1. Introduction

This study focuses on the topic of opening subsidiaries through internationalizing in East Asia in a specific context: the industrial transformers and reactors market. After having reviewed the main literature that touches this or part of this subject, and helps defining the tools with which to conduct the research, two personal quantitative analyses will follow.

The novelty of the first part comes from the counterfactual analysis made on companies in the same industry segment and market that invested in East Asia, when compared to companies that did not invest, that served as control variables. These results will be then crossed to the results of a survey conducted on an employee sample of 163 people, all belonging to companies operating in the industrial transformers market.

Main findings demonstrate how firm specific factors and situational factors have the strongest impacts on the market overall results, and they all lead to the “Global enterprise theory”. It explores the quantitative effects and impacts, both tangibles and intangibles that a Corporate Business can benefit from when it enacts in internationalization.

I personally have worked what will be further on referred as “The Company”, which is a player in this specific market, and through the knowledge acquired in the Business Development department, a deep research and empirical studies conducted and further explained in this paper, questions regarding the following focuses will be observed in order to find acceptable clarifications:

- Do investments in the East Asian market reach break even and high sales growth within 4 years?
• Are companies required to have specific characteristics in order to have a successful international expansion?
• To what extent are the benefits from the new foreign branch extendable to the Corporate Business?
• Are there intangible benefits attainable by internationalization strategies?
• Are these internalization benefits leading the market to an evolution or phenomenon?

2. Market Overview

The market segment of transformers, reactors and electric motors, market which is object of the thesis, is populated by:

• Few large international players, which entered the European market establishing local subsidiaries and production sites, or selling the products manufactured abroad;
• A large number of small-medium sized domestic companies (most of them family owned) characterized by local production sites, a regional focus as well as an high specialization. As part of the internationalization process, during the last years many European players established production sites abroad (especially in Asia and emerging markets).

It is highly competitive due to the strong attention to the product marketing strategies. Companies are in fact forced to continuously widen their portfolio to satisfy client’s needs always on change, and find alternative uses and applications for their existing products. Another key driver for the companies’ growth, which is affecting the market especially in latest years, is the internationalisation process through the establishment of production sites in foreign and emerging countries in East Asia, Eastern Europe and Southern America(The Company fully reflects then the need for investments in the just mentioned geographical areas). Emerging markets represent significant opportunities for both the development and the renewal of electricity transmission grids as well as for the expansion of the local industrial manufacturing activities, having a particular focus on the improvement of energy efficiency. A further important driver for the growth, is their demand for the development of renewable energy production plants (mainly solar...
and wind energy), which are usually located far from the final users and require specific technologies for the energy transmission.

The transformer market has not witnessed many technological or product innovations, mainly because of the lack of incentives for spending on research and development and the costly expenses associated with it. Most of the innovations in this market are limited to trying different transformer core materials or insulation materials.¹

It is clear then that the positive correlation between one’s country economic growth and their demand for energy supply, easily integrates with the chance of investments in production capacity, and know-how and resources transfer to these above said areas.

Throughout years 2000 and 2006 (with the peak being in 2003) almost every competitor of The Company undertook investment and expansion strategies in East Asia and more precisely China, Hong Kong and Taiwan; no surprise indeed if China had become in these years the world’s largest recipient of FDI, that is foreign direct investment (UNCTAD, 2006).

The percent contribution of the various geographic regions to the world transformer market revenues in 2008 is as follows:

- North America - 28.5 percent
- Latin America - 3.6 percent
- Europe - 14.2 percent
- Asia Pacific - 47.6 percent
- Rest-of-World - 6.1 percent

3. Hypothesis from literature review

Companies in each industries and segments have to make serious problem solving when deciding whether to invest in a country abroad, the amount of the investment required and come up with a final decision on the ultimate way in which they want to be present in that specific market. The industrial and electric transformers and reactors manufacturers worldwide in the years 2000-2006 had to face this challenge and today we could see just the results of the choices and strategies implemented back then. For 85.7% of these players, being them 17 European and one Mexican, opening new branches in Asia was a first time in their company life and certainly the cultural barriers

