- Host-country traditional IJVs – JV between a home-country firm and a host-country firm, located in the host country

3.3.2.1. The Case of SMEs vs MNEs

What differentiate SMEs from large multinational enterprises (MNEs) are their managerial style, ownership, and independence (Brouthers and Nakos, 2004: 229). They represent smaller versions of MNEs that due to their dimension face the external environment and international strategic decisions through different options.

Lu & Beamish (2006) state that when SMEs open subsidiaries in other countries they are confronted by three main liabilities: foreignness, newness and smallness. The choice of the right partner is a compelling way to overcome the three of them mainly if it is local.

The authors explain that both MNEs and SMEs are confronted by the liabilities of foreignness and newness. The first implies the lack of local knowledge which undermines the firm's competitive advantage facing local companies and the second represents the difficulties of new entrants as in financing and attracting stakeholders due to their lack of legitimacy in the new country contrarily to the recognized incumbents, a process that takes time and money to overcome. However, difficulties for SMEs entrance are enhanced due to the liability of smallness which also affects them, as small sized companies tend to create similar in-size subsidiaries, with limited resources and capabilities which make them "more vulnerable to environmental change" (Lu & Beamish, 2006:462). In this line of thought, the authors argue

that resources such as knowledge about the local markets, firm's reputation and financial capital play are the major barriers that SMEs need to overcome when going overseas and consequently, the interesting search for the right partner arises.

3.3.2.2. The right partner

Partner selection is one of the first and most fundamental choices that a firm makes after deciding to use an IJV as an entry mode (Hitt et al., 1995 as quoted by Lu & Beamish, 2006).

In research from the 80s and 90s, it has been discussed that a core factor for the success of IJVs was the choice of the partner, since the complementarity between both parent firms would be the main responsible for its effectiveness (Chowdhury, 1989 as quoted by Geringer, 1991).

More precisely, authors like Awadzi (1987), placed this choice on four selection criteria, which included complementarity of partner's resource contributions (as mentioned above); past association between partners – if they have previously done business together; relatedness of partners' businesses – what can I learn from his business that can be applied to mine?; and relatedness of foreign partners' and IJVs' businesses – Are both parent firms contributing with the same level of know-how and resources for the IJV business? (Geringer, 1991)

There is extensive qualitative research on the most valuable characteristics a local partner must have, although most studies reveal lack of consistency in the results. However, the differences in firms' dimension between partners' plays a big role on what importance will be given to the IJV, their power position and bargaining motivations (Daniels, 1971 as quoted by Geringer, 1991).

Geringer (1991) separates these criteria into two, the task-related criteria and the partner-related criteria. By task-related criteria the author refers to what happens inside the firm at an operational skills and resources' level in spite of the partner's and that is crucial for the IJV success. On the other hand, partner related criteria stands for the effectiveness of partner's cooperation. For approaching this criteria, the use of Critical Success Factors (CSFs), which are crucial to the competitive advantage of a firm, build on firms' industry characteristics (Porter, 1980), have shown to be useful as determinants of the necessary needs for complementary between partners (Geringer, 1991). The author also claims that although this analysis is influenced by the firm perspectives, this internal perception is the one crucial for strategy formulation process of IJVs, as manager's evaluations on CSFs give grounds to the firm's competitive strategy.

It is also pointed out that after the acknowledgement of the CSFs, these “should reflect the perceived relative importance to the firm of various contributions a partner can make toward improving competitive position and developing sustainable competitive advantage”(Geringer, 1991: 47). As so, a firm seeks a partner whose strengths cover the basic needs of the venture that can't be covered by the first parent (Davidson, 1982) and prioritize the importance of those needs. Moreover, this interdependency showed to be strongly related to the durability and performance of the IJVs (Geringer, 1991).

3.3.2.3. Profitability and Longevity of SMEs IJVs

Theories on the main influents of IJVs partners' relationships have pointed out the complexity of differences between SMEs and MNEs due to the differences in legitimacy, public awareness, power and resources – liability of smallness. Furthermore, as the core management of SMEs is usually comprised by the founders which are not necessarily qualified personnel as in the case of MNEs, decisions are more centralized and made on a less rational/objective base, which might have a negative impact on the performance of both the firm and its subsidiary (Lu & Beamish, 2006).

A host country partner might help mitigate the risk involved in getting the required knowledge by itself as if it was a wholly-owned subsidiary. Although possible, the learning- by-doing process is more exhausting and risky, representing a higher danger to the longevity of the subsidiary than accessing a local's partner knowledge base (Beamish, 1999).

Moreover, the local partner's knowledge concerns distribution channels, networks as well as information about consumers, competitors and changes in the industry which can leverage the positioning of the IJV in the market which turns into higher profitability and reduced liability of foreignness. Later, when the SMEs becomes more familiar with the market due to the knowledge acquisition from the partner, the interdependency on the local partner decreases, increasing the foreign partner's power of bargaining and may lead to the IJV's instability or dissolution (Inkpen and Beamish, 1997 as quoted in Lu & Beamish, 2006).

Although the bargaining power of each partner of the IJV is undoubtedly an important issue in what concerns its longevity, a large-sized partner can bring several advantages to the SMEs strategy. Reputation and resources would cover the SMEs liabilities as a new entrant, giving it the opportunity to grow and operate faster as well as of accumulating valuable resources and consequently to become less vulnerable (Lu & Beamish, 2006). As firms' legitimacy is often associated to its size as a result of prior accomplishments, the leverage the partner will bring

on the IJVs reputation by its endorsement effect will conquer the institutional environment of the relevant industries (Lu & Beamish, 2006). The authors discovered that it is much easier to acquire the partner's local knowledge than its size-related resources. As for other resources, the more difficult it is for the other partner to replicate them, the longer is the probability for the IJV to remain stable.

Furthermore, other advantages rely on the larger-sized partner having "deep pockets" which can better sustain eventual losses, a longer-term view of its investments and a deeper concern on the impact that a subsidiaries' dissolution would have on its reputation, factors which can extend the IJVs longevity (Lu & Beamish, 2006). The more they need to learn from each other, the longer will the IJV hold stable as the bargaining power of each partner will become more levelheaded (Lu & Beamish, 2006).

3.3.2.4. Predatory Alliances

One concern on SMEs alliances with larger partners is associated with the higher bargaining power of the larger partner as the smaller requires its knowledge and resources (Lu & Beamish, 2006). This may lead to a situation where the larger partners might "exploit the international joint ventures or alliances for their own economic gains" (Lu & Beamish, 2006: 470). The exploitation might be in the form of driving activities to benefit its own products and services in spite of the IJVs primary purpose, decreasing the IJVs profitability. One solution for this problem is to increase the level of equity ownership of the larger partner in order to decrease the exploitation, as it will be more concerned about the future of the IJV (Lu & Beamish, 2006).

3.3.2.5. Knowledge Management within the IJV

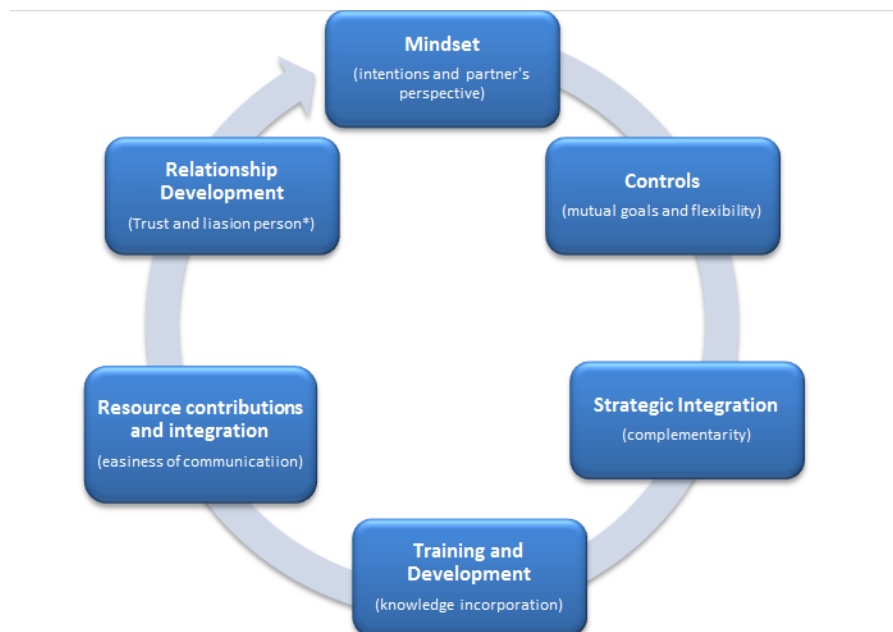
This subject intends to enhance the importance of knowledge flows during the period of activity of IJVs as knowledge acquisition is the underlying goal of any partnership for having shared risk with doubled knowledge resources (Berdrow and Lane, 2003). These authors considered the existence of three types of flows in IJVs:

- Knowledge Transfer, implying the transmission of know-how from one partner to the other and to the IJV;
- Knowledge Transformation, defined as "the integration, application and leverage of contributed knowledge and the creation of new knowledge as a result of the joint activities" (Berdrow and Lane, 2003: 18)

- Knowledge Harvesting entails the flow of knowledge produced by the IJV that comes back as an experience to the partners and can be externally replicated.

These flows are part of firm-specific knowledge (internal) and market-specific knowledge acquisition (external) which allow and require a firm to also develop resource-integration and partnering knowledge through the alliance and therefore, to reach its objectives in new market settings. Berdrow and Lane (2003), considered a set of attributes to be crucial for the successful knowledge acquisition and which are represented in the table below:

Figure 4 - Key descriptors of knowledge management processes¹³



Managing knowledge resources leads to enhanced adaptability and responsiveness for the IJV and long term strategic benefits for the parent firms. Moreover, through a learning culture, resource contributions may maximize learning outcomes instead of minimizing the cost structure, in order to create value (Berdrow and Lane, 2003).

3.3.2.6. Hofstede dimensions as IJVs performance influencers

Cultural differences in JVs can lead to instability and bad performance (Yang and Zen, 1999 as quoted by Hanvanich et al, 2003) as well as to impairments on information flow and mistrust (Buckley & Casson, 1996, as quoted by Hanvanich et al, 2003).

¹³ The authors indicate a liaison person as an intermediary only responsible for the control of the stability of the IJV. As partner's still have their own firms, a liaison person can be impartially assuring the maintenance of trust and respect between parts (Source: Berdrow and Lane, 2003)

Partners with similar cultures should experience higher survival rates and performance levels as this similarity diminishes the probability of different management styles and knowledge management practices, avoiding mistrust and ambiguities in the relationship (Hanvanich et al, 2003). Figure 5¹⁴ indicates the main reasons that lead to stability or instability in a IJV.

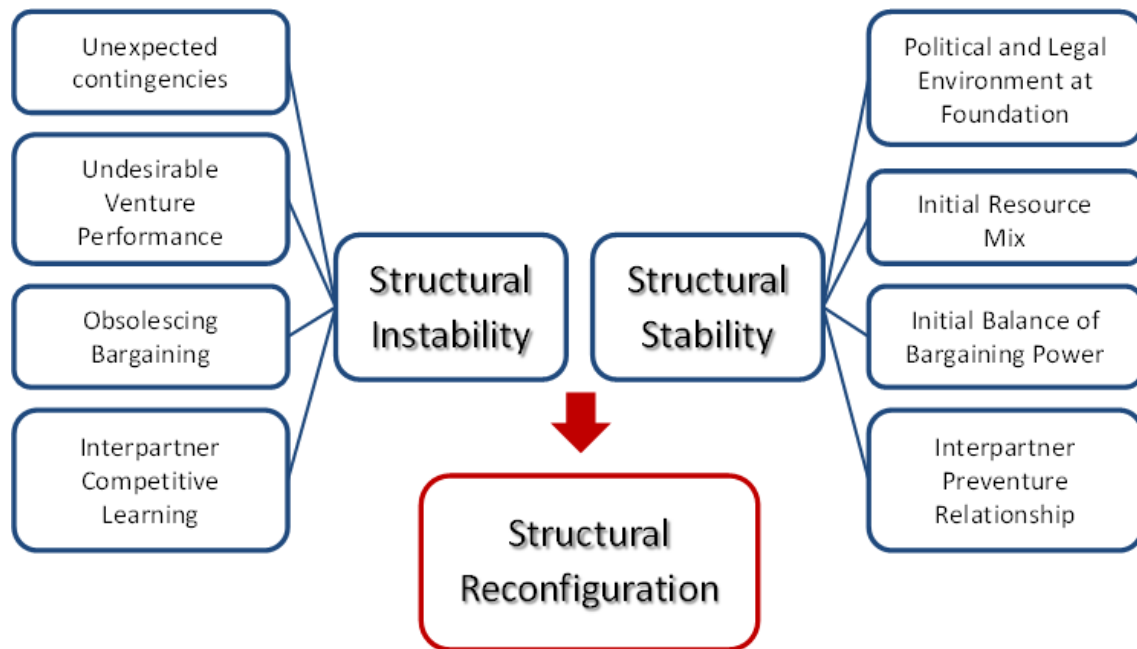


Figure 5 - A framework of structural reconfiguration in IJVs

The double-layered acculturation is stated as the case in which “there are both partner and location differences”, meaning that firms have to overcome differences “from the host country national culture and partner’s culture differences (...) and therefore leading to higher relational hazards (trust building costs)” (Barkema et al., 1996 as quoted by Hanvanich et al., 2003: 6). This situation happens when the IJV is structured as an host-country traditional IJV, in which case it is less probable to expect cooperative behavior than when the JV is neutral for both partners (third-country IJV) (Hanvanich et al., 2003).

3.4. Market Divestment of IJVs in Emerging Economies

The presence of a firm in a foreign country through strategic alliances may not have the expected results that were primarily ambitioned. Although partners are the main contributors for IJV stability, there are other reasons that might come in the way of its success. Therefore, divestment¹⁵ refers to the sale of assets or subsidiaries which are no longer providing sustainable profits, in order to “improve a company’s capital position and to provide a more

¹⁴ Source: Yan, 1998: 788

¹⁵ Divestment is referred to as divestiture

efficient, cleaner and transparent structure that adds value for shareholders”¹⁶. This strategy might take the form of the sale of a portion of the firm’s assets, such as a subsidiary, to raise capital or to focus the business on a smaller core of goods and services (Thompson, 2005).

Underlying the reasons for divestment, the most common is the low performance of the subsidiary, although one can find that the subsidiary not being vital for the core business of the firm or being of higher worth as a separate entity than as part of the company may also lead to the divestment.

Research made to MNEs which have divested in the last years, indicate that market change was the lower chosen reason (Figure 6).

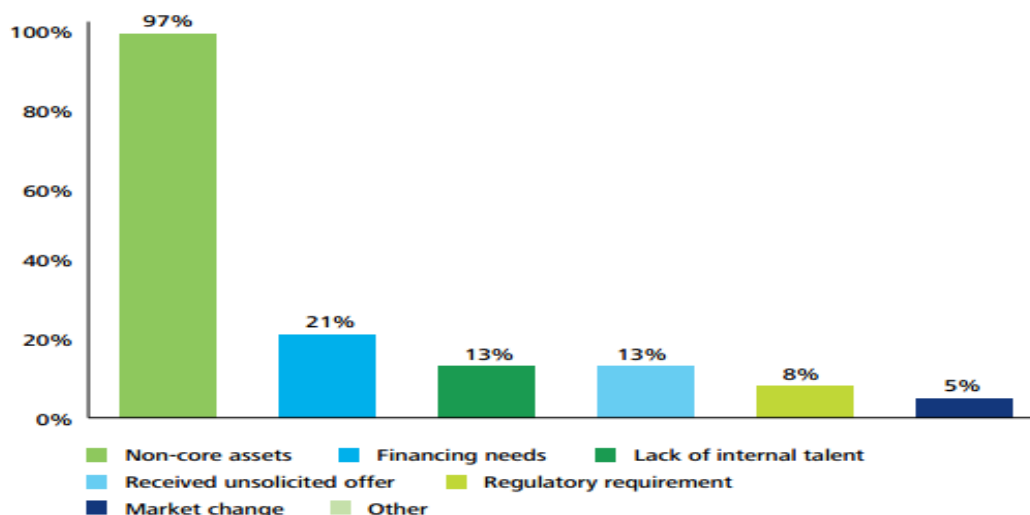


Figure 6 - Primary reasons for carrying out a divestment¹⁷

However, when the divestment concerns an IJV located in emerging countries this item becomes vital. Given the circumstances of emerging markets, usually attractive for their fast economic growth, “market structures are the products of idiosyncratic historical, political, legal, economic and cultural forces within any country” (Khanna & Palepu, 2010)

“The opening of these large economies to global capital, technology, and talent over the past two decades has fundamentally changed their economic and business environments. As a result, the GDP growth rates of these countries have dramatically outpaced those of more developed economies, lifting millions out of poverty and creating new middle classes—and vast new markets for consumer products and services. Large, low-cost and increasingly educated labor pools, meanwhile, give these markets tremendous competitive advantage in production, and information technology is enabling companies to exploit labor in these markets in unique ways.”

¹⁶ Source: “Is breaking up hard to do?” Deloitte Divestment Survey 2012

¹⁷ Source: “Is breaking up hard to do?” Deloitte Divestment Survey 2012

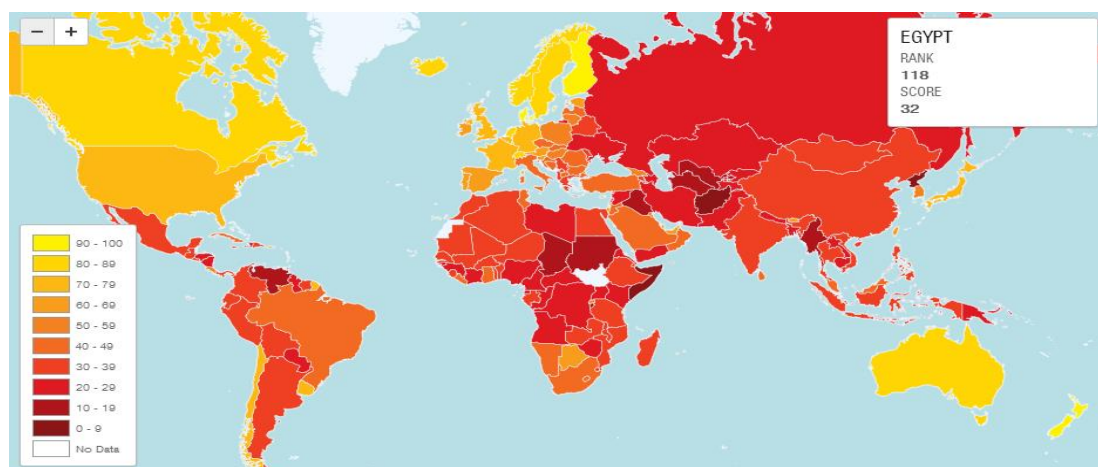
Even if these economies might seem extremely attractive, they hold a wide series of indicators that reveal an underdeveloped economy. These include facts such as unsteady intellectual propriety rights, government bureaucracy or corruption and poor local human capital. I will therefore focus on Government Corruption as one of the external reasons that affect the willingness to divest in an emerging economy.

3.4.1. Governments Corruption

According to Meschi (2007), the environment in which a firm acts plays a huge role in its future success. Whenever the firm finds itself in a completely different political and economic framework, the need for decision making on how to deal with this uncertainty that could threaten the firm's existence is crucial. Government corruption may undermine the firm's profits, the host's country propriety rights, financial stability and economic growth.

However, in emerging economies, some foreign firms might see the leverage on corruption as an opportunity for influencing the government for their own profit and of surpassing the liability of foreignness.

Figure 7 - Corruption Perceptions Index 2012¹⁸



3.5. Sustainability

3.5.1. The importance of Sustaining Competitive Advantages in Managing the Alliance's Development

Whenever a strategic alliance has taken off from its original goals, it is preponderant that both partners are aware of the path they have to lead in order to achieve success. However,

¹⁸ Source: Transparency International

according to Hoffman and Schlosser (2001), this path requires compatibility between strategic planning between partners and suitable governance mechanisms which are able to guide the alliance through what has been planned in its early days. But is there any ground rule to achieve success?

As any other firm, the ones involved in strategic partnerships are required to outperform among their competitors along their activity to sustain the firm's survival, what is mainly difficult in instable environments such as the ones in developing countries (Yan, 1998). IJVs are themselves, a way that parent firms found to sustain their primary competitive advantages. Nevertheless, it is important to seek how sustainable is this form and what other sustaining competitive advantages should be built from then on. Following this perspective, management control of IJVs, the mechanisms to support it, the focus and extent to which it is applied, reveal to be essential (Le, 2009). Regarding control mechanisms, either being formal, such as rules and procedures, or social, such as interpersonal relations and a common organizational culture are crucial for the parent firms' to create a common base of management and avoid opportunisms from one of the parents.

Control focus, on the other hand, is a perspective concerned with the activities and departments where the firm founds its competitive advantage, where it has the most developed competencies and major goals, and therefore, the ones more relevant to prioritize. This includes, for example, the frequency of reports, the strictness with punctuality and the employee's training intensity.

Furthermore, knowledge from and of the local partner has a great importance not only when entering a new market, but also in achieving competitive advantages in IJVs (Le, 2009). The transfer of knowledge, operational and formation training represent main tools of a successful relationship, as explained by the Organizational Learning Perspective (Child & Yan, 2003).

However, in his study, Le (2009) adds another variable, the Resource Dependence Theory (RDT) developed by Peteraf in 1993. Firms vary in their resources and skills, and therefore depend on each other to surpass the lack of imperative resources and achieve competitive advantages (Le, 2009). The balance between the amount and usefulness of the resources introduced by each of the parent firms' states the power and control each of them has and therefore reduces uncertainty. As Le (2009: 6) concluded, "foreign parent firms need to narrow down and loosen their control to some key areas of IJV operations such as human resources control, effective communication control". Furthermore, depending on the competitive advantage the company wants to achieve, different strategies showed to be

required. For example, gaining market share in the foreign country and learning new skills would demand formal control structures and mechanisms to ensure they will meet the initial plans for the firm. On the other hand, the acquisition of skills and knowledge from the local partner claims for social control mechanisms within the IJVs.

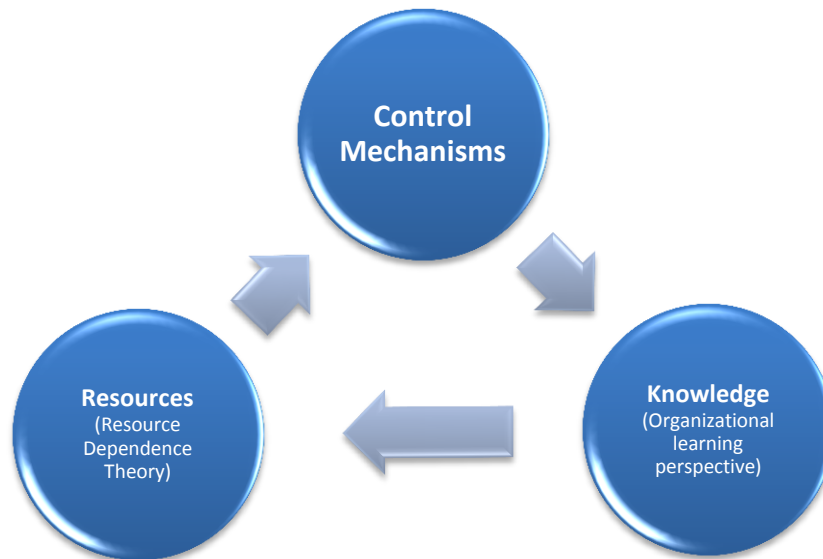


Figure 8 - Proper Control Structure in IJVs¹⁹

Lyles and Salk (1996) found that IJVs with equally shared ownership control had significantly higher levels of knowledge acquisition than majority controlled IJVs. Social control promotes inter-organizational learning by enhancing partner's trust.

3.5.2. Blue and Red Ocean Strategies

"To win in the future, companies must stop competing with each other. The only way to beat the competition is to stop trying to beat the competition" Kim & Mauborgne, 2005

Kim and Mauborgne used the term 'blue ocean' for the first time in 2005 to define the strategy where firms stop striving in competitive environments by creating new markets and new demand which leads them to beat the competition in unexpected and successful ways. In their studies, they considered the market dynamics that point out strategic positioning as the decisions firms take on in order to succeed in the hard competitive markets their industry

¹⁹ Source: Author

works, as being a 'bloody battle' where firms "must deliver greater value to customers or create comparable value at a lower cost" (Porter, 1996: 62).

On the other hand, the Blue Ocean strategy suggests that "firms should raise the standard of activities higher than the industry standard and offer consumers higher value than competitors" (Butler, 2008:19). Furthermore, firms should redefine market's frontiers and keep focus on a long-term strategy being aware of the inevitability of changing it over time.

In order to implement it, the authors suggest a 4-step framework to redesign the new value curve, called the Strategy Canvas, which is a valuable tool to find Blue Oceans designed by Kim and Mauborgne. By using it, firms are able to analyze the weight consumers put on different attributes, and therefore shift the market focus to non-consumers, which place different weights on the existing attributes and even value new ones, translating this analysis into value creation (Kim & Mauborgne, 2004).

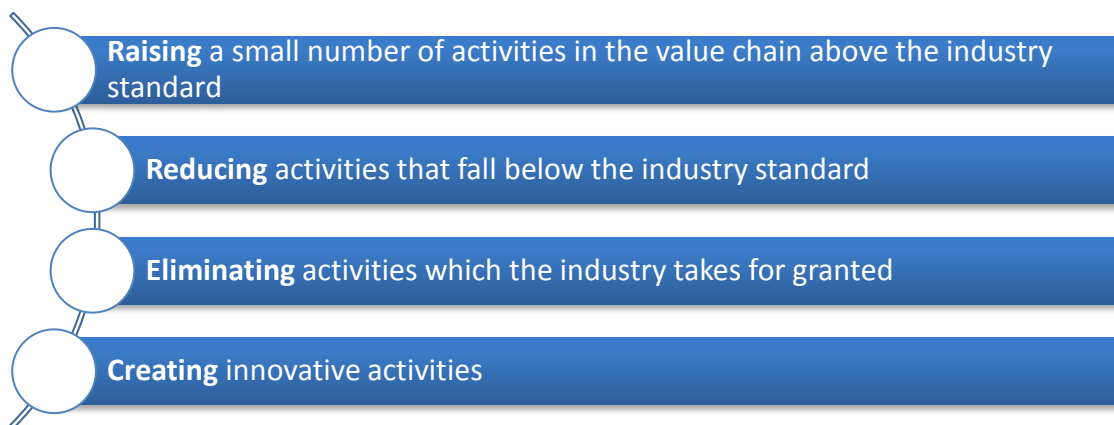


Figure 9 - 4-Steps framework to redesign a value curve²⁰

In this way, firms can achieve success, which Colin Butler (2008:171) states to happen "not from battling competition but by making the competition irrelevant".

²⁰ Source: Author , adapted from Butler (2008: 170)

The strategy Canvas

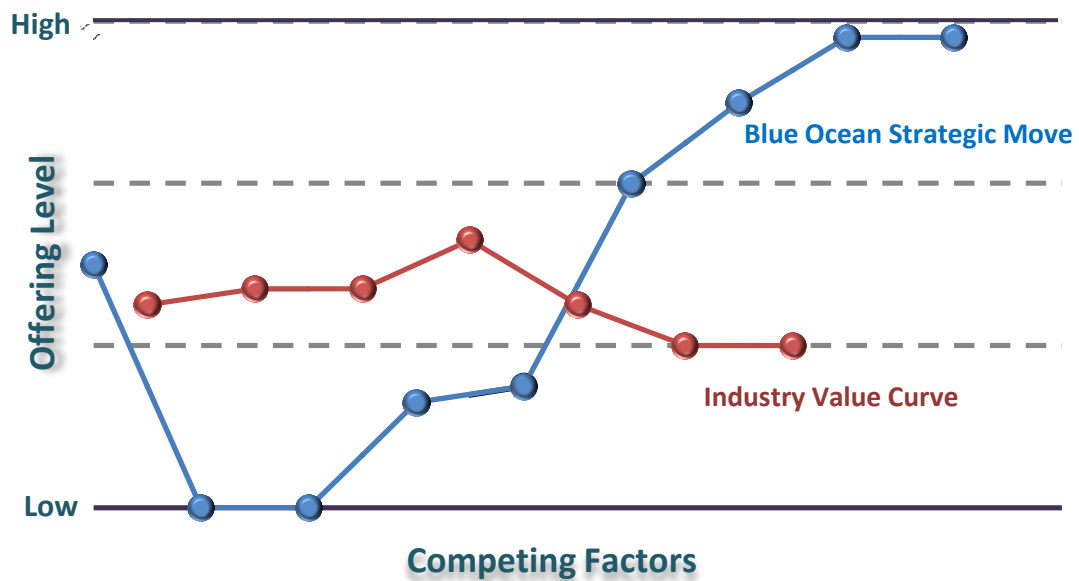


Figure 10 - The Strategy Canvas²¹

3.5.3. The introduction of a Blue Ocean Strategy in The Middle East by SMEs

As above described, nations have distinctive business cultures which affect not only new entrants' strategies but also strategic change itself.

In his study, Butler (2008:171) identifies resistance to change as "one of the greatest failures of many industrial management". Leveraging from the work of Kim and Mauborgne on the Blue Ocean Strategy, the author findings conclude that SMEs, for their size, easier decision-making and therefore, faster reaction to environmental change, place more importance on opening up uncontested marked space and on focusing on non-costomers and their similarities in order to grow than MNEs.

For this matter, "SMEs need to cut across multicultural boundaries among Arab, Asian, European, Australian, American, African and Latin America consumers" (Butler, 2008:176)

²¹ Source: <http://www.blueoceanstrategy.com/concepts/>

“The key to a Blue Ocean strategic approach is to maintain high quality in only a small number of activities in the value chain rather than maintain the same level (...) across all the value chain activities” (Butler 2008:177).

The author concludes that for winning a first-mover advantage in the UAE by applying a Blue Ocean Strategy, firms should endeavor the domestic market leadership. In these high-growth multicultural markets, there is great potential to attract new customers by changing prices of some activities in the value chain, and in this way, to come up with a different product for different consumers, which allows them to redefine market boundaries (Butler, 2008).

Other studies reveal that the optimal strategy to sustain in the long term is not to decide between either a Blue Ocean or a Red Ocean, but to blend the two strategies. The underlying reason is that a firm which is able to be sustainable in a competitive market in the short term will have the funds to proceed to a Blue Ocean in order to succeed in the long term. (Burke et. Al, 2009).

IV | Teaching Note

4.1 Case Summary

ISA – Intelligent Sensing Anywhere, a Portuguese small to medium sized company in the technological field, with a turnover of 5,4 million euros in the year of 2011, was present in 5 continents through subsidiaries and sales representatives. It created and developed products and solutions for different markets such as fuel distribution, energetic and hydric efficiency, environmental monitoring and intelligent houses and cities.

By 2008, the firm had opened its first subsidiaries in Brazil, Spain and France. Although the activities in the European market were running as planned, ISA South America was not up to their expectations, as it entered with “the wrong strategy, the wrong partner and the wrong resources”,

Henrique Pereira, the global managing director of the energy & utilities business unit at ISA, was hired in 2010 to analyze and develop strategies to enter new markets. After months of meetings with his team, studying the options that would be more profitable and consistent with ISA’s strategy, they came up with four possibilities: China, Brazil, United States of America and United Arab Emirates.

One chosen market for ISA to open physical facilities was Brazil, where ISA opened a wholly-owned subsidiary, enjoying the profits its main client, SABESP, would bring. A completely different strategy from the previous one, adapted to a key market.

Another market chosen among the options around North Africa and the Middle East was Egypt which seemed to be the best one, for its geography and demography and for the network ISA had at the time.

Wahid Tawfik, was the right local partner. Besides being the Managing Director of Calensia, a consulting firm which covered ISA’s requirements, Mr. Tawfik had previously worked with ISA while he was the CEO of DuPont Group in Egypt. This relationship led him to assume the chair of Managing Director of ISA Middle East in Cairo in early 2012, along with a team of six professionals: two Portuguese and four Egyptians. Both partners soon found out that the market was too extensive with too many distinct characteristics. Thus, the Egyptian operation focused on the North African market and Henrique took the lead of the UAE market.

The International Joint Venture was running quite smoothly during the first semester of 2012. ISA, as a group, had accomplished a much-desired goal. ISA was the first Portuguese company to be admitted at the NYSE Alternext, the equity trading market for small to medium sized

companies. This would, on one hand, translate into higher exposure, responsibility and transparency of the firm, but on the other hand, in a higher easiness to find new investors.

Soon after this, in July, Egypt, the country so known for participating in the Arab Spring since 2011, leveraged its conflicts when Mohammed Morsi, one of the leaders of the Muslim Brotherhood, winning the Egyptian elections with 51,73% of the votes.

ISA's staff and managers were concerned that the raw division of the country between the Islamist governance and the moderate Muslim, Christian and liberal opposition would trigger a civil war, diminishing the investment in the country and increasing insecurity.

By November 2012, the CEO, José Basilio Simões, called Henrique for a meeting, in order to make a final decision on whether to divest in the IJV, end it and transfer the investment or to try to hold it until the storm went away. The decision would define the future of that market for ISA, a market that could not be disregarded. Furthermore, ISA would also have to take into account the physical security, issue its image upon its stakeholders, and the consequences of such a decision on the whole group.

4.2 Learning Objectives

The present case study aims to address the importance that cultural differences take in the business world, and how initial perceptions might affect the change of strategic objectives in companies that want to internationalize.

By exploring how a technological SME built up its reputation by exploring the global market as part of its corporate strategy and the constraints it had in the way, the case study focus on some of the decision making processes required to internationalize within the technological field.

Moreover, students are challenged to comprehend the pros and cons of strategic alliances as well as the motives that might make some alliances to fail in stages of the process. Those can go beyond internal issues of the partnership and can involve stakeholders, and the host country social, economic and political environment.

Regarding strategic alliances, it is important to realize that the level of competences, resources and knowledge of the firm willing to internationalize should be the grounds to draw the profile of the partner which would be able to put off those weaknesses.

Innovation and R&D as competitive advantages is another issue for discussion, due to the importance of constant disruption of patterns and products in a fast pacing market, such as

the technological one. In this way, Blue Ocean strategies appear clearly related to firms that have been able to survive, by altering their value curve in order to reach new demand.

At last, through the lenses of the decision maker of a stable International Joint Venture in an emergent market, students are required to come up with recommendations for a firm that is required to reduce the impact on the Joint Venture of the political crisis lived in Cairo. Taking into account the need to sustain the businesses in course and also to assure that the firm is not jeopardizing the security of its workers, its liability towards the stakeholders and the future success of ISA in the Middle East, students would be forced to debate and balance a variety of subjects.

Firstly, how a firm in the position of a foreign investor should react in the face of a host country's political, economic and social crises; secondly, how each decision – such as the maintenance, the dissolution or the transfer of the IJV to another country – would address each stakeholder's interests and how viable it is.

4.3 Assignment Questions

Those are provided in order to help students prepare for case discussion.

1. How was ISA able to compete internationally?
2. In November 2012, which were the most relevant markets for ISA?
3. If ISA decides to continue on the Middle East countries, will the investment be sustainable for the company?
4. Picture yourself as the CEO of ISA. You are now facing one of the toughest decisions on the firm's internationalization strategy that can change the future of the company. What decision would you make? Justify your answer considering ISA's strategic options at the time, evaluating each of stakeholder's perspectives and the company's best interests.

4.4 Class Plan

With the aim of helping an instructor to develop a structure that could be useful for using the case in a class discussion, a set of topics and their analysis is now proposed.

Assignment Question 1: How was ISA able to compete internationally?

1. Describe ISA's industry and how was it able to differentiate from its main competitors in the market.
2. What role does innovation play for this company? (Suggestion: investment on Technological R&D)
3. Describe the company's strategy and how did it influence its success. (Suggestion: Key success factors)
4. Explain the value ISA brings to its clients on the Energy business unit. (Suggestion: Business Intelligence processes' contribution on companies' value chain)

Assignment Question 2: In November 2012, which were the most relevant markets for ISA?

5. What was the strategy applied to the Middle East and North African countries?
6. What were the main factors delaying the entrance? (Suggestion: Hofstede dimensions analysis)
7. Why did ISA decided to enter Egypt with a strategic alliance? What is the outcome of the Joint-venture so far? (Suggestion: Strategic Alliances' analysis)
8. Assume ISA has the opportunity to form an IJV with a MNE leader in the area of technology. Indicate the main risks that might follow this strategic alliance (Suggestion: predatory alliances)

Assignment Question 3: If ISA decides to continue on the Middle East market, will the investment be sustainable for the company?

9. What were ISA's investment and strategic decisions before 2012 that went wrong in the foreign markets? Why did they fail? (Suggestion: Reasons for market divestment)

10.What were the main drivers for ISA to enter the Asian market and how can ISA sustain its strategic advantage in Shenzhen? (threats of sustainability)

11.Do you think ISA applied a Blue Ocean Strategy in the Middle East?

Assignment Question 4:

12. Picture yourself as the CEO of ISA. You are now facing one of the toughest decisions on the firm's internationalization strategy that can change the future of the company. What decision would you make? Justify your answer considering ISA's strategic options at the time, evaluating each of stakeholder's perspectives and the company's best interests.

4.5 Analysis

1. Describe ISA's industry and how was it able to differentiate from its main competitors in the market.

ISA is in the field of telemetry, measuring and optimizing energetic efficiency. This technology-based industry is highly competitive, mainly at the international level, due to the constant speed of innovation and the investment international firms make on research and development. ISA specialization in telemetry solutions through GSM applied to the monitoring of tanks, nets, and gas meters, made it a world leader in this field. Its clients were mainly gas companies. Furthermore, for customizing all of its solutions to its clients' needs, the firm was able to differentiate from its competitors who offered lined-up solutions and gain customers' trust and loyalty. For better understanding, the Michael Porter's 5 forces analysis on the Telemetry Industry is now going to be drawn. A brief explanation on the differences between the industry in the 90's and in 2013 is also going to be described since the technological market where ISA built its start-up that allowed it to beat competition is completely different from the reality of the present situation.

Threat of new entrants:

One of the determinants of the industry attractiveness is, according to Porter (1985), the threat of new entrants. The telemetry market, belonging to the technological field, was in the 90's quite unknown in Portugal and was slowly growing on a global scale. Although its target is mainly the B2B segment, the investment on technological R&D needed was too high in the 90's and the majority of technological firms did not have the capital to support the costs of

technology and R&D to develop products for a niche – it involved too much risk. However, as time went by, technological barriers decreased, and firms started investing in business intelligence processes. Due to its patents, ISA was able to protect itself from these threats and to become the leader of the Oil & Gas telemetry solutions while some new firms were entering the market with few or no experience at all.

Technological change can lead to a two-ways' street, as it can increase or diminish entry barriers. This is the era where companies and governments are taking more measures on energetic efficiency and environmental care but it is also the era when technology is most advanced. What this means for companies is that the technological pace nowadays, will easily bring more competitors into the game, introducing substitute products.

The global financial crisis also had an impact on this dimension. In the most affected economies, such as Portugal, there has been a decrease in foreign investment and in external financing (EU funds, business angels and bank loans) which largely decreased the capacity of firms to be able to compete in these markets, due to the existing financial cost.

Although ISA has the technological know-how and the experience on its side as an incumbent firm, the technological pace and thus innovative solutions, mainly internationally, might reduce ISA's market share and number of clients. In this way, the threat of new entrants on the telemetry market is considered to be **medium**, as ISA's experience and international reputation can assure ISA's competitiveness in the market.

Telemetry and buyer power

The bargaining power of buyers is mainly determined by the offer options in the market. As ISA's target is mainly the B2B segment, switching costs and differentiation, two main reasons that lead buyer's decision-making processes, show an optimistic perspective. On one hand, being a leader in the segment diminishes the bargaining power of buyers, as its innovative products and processes lead ISA to achieve international awards in the Oil & Gas segment but on the other hand, the disruption of the market by a competitor might easily shift the buyer's power.

Moreover, this industry has high switching costs, as most buyers undertake projects of millions for the installation and later monitoring of the telemetry solutions (for example, for the gas tanks referred in the Case Study) and as so, changing to other supplier would not put off the costs of this previous investment.

The growing concern on energetic efficiency and monitoring solutions has increased the demand for these products, faster than the pace of growth of companies which can compete with ISA.

However, the crisis has slowed down international transactions and decreased the demand for energetic efficiency products, as on one hand allows firms to be cost-effective, but on the other hand, also decreases the willingness of companies to invest on non-core strategies.

The development of the B2C channel will permit ISA to explore the international market that has great potential as well, due to the growing established international laws on energetic efficiency which will decrease the buyer's bargaining power. Furthermore, ISA's business model is based on diversifying the risk, through different markets and segments, which allows it to avoid the dependence on important clients such as BP.

Thus, one can conclude that in 2012 the bargaining power of buyers is **medium** due to B2B channels, but in the near future it will decrease due to environmental legislation for the household, which will increase the demand for energetic efficiency solutions.

Bargaining Power of Suppliers

In what concerns the bargaining power of ISA's suppliers, it has been decreasing from decade to decade. Due to the increasing reputation and innovative solutions of ISA in the industry, ISA's ability to build a large international network made it reach multiple suppliers from which it can surpass the punctual scarce of one entity without any dependence. This issue is stressed out in the Case Study, by the strategic alliance with the Chinese supplier, which lowered the productions costs. However, in the early 90's the company lacked this network, being less powerful in its relationship with suppliers.

Thus, one can consider the bargaining power of suppliers to be **low**, due to the increasing independence of ISA on this issue.

Threat of substitute products

When ISA took its first steps it was a micro enterprise with ambition and knowledge that turned up to be a market leader in gas telemetry. Innovation and market disruption are usually unexpected, mainly in the fast-paced technological field, and can easily change the game backwards. However, ISA continues to develop innovative solutions, such as the ones for the development of smart cities, which have been mastered by ISA for years and only now are on the spot for discussion.

One can conclude that although ISA has innovative products and the telemetry industry requires long term R&D investment, market disruption can come, as ISA did, for any micro company, thus making this a **medium** threat.

Rivalry among competitors

Although ISA is the market leader on the Oil & Gas segment solutions, it competes with MNE's such as Schneider, Siemens, ABB, Honeywell, Pacific Controls and Johnson Controls outside its niche market, making ISA more vulnerable to the this force since its early years. Due to its innovative products and customized sales process, ISA was able to take advantage of being a SME and conquered big clients using them as a reference for leveraging its international recognition. Furthermore, the recent inclusion in NYSE Alternext and its leadership of the M2M segment on Oil & Gas have also increased its market share. However, that can be threatened by MNEs capabilities of setting the hurdle higher, innovating at a rhythm that cannot be sustained by the resources of a SME. The Portuguese financial crisis has brought the contraction of the energy business unit, due to the fact that it was highly depend on the national market.

To face this threat, ISA is daily focused on its core activity: developing business intelligence solutions on telemetry, the one where it gains its competitive advantage internationally.

In this context, one can say that the rivalry among incumbents on the telemetry sector is **high** due to the number of MNEs with large experience, knowledge and resources that are competing directly with ISA in some of the activities of the value chain.

Porter evaluated the attractiveness of an industry as low when all of these five forces were high (Porter, 1985). As we can see, telemetry is a very specific field of the technological industry, where the higher chances of a firm to survive among incumbent firms are in its ability to disrupt markets and to develop carefully-planned strategies.

In this way we can conclude that the industry was attractive for the evolution of technological change, which consequently lowered barriers to entrance, and to the energy business, due to new legislation imposed by EU, Brazil and China. On the other hand, the attractiveness diminishes once one analyzes the rivalry in the market and the threat of substitute products.

By making this analysis it was clear to perceive that ISA's business model and its disruptive products were the main causes of ISA's recognition and success in 2012. Technological change

will turn the game backwards once another disruptive technology enters the market and monopolizes one segment due to its innovative capabilities.

2. What role does innovation play for this company? (Suggestion: investment on Technological R&D)

It is important to realize the importance that technological R&D has in a technological firm. If one wants to become a pioneer and disrupt the existent market with its technology, the need to prioritize the investment in this area becomes vital, in order to achieve a competitive advantage. Thus, firms should leverage their internal capacity in R&D and make it the heart of the company. As so, another issue becomes relevant. For a SME to compete internationally in this area, the scarce resources require a good management in order not to be wasted and allow the focus on the development of R&D practices. And for that, firms need a well-defined strategy. ISA's growth strategy associates continuous innovation to technologic development in the search for emergent markets with lower competitive pressure. This means that ISA's efforts and investment on TR&D are quite high relatively to other investment items. This is crucial for the success of its products and to tap gaps in the market before its competitors, creating unique competences that guarantee a competitive advantage. All of its products are a result of this investment on TR&D along with a carefully planned strategy and had the power to leverage ISA to an international standard of technological pioneer.

3. Describe the company's strategy and how did it influence its success. (Key success factors)

ISA applied a blue ocean strategy in its internationalization as it entered in low exploited markets in this industry that showed great potential with products for a specific niche (such as Brazil and the Middle East).

Building up from a disruptive technology of telemetry and remote control, the firm was able to create a discontinuous innovation which will, at its turn, become an evolutionary technology once its patent expires. ISA's creation of smart cities, a concept for which it develops monitoring and remote control solutions, is one of the most valuable examples of a discontinuous innovation which has gained international recognition.

One of ISA's Key Success Factors, was the ability to create value for its customers, through tailoring its solutions to its customers need, analyzing the existing problems and making proposals for optimal solutions.

Furthermore, ISA had a high return on investment (ROI) on its projects, due to a careful financial analysis and also because the implementation of its solutions requires the clients to pay a fixed annual fee for the equipment, in addition to the costs of installation and further equipment acquisition. This fee for the equipment installed in all its clients guaranteed ISA's working capital needs.

The attained percentage of efficiency was another advantage; as ISA prides for excellence in all of its areas and had already proved the benefits of its products. The firm is also a strong believer that a fine post-sale support system creates customer loyalty, good word-of-mouth and therefore, makes sure all installation and repairs are done as soon as possible. These factors that might seem details are actually the key that opened their doors for the whole world.

ISA had always played the game with an international vision for its strategy. For that reason, ISA had soon started to participate (and to win) relevant international contests.

4. Explain the value ISA brings to its clients on the Energy business unit. (Business Intelligence processes' contribution on companies' value chain)

The solutions developed by ISA on the energy business unit are mostly related to energetic efficiency for the household. These solutions include a variable number of equipment that measures the consumption of electricity, gas and water, and cross them with the measure of environmental data such as humidity, temperature and CO2 allowing a cost reduction, a more efficient resource management and increasing environmental responsibility. These solutions can be used in industries, buildings and houses and soon its application will be mandatory due to international laws that establish climate change precautions.

All this data can be found in detailed software applications, which permit that the final consumers analyze their consumption values on user-friendly platforms.

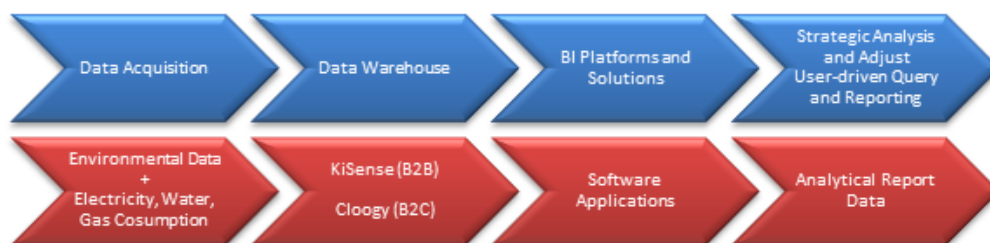


Figure 11 - Business Intelligence Flow applied to ISA

Although cost reduction and energetic efficiency might be perceived as evident valuable advantages for the final consumer, in what concerns B2B, where ISA's clients are firms and

industries, this instrument has greater importance. For instance, by looking at a multinational firm which requires the analysis of data from millions of consumers, business intelligence (BI) comes as a process that simplifies all this analysis, acquiring, storing and simplifying the statistical results, allowing the firm to understand the customers' needs and preferences easily and faster. For all the phases of the process to be well-done, the questions that BI use is supposed to answer should also be clear since its beginning in order to reach a straight-forward and useful analysis of the results.

Moreover, on a firm's logistics perspective, BI can also come as a solution to realize the impact of the variable expenses on production, facilitating a cost reduction and a better decision making moves that might reinforce the company's competitiveness.

As so, the energy business unit brings advantages at different levels through its solutions – on cost, environmental, decision making, efficiency and analytical perspectives – creating value for both B2B and B2C channels.

5. What was the strategy applied to the Middle East and North African countries?

ISA found in the world map some geographical zones that stood out. North Africa and The Middle East, for instance, was one of them. The region is as known for the oil and gas reserves as for the prevailing religion of most of the countries, Islamism. Nevertheless, what has moved millions of firms to make business there was precisely the exploitation of oil and gas reserves' potential. For ISA, this was an opportunity as well. Having both the Energy and the Oil & Gas business units, this area could be ISA's golden egg. Firstly, due to the requirement of measuring the level of gas per tank, ISA's offer would adjust perfectly in the telemetry and remote control technology those countries lacked and required. ISA started to study each country's characteristics to implement its physical facilities. Ultimately, Egypt, with one of the largest populations of North Africa and being the main non-OPEC oil producer and dry natural gas producer in the whole continent²², was the chosen one.

The choice of a strategic partner was based on the need to have someone local, that ISA trusted, whose network would reach potential clients, and mainly, a partner whose strengths matched ISA's weaknesses so that the partnership was complementary both in resources, core business, knowledge and financially.

It did not take long until the partners strategically divided the target market of the IJV headed by Wahid Tawfik. For a matter of market strategy consistency, the Egyptian office addressed to

²² *International Reserves*, United States Department of Energy, 2011

the North African market while Henrique addressed the Middle East region directly from Portugal.

Still, the process of entering the market would remain the same. Firstly, to contact well-known enterprises in the field of oil, gas and energy, analyze their problems and make a project proposal. When the project was implemented, they would use it as an example to leverage their business by creating local awareness of their brand.

This strategy is usually applied to several firms, in an attempt to attract new clients using successful pilot projects for locally renowned companies. In an international context, the new partner will help reducing the liabilities of foreignness, newness and smallness, three liabilities that SMEs have to surpass to be able to succeed in doing business abroad.

6. What were the main factors delaying the entrance? (Suggestion: Hofstede dimensions analysis)

Cultural differences have been widely known as barriers to a firm's internationalization since the first steps of globalization. Europe and The Middle East are distinct geographies where one could evaluate the differences between local culture, religion and politics. Hofstede has found in 1980 deeper gaps among them in terms of business culture. As the case study indicates, ISA's team found difficulties in entering the market as the development of the relationship took longer than expected, due to the need to establish a trustful relationship before undertaking any contract.

The following chart (Figure 12²³), compares the evaluation of both countries, Portugal and Egypt, for each of Hofstede's dimensions in an attempt to better understand the dissimilarities that might constraint business relationships.

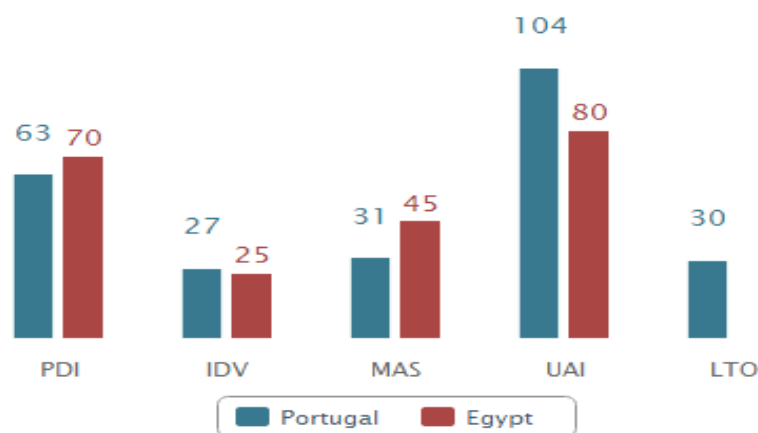


Figure 12- Hofstede's Cultural Dimensions - Portugal vs Egypt

²³ Source: <http://geert-hofstede.com/portugal.html>

In terms of Power Distance (PDI) and Individualism vs Collectivism (IDV) both countries score similar results. Firstly, on the PDI dimension, both countries show an acceptance of hierarchical division between the boss and the employee. Both cultures score very low on individualism, what states the great importance given to groups, be them family, firms' team work or communities. Decisions are not only made thinking about the self, but mainly on the groups' benefit perspective.

In what concerns Masculinity vs Femininity (MAS), both have relatively low results, with a considerable difference. Religion and social behavior are expected to have great influence in Egypt's evaluation (45), as around 90% of the population is Muslim²⁴, where inequality between genders is high, undermining the role of women on the society. For example, by law, women's testimony on court counts half as much of men's testimony while WHO²⁵ reports the outrageous 91% of women who suffered genital mutilation across their lifetime²⁶. These non-business related facts reveal a deeply underdeveloped society. However, this dimension is associated to the perceived values in life that distinguish men and women in what defines success rather than the social role of women in society. As so, one might analyze this score as mirroring a quite feminine country, which might be explained by the management style, where the importance given to life quality puts off competitiveness.

Regarding the Uncertainty Avoidance sphere, Portugal has one of the highest values among all countries (104). Although the Egyptian value is also quite high (80), the Portuguese peak shows the necessity of strict rules and moral beliefs and the intolerance to new ideas and innovation. These may reflect a very assertive behavior in business, the need to meet deadlines and to follow moral codes.

There is no official data on the last variable for Egypt but I believe that for its culture and social dynamics – importance given to trust, to business partners' relationships and to the future – added to the comprehension of similar cultures scores, Egyptian score should be quite high. Portugal, however, appears as a short-term oriented culture (30), which seems to be consistent within western societies. Traditional behaviors, urge for quick decisions, and lack of future-oriented decisions such as small propensity to save are among the Portugal's dimension characteristics.

²⁴ The CIA World Factbook, 2011

²⁵ World Health Organization

²⁶ WHO, *Female genital mutilation and other harmful practices*, 2011

In conclusion, these dissimilarities influence the international negotiation between the two countries, mainly in what concerns uncertainty avoidance and long-term vs short-term orientation where the impact on personal and professional relationships is higher.

7. Why did ISA decided to enter Egypt with a strategic alliance? What is the outcome of the Joint-venture so far? (Suggestion: Strategic Alliances' analysis and IJV partner selection criteria)

ISA's decision of entering Egypt through a strategic alliance was mainly because it recognized the importance of having a partner who had local knowledge and local experience (in order to reduce the liability of foreignness and newness, respectively) and thus to be able to guarantee the feasibility and profitability of the investment in such a distinctive market. Although it could have chosen other types of entry modes such as Licensing, the firm had chosen an equity mode of entry as the potential partner met ISA's requirements. Firstly, both partners complemented each other needs on resources and on the relatedness of the business, being ISA's a supplier of telemetry solutions, and Wahid Tawfik, a consultant specialized in the area of energy, with wide knowledge on risk analysis and strategy development. Moreover, Mr. Tawfik also had a past association with ISA, due to previous deals between ISA and Calensia. In what concerns the relatedness of foreign partner's and IJVs' business, the complementarity between both parts that successfully sustained the IJV for almost a year lets me conclude that the last selection criteria was accomplished. Thus, both partners accomplished the desired effectiveness on the IJV, built on the acknowledgement of both partner's CSFs that contributed to the development of the IJVs strategy. On an internal level, one might conclude that the IJV was performing well and that it would have a long-term durability.

8. Assume ISA has the opportunity to form an IJV with a MNE leader in the area of technology. Indicate the main risks that might follow this strategic alliance (Suggestion: predatory alliances)

To address the risks of establishing a partnership between SMEs and MNEs, it is important to stress their contrasting characteristics. As the pioneers of globalization, multinational firms take the market leadership of most industries (Boeing in Aerospace and Defense; Bank of America Corp. in Banking, Time Warner in Media, ExxonMobil in Oil & Gas Operations; AT&T in telecommunications; Hewlett-Packard in Technology Hardware & Equipment²⁷). However, SMEs constitute the engine of most economies thus being of great importance to the countries' GDP – in the European Union, for example, SMEs constitute 99,8% of the non-

²⁷ Source: Fortune 500, May 2012 - CNN

financial enterprises guaranteeing 66,7% of the jobs²⁸. They constitute the roots of innovation and give lights to entrepreneurial spirit, being the engine of competitiveness.

As we can see both MNEs and SMEs are extremely important and each of them has its role in the economy. But if MNEs and SMEs bring disparate benefits, why shouldn't firms engage in strategic alliances between MNEs and SMEs to create synergies?

Although both types of firms bring value to the global economy, the two parts will have higher probability of successfully co-exist on a supplier/buyer relationship of goods and services or through firm acquisition. Because they have different strategic capabilities, alliances such as International Joint Ventures might become a source of predatory behavior between partners. Even if the core business is complementary, there is unequal legitimacy in foreign markets, in what concerns reputation and resources.

At an external level, the alliance with the MNE might be seen as an advantage for a SME as in this way the liabilities of smallness, newness and foreignness have been previously surpassed by the MNE's recognition in the market. In what concerns its reputation, even though ISA is listed in Alternext and is an internationally awarded firm, a multinational company would probably still be more concerned about the possible IJV dissolution impact in its image. This, in addition to its higher capacity of sustaining capital losses, translates into higher longevity.

However, distinct strategic orientations can have a negative impact on the IJV's performance. As the MNE would have higher bargaining power than ISA, since ISA would be dependent on its knowledge and resources, ISA might found itself in a manipulative situation where the MNE uses the IJV for its own economic gain instead of for the IJV's profit, therefore becoming a predatory alliance.

This situation might be avoided through the increase of ISA's ownership percentage in the IJV and it would also diminish once ISA gains better knowledge and experience in the host country market.

One can conclude, that when the parents' firm structure is as distinct as it would be in this situation, IJV control is required by the parent or by a neutral third-party, for no one to take advantage of the partnership for its own good, to assure that IJV's goals are accomplished and the partnerships remains stable in the long-term.

9. What were ISA's investment and strategic decisions before 2012 that went wrong in the foreign market? Why did they fail? (Suggestion: Reasons for market divestment)

²⁸ Source: Ecorys. EU SMEs in 2012: at the crossroads, Annual Report on SMEs in the EU, 2011/12, European Commission

ISA's internationalization strategies did not always go for the best. When ISA tried to make its way to the USA market in 2010, it ultimately found a great obstacle to its entrance. The entrance required bureaucracies such as certifications and the need for the product to be modified to obey commercial regulatory laws. Plus, they found themselves in a red ocean, as the technological offer in USA constraints the value of ISA's offer. The number of competitors, their products, their dimension and their way into the market, would be quite hard to surpass.

Barriers to entrance are well-known as one of the causes of internationalization. However, once a firm is established in a market, it will find new obstacles to its successful progress, as it happened in Brazil in 2008, when ISA opened a JV. The partner was not up to ISA's needs for complementarity, and the JV was not achieving efficiency through the implementation of its strategy either. Consequently, ISA decided to divest and to later redesign the whole strategy for the Brazilian market from scratch, but now with more experience on an emerging country growing at two digits. Although Brazil was once a Portuguese colony, roots that to some point imply a cultural similarity, one does not see the same uncertainty avoidance and urgency from the other side of the ocean. The following chart (Figure 13) intends to compare Hofstede dimensions' scores in both countries – Portugal and Brazil in order to enhance the importance of the effect of culture discrepancy in a JV.

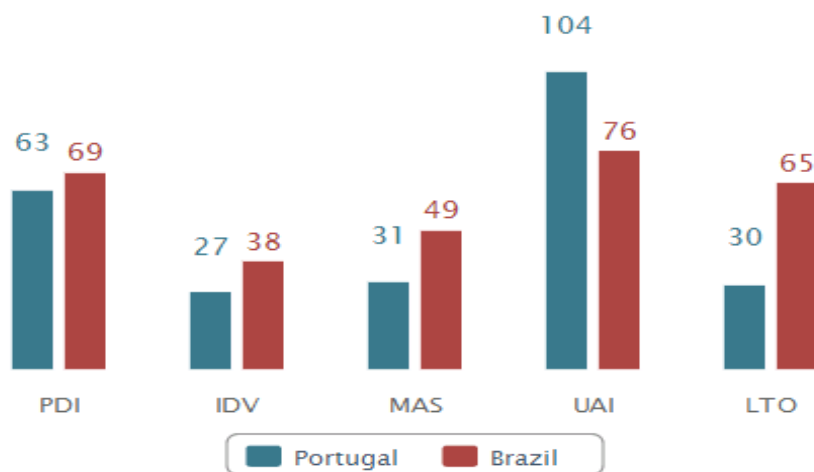


Figure 13 - Hofstede's Cultural Dimensions: Portugal vs Brazil²⁹

In spite of the common thought inside companies that divestment might be a great loss; it may come as the best decision on a non-core asset or subsidiary that a firm can make. Investments are worth when they are paying off, and when they are not paying off, leaders should carefully analyze the asset's future value to decide on its worthiness. This decision should be looked

²⁹ Source: <http://geert-hofstede.com/portugal.html>

upon as a wise one and as a (quite expensive) learning experience, instead of the common perception of failure, since internationalization requires deep foreign market knowledge.

10. What were the main drivers for ISA to enter the Asian market and how can ISA sustain its strategic advantage in Shenzhen? (Suggestion: threats of sustainability)

ISA primarily entered the market with the prospects of diminishing its production costs and of establishing a network in the country, opening a commercial gate towards an economy growing exponentially. At a first stage, in 2009, they found a supplier of electronic equipment in Shenzhen that could diminish part of the costs ISA had in producing its items, thus making ISA's production cost-effective for high quantities. The agreement that started on a contract manufacturing basis had the intention of being later transformed into a subsidiary, once ISA found the right partner. However, the Chinese market is very well known for its threats of imitation of foreign products and services, and this has been a problem for multinational companies in the past years. This is one of the threats to sustainability and the most common and problematic for foreign investors in Eastern countries, for their easiness in copying and selling for a lower price, decreasing the value of the original one. In ISA's case, being in the technological field would even attract more attention for the "counterfeiting market" because its quality products may be very demanded in the next few years in China, with its huge population and enormous environmental problems, having 16 of the most polluted cities in the whole world. However, in the last years, China had made a turn, and is now the number one investor of renewable technology globally, which represents 17% of its total energy supply^{30,31}.

With a new plan for environmental development, China will become a great market for technologies in the telemetry area. It is indeed a huge opportunity for ISA at this point to have the right timing and explore the market. However, in order to avoid the imitation of its products there are some steps that can reduce this danger. To register the trademark in all the steps of the value chain - every jurisdiction from supplier until the buyer must have this register – is the most valuable one. After that, having someone inside the company which job is to prevent this situation from happening, controlling commercialization both locally and online.

Unfortunately, the perfect solution is far from being found. The Chinese market won't change as they are extremely reliant on counterfeiting goods. For example, in 2010 a little Chinese

³⁰ "China Leads Major Countries With \$34.6 Billion Invested in Clean Technology"

³¹ "China Leads The World In Renewable Energy Investment"

town announced inspection to all stores for counterfeiting goods and 90% of them closed their doors right away³². Truth being said, China’s competitiveness in the global world has much leverage for their ability to replicate any product for a lower cost. This fact, which is a problem to foreign investors is, on the other hand, a very profitable business for the local population and is, therefore, far from being put to an end by the government. In a world where there is no such thing as a perfect market for a foreign firm to enter in, ISA will have to adapt and prevent counterfeiting in order to have a sustainable development in widening its international presence.

11. Do you think ISA applied a Blue Ocean Strategy in the Middle East?

It is important to, at a first stage, distinguish what is a Blue Ocean Strategy. This strategy consists on creating new markets and new consumers in order to get away from the hard competitive environment (Red Ocean), by recreating its value chain with the aim of succeeding in an innovative way. Therefore, an analysis to the strategy canvas, the framework applied to develop a blue ocean strategy, should be done in order to perceive whether ISA have applied this strategy.

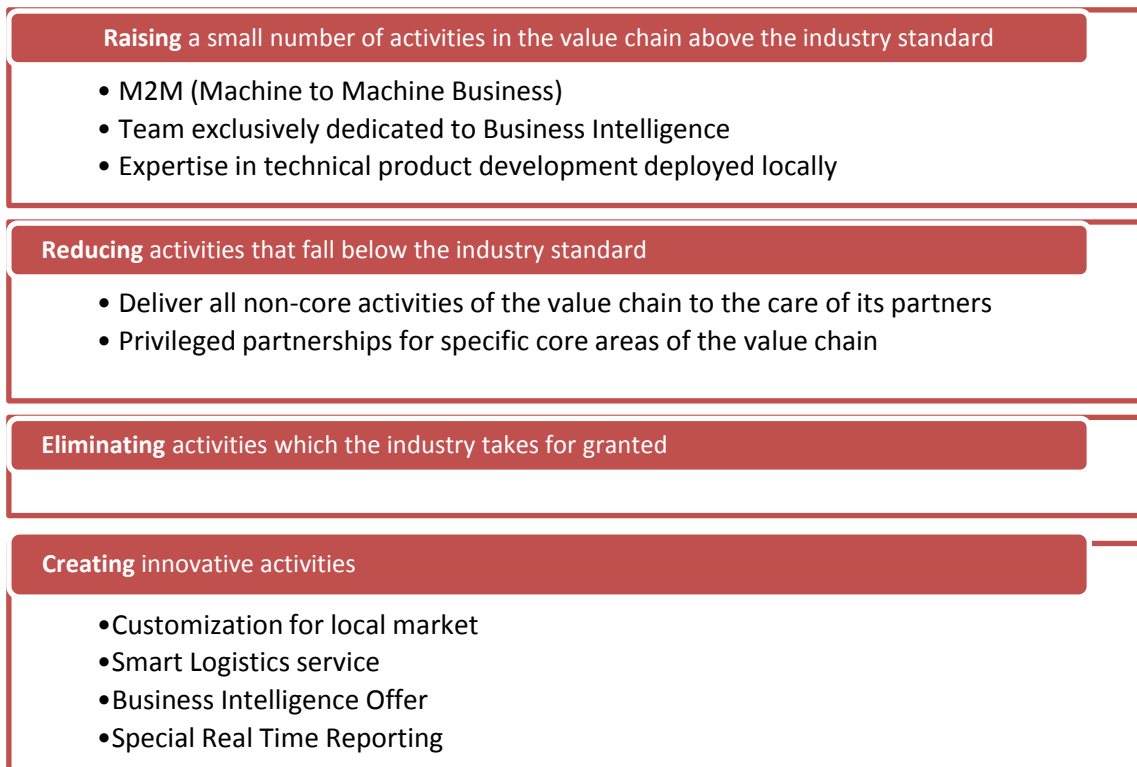


Figure 14 - 4-Steps framework applied to ISA

³² “THIS Is Why China Can't And Won't Try To Eliminate Fake Goods”

Through the analysis of the firm's strategy, which begins with the conceptualization of its products, and goes through the sales process, reaching different markets, one can perceive the flow of the Strategy Canvas, which lacks the elimination of activities that the industry takes for granted. Although this step is missing, we can find that by passing all non-core activities of the value chain to its partners, the firm was able to focus on what really matters and distinguishes it, without eliminating the non-core activities as they were now taken care of through ISA's partnerships.

ISA understood the importance of striving for excellence in what really distinguished its business. Therefore, on the first phase and unlike its competitors, one can find that the firm dedicated a specialized team to focus on business intelligence, as its core activity, finding the means to lead M2M³³ segment in the business area of Oil & Gas, in which telemetry appears as the bridge of communication. This area is the grand stake of ISA in the Middle East, the most profitable region in the world in Oil & Gas segment. Moreover, their expertise in technical product development deployed locally raises its competitiveness in every country.

In what concerns innovative solutions, ISA was able to introduce in its sales process problem analysis and product customization adapted to the local market. This activity might be considered as innovative if one understands that the technological industry is usually lucrative for disrupting patterns but also for working as a mass market, which permits reaching economies of scale. Furthermore, this adaptation brings more value to the consumer, be it B2B, B2C or in B2B2C flows, humanizing the business by creating a relationship of proximity, trust and loyalty with the client, taking advantage of the positive side of small firms, with the local expertise advantage of a multinational.

With the Smart Logistics service ISA allows the final client to optimize its consumption and the use of telemetry. It has now the plans to introduce more value to it, as tool that brings easiness to people's life.

This widen business intelligence offer, is not often seen in SMEs. ISA endeavors for TR&D in business intelligence with the means to create solutions to any problem, and for that it has to move at the pace of international competitors. Furthermore, ISA bets on its special real time reporting to innovate, delivering information right on time.

³³ In the beginning of 2013, ISA was listed in the report of the consultant Berg Insight on the Oil & Gas market, as one of the world's best companies in M2M communications

With the high capacity for investment in the Oil & Gas segment in that region, ISA will now find a lot of competitors in the Middle East. Nevertheless, ISA's offer is one of a kind, and in low developed societies with high growth economies – such as we could find in Egypt in 2012, this market has been quite unexploited (only 10% of the world's gas tanks were using it).

Adding to the analysis done to the strategy canvas, I therefore conclude that ISA has indeed applied a blue ocean strategy, reaching markets with great potential but low exploited, running away from the “bloody battle” and recreating demand through its optimized value chain and product range offer that it brought to Egypt.

In Kim's and Mauborgne's words, a blue ocean is made from the within of the firm, meaning that it is the conceived strategy that will affect the structure and environment, not the usual other way around. And that is what ISA did. It recreated itself, held on to and improved core activities and removed the others, with the aim of building a smart world.

12. Picture yourself as the CEO of ISA. You are now facing one of the toughest decisions on the firm's internationalization strategy that can change the future of the company. What decision would you make? Justify your answer considering ISA's strategic options at the time, evaluating each of stakeholder's perspectives and the company's best interests.

During the year of 2012, ISA Middle East had lived an intensive route. From the implementation of the offices in the beginning of the year, the engagement of its first clients

and the implementation of the first pilot projects, the IJV was running as expected. After six months of existence, the implementation of the first projects was successful and most of the recognized firms in the local market were already engaged in the process.

Although most countries in North Africa and the Middle East are constantly flashed by the media for its social and political hazardous circumstances, mainly since the Arab Spring revolution that has taken off in 2011, Egypt has been the focus since the election of Mohammed Morsi. As the case study refers, the member of the Muslim Brotherhood was

Political Risk (Dynamic) Index: Top 20 Growth Markets			
	Country	Rank	Rating
1	China	61	High
2	India	35	High
3	Indonesia	60	High
4	Viet Nam	70	Medium
5	Bangladesh	33	High
6	Brazil	109	Medium
7	Philippines	29	High
8	Nigeria	16	High
9	South Korea	161	Low
10	Malaysia	123	Medium
11	Russia	17	High
12	Tanzania	83	Medium
13	Singapore	180	Low
14	Hong Kong (China)	177	Low
15	Peru	97	Medium
16	Thailand	63	High
17	Egypt	27	High
18	Colombia	49	High
19	Turkey	71	Medium
20	Uzbekistan	43	High

Figure 15 - Political Risk Index, 2013

the first democratically elected president and the 5th of the line, dividing the country in a conflict that went over political issues – it was strictly bonded to religious tensions. Such emerging countries, while being oil producers, will always be an attraction for international investors, and therefore corrupt governments’ revenues will always be unbalanced with the population quality of living. In 2012, Egypt has been considered in high political risk for its very poor political freedom and medium societal gains. As one can see in Figure 15³⁴, the situation did not improve in 2013, being Egypt ranked as the third country with higher political risk of the top twenty growth markets in the world, rank were it occupies the 17th position.

Installed the chaos, the managers found urgency in making a decision on whether it would be worth to continue in the country. The strategy that would define the structure was threatened by the market conditions, with Egypt on the red spot for its striking instability and social revolution.

For the analysis of this question, I am going to set forth the options that the company had at the time, with the pros and cons of each as well as the stakeholder’s perspective, in order to reach a better conclusion.

Firstly, one should notice each of the stakeholder’s position³⁵ on the future of ISA Middle East:

Stakeholders	Stakeholder’s Concerns
Customers	Projects on course; costumer care
Employees	Job security; self-security; communication
Suppliers	Possible loss of business;
Shareholders	ROI; ISA’s image and position in Alternext; company’s protection
Owners	Succession planning; profitability; longevity; workers protection; company’s image.

Figure 16 - Stakeholder's Concerns on the Future of ISA Middle East

With such concerns to be considered in the decision, the options and their impact have now to be drawn:

Hold the IJV in Cairo and wait for the storm to go away

³⁴ Source: Maplecroft’s Political Risk Atlas (PRA) 2013

³⁵ Only the stakeholders which could be affected by this decision are going to be considered

As the conflict is the main cause for the country's instability, the advantage of holding the IJV in Cairo will be for ISA to be able to continue the operations after its resolution. However, how long was it going to last? For how long could the firm sustain the costs of an IJV in stand-by for an unforeseeable amount of time? Moreover, employee concerns on their own physical security, in addition to the shareholders and owners concerns, would be unsustainable to alleviate without a withdrawal.

End the IJV and withdraw the market for a considerable time

Considering the pros and cons of the last option, the end of the IJV would be a good option. Nevertheless, it is crucial to consider the investment made in the market since the strategy was defined. It is also important to remember the contracts on hold due to the crisis and the potential profitability ISA could gain out of its clients.

On one hand, this decision would be consistent and respectful for the security concerns, but ISA would lose the track of the market because the IJV timeline was insufficient to gain enough reputation and experience. And as the case indicates, you have to be in the market to actually know it.

Furthermore, by leaving the market, ISA's competitiveness would drop in that market, as a competitor will soon find its way in with the same vision for the oil & gas potential.

Transfer the IJV investment to another market in the same region

The option of transferring the investment to another country that could also reach the same target market ends the strategic problem, but brings up other problems. For starters, transaction costs will obviously arise, as there is the need for market research, new office, new partner and a strategy adapted to the new market reality. This investment might be partially put off with the sale of the offices in Cairo. Dependent on the location choice, it would also please most stakeholders and assure ISA's competitiveness and security in the region.

Change the strategic alliance to a non-equity mode

Ultimately, for ISA to safeguard its image, it could sell the offices in Cairo and make a commercial agreement with an interested technological firm of their trust, which would continue its projects on course. In this way, ISA could work as a supplier, maintain its products on the market and although it wouldn't be able to work as a subsidiary, it would not have the high costs of holding for the storm to pass either.

In conclusion, there were many options on the table that could damage ISA. Even though it would be unable to please all perspectives, whatever the decision is, a combination of them might address the main concerns. However, a market where ISA can take such a leap in its internationalization, due to the potential of Oil & Gas in the region, could not be dismissed.

If I was seated on the administration office that day, with the data presented in the case study, I would have chosen to give a license agreement for the sale of my products in Egypt to an interesting firm with large experience and knowledge of the market, preferably one with reputation in the field of telemetry or, at least, of business intelligence solutions. As for the market, resilience is always a quality when it is done in an intelligent way and therefore, I would have not given up. Another investment would require money and time, but it would for sure be rewarded with a profitable business development in a new market. The choice of the market, as the research team had previously done when they have chosen Egypt to set up the IJV, would also be clarified with the exclusion of the ones with high risk indexes for investors, due to the probability of a civil war be triggered soon or due to the fragile political stability at the moment. That would have left me with UAE, Saudi Arabia and Jordan as potential markets for entrance³⁶.

In both Saudi Arabia and Jordan, the firm already had commercial relations through representatives to whom ISA had given a license agreement and the UAE were the financial center of the Middle East at the time.

Among the United Arab Emirates, Dubai and Abu Dhabi are the most important and rich cities. As one can see in Figure 17, contrarily to most Arab economies, Dubai has a completely different offer for investors. Being attractive for investors worldwide, Dubai has high reputation and a mandatory location for the most internationalized companies in the last decade. It is the financial center of the UAE as well as its most developed location.

But why is Dubai so developed compared to other economies surrounding it? Figure 17 represents the main example of how blue ocean strategies can redefine the whole environment. With a \$275.8 billion GDP in 2012, Dubai grew up to be one of the fast-growing economies worldwide, by diminishing its oil & gas revenue from 30 to 5 percent in a decade according to the government's strategy. Among the characteristics that make it so appealing for foreign investors one can find a low language barrier, free trade zones, very low corporate

³⁶ Maplecroft's Political Risk Atlas (PRA) 2013.

taxes, low complexity for setting up business and the freedom to repatriate 100% of capital and profits.

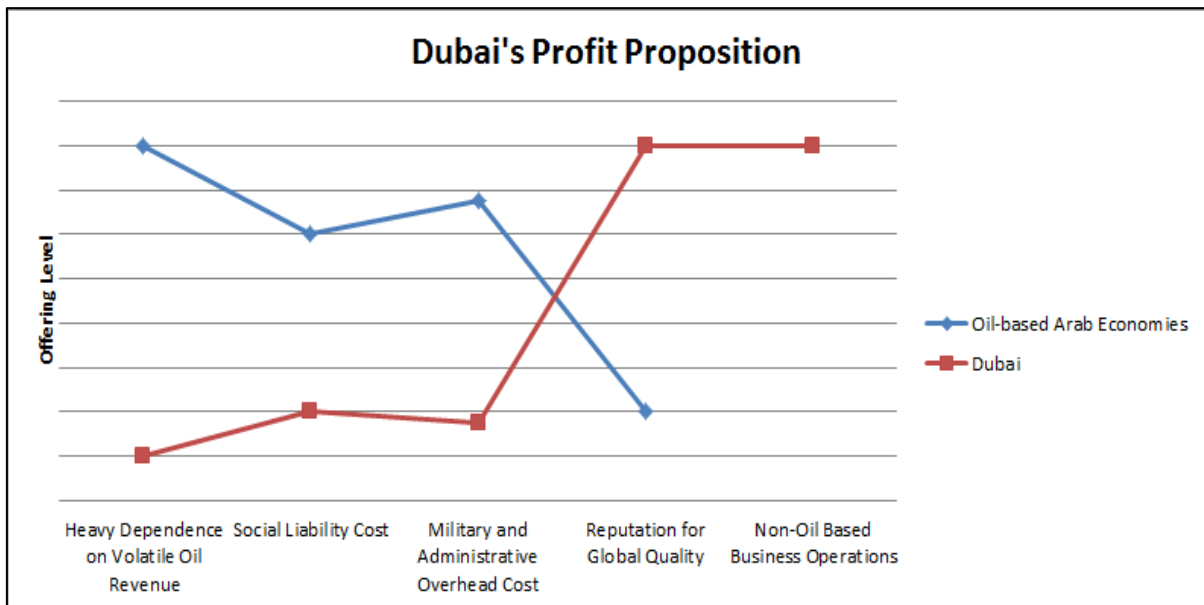


Figure 17 - Dubai's Profit Proposition³⁷

Such reputation made Dubai an investors' paradise. As the Oil & Gas business does not represent a great share of the whole economy of Dubai, ISA would not find a great amount of direct competitors. On the contrary, it would find better business opportunities still having the ability to reach the whole Middle Eastern countries that surround it with the benefit of not having the high risk to suffer from a political crisis.

4.6 What Happened Next?

Offices in Cairo

Isa decided to cease the activities of ISA Middle East in the end of the year, given the existing social and political instability in Egypt. The transfer was done to local shareholders who closed the office and started its liquidation after January 31, 2013.

The team

The Portuguese expatriates in Cairo were later sent to the offices in Shenzhen, as they were already experienced in controlling ISA's operations abroad and were willing to go to the offices in China.

³⁷ Source: Kim and Mauborgne, 2009: 7

The Managing Director of ISA Middle East, Wahid Tawfik, went to Texas, in USA and is at the time working as an independent consultant, for he was not willing to live in the Egypt's insecurity anymore.

The Egyptian members of the team were willing to start their own company in Cairo, in spite of the instability– it is where their roots are.

Representation Agreement

The new company, EMS – Energy Management Solutions, undertook ISA's contracts, clients and projects as it was a win-win situation for both companies. For ISA, it was an advantage that someone who already had been inside the company, with experience and knowledge of the sales process would “*seal the deal*” and carry on project development of the projects that had been on hold since the exacerbation of Egypt's situation. Moreover, ISA would maintain the possibility of continuing doing business in the country not only in the short-term, but over the years through a representation agreement with EMS.

The Relocation

The thought of ceasing activities in Egypt did not cease the willingness of continuing the exploitation of The Middle East. Although the instability in all the countries in the area would be hard to surpass, the Emirate of Dubai was clearly the financial center of the Middle East in 2013. From a deep transformation and restructuring of the economy over the last 30 years due to the discovery of oil in the region, the United Arab Emirates (UAE) had brought itself from an impoverished region to a modern state with high standards of living.

Although the UAE were considerably affected by the world crisis, it remains attracting foreign investment through the Free Trade Zones of the region.

Consequently, ISA is now in the process of relocation of the Cairo IJV's investment to Dubai, where the firm already “found an interesting partner, a team and prospected new clients” – as Henrique Pereira stated.

With the transfer of the IJV, the company was able to get out of a dangerous situation that it had in Egypt and to strive for better success in the crowded Dubai, while maintaining its presence in Cairo through representation.

The strategy for Dubai is mainly focused on reaching the members of GCC (Gulf Cooperation Council), including Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and all the states of UAE.

V | Conclusion

My work on this dissertation enabled me to acknowledge the difficulties a SME needs to surpass in order to establish successful strategic alliances internationally. This allowed me to develop my perception on cultural dimensions and how, in a fast-paced world of technology, innovators are the ones taking the lead of the industry.

Moreover, my interest in business administration grew up to be focused in international negotiation and in international strategic alliances, and thus, it was a pleasure to deepen my knowledge on these themes. On the contrary, increasing my knowledge on the flow of telemetry systems and business intelligence was harder. However, against my expectations, it brought on the appeal to work in the industry. For future research, I recommend this theme to be treated with financial data, to which I did not have access, and to be analyzed on a 3-year time scope, in order to better evaluate the financial impact on such decisions in SMEs.

This master thesis aimed to send the message that the “business war” does not end once you are successful in a foreign country. The thesis highlights the case of ISA, a SME which was able to achieve innovation international awards, to reach more than 20 countries and to establish a stable IJV in Egypt. Still, the managers had to use their “intelligent senses” to step up to the options they had on their hands at that time, within a situation completely created by an external force, that is, the political upheaval lived in Egypt.

This fact enlightens the reality of emerging countries where firms from developed countries are trying to catch the wave against saturated markets and their financial crisis, and end up finding themselves affected by the underdevelopment of those regions, which somehow impacts their business strategies.

In fact, technological SMEs have great potential to accomplish international success, because their innovative capacities and higher flexibility make them more likely to opt for Blue Ocean strategies and disrupt the existing market. This business model requires firms to design strategies that take into account different market realities and, even more important and as a mandatory point for success, requires that a company has clear notion of the competences, resources and knowledge that it owns and that it lacks. In this way, companies will be able to find host country partners that match their needs, and, therefore, to build the grounds for a successful market entrance.

Finally, it was of great interest to realize the strategic decision making process in the resolution of this issue. ISA was able to: cease ISA Middle East and reallocate the expatriated employees – putting an end to the stakeholders concerns; Transfer the investment to start a new IJV in Dubai – a fast growing market that would assure ISA would be able to compete in the Middle Eastern Market; Change the strategic alliance in Cairo to a non-equity mode – assuring its clients would receive customer care and the implementation of the projects would be done.

The firm was the global pioneer in the launch of telemetry solutions via GSM for the remote monitoring of tanks, grids and GPL counters in the 90's, and that aims to create a smart world.

How far will it go?

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