¹ Frost & Sullivan (2009), World Transformer Market, Conclusion
were playing a blocking role in the prompt and ready investment. Sure is that behavioral evidence tells us that in this decision making process a determinant could be the need for control for firms (Cespedes, Frank V. 1988. Control VS resources in channel design: distribution differences in one industry. Industrial Marketing Management, 17; 218-29). The main objective is indeed for firms to gain the highest adjusted ROI, and with higher control there could be no regrets on how the operations were managed, as higher control means higher ownership, or full ownership, higher investments and resources allocation and as well higher risks connected to the more decisions and involvement that comes with them.

John Dunning for this purpose created a framework that integrated all of the above mentioned variables being: the ROI, the control of a firm on another one, the resources allocation, and the risks to bear (Dunning John H., 1988. The eclectic paradigm of international production: a restatement and some possible extensions. Journal of International Business Studies, 19 (Spring) : 5-28). There are some market specific and firm specific independent factors that Dunning pointed out that affect the 4 dependent variables, and integrating them in his work, he gave birth to the OLI model where O stands for Ownership, L for location and I for internalization.

1)Ownership: the two factors affecting the ownership need are the size of a firm, that the greater it is, the more likely it can lead to “multinationality”, and the portfolio of skills that may enhance differentiated strategies. This is because in order to expand, exploit economies of scale, and absorb the costly marketing expenditures for promoting the new business and enforcing patents and licenses, companies need to have a great amount of assets and skills; only with this combination they could effectively compete against the host firms in the country where they invested. The most preferable option for large companies is then the sole venture/fully ownership for different reasons:

- Since there is empirical evidence regarding positive correlation between firm size and FDI, large firms with relevant assets can have the chance and capabilities to solely invest abroad.

- Larger firms usually have more international experience and by exploiting it they can engage with lower risks in sole investments abroad; firms which do not have these features are instead more likely to not invest at all or to license (Caves Richard E. 1982. Multinational enterprise and economic analysis. New York: Cambridge University Press).
Companies when implementing a differentiated strategy, the latter have to be protected by host countries firms or by the invested company itself, to prevent that key employees could leave and implement somewhere else. For this goal a tighter control on the subsidiary results to be smarter, precautious and effective.

2) Location: the attractiveness of a location where investment is being thought of depends on its market potential in primis and on the its investment risk considered as the risk stemming from the legal, political and situational environment of that specific country or area. If the market potential is high, as it was and still is in East Asia, it is expected to happen a more controlled mode of entry because marginal costs will decrease in medium long term and profitability will drastically grow. Conversely if the investment risk is high it is suggested to not invest at all or enter with low investment ways.

3) Internalization: internalization has to do with the contractual risk and the disadvantages coming from bureaucratic integration of two or more companies (Williamson Oliver, 1985. The economic institutions of capitalism. New York: The Free Press.). In this case to overcome these risks a lower control would be better off, if it wasn’t for the fact that much is left to the autonomy of delegated managers: if these are not able to predict contingencies a company could incur in bigger losses and inconveniences with respect to the bureaucratic costs of integration. It is then suggested to prevent the contractual factors to invest with big control on the foreign subsidiary.

4. Methodology 1: Financial Statements Analysis

The 21 companies that were briefly illustrated in the second chapter will be here analyzed taking into account the years of investment in East Asia for each one of them and then compared to check for the best outcomes. Bivariate analysis between the results will be conducted with SPSS to check for the most significant variables that led to a higher profitability. Between quantitative variables analysis of correlation through correlation with T-test will be conducted, while for qualitative and quantitative variables together analysis of variance with ANOVA tables will be conducted through comparisons of means. The 8 companies that did not invest in East Asia will serve as control variables. Average of the outcomes will be compared between the two groups to assess
if opening branches in the market of industrial transformers and reactors was really a concrete opportunity for higher probability results. It has to be said also that as the previous literature explained us, the high results attained from investor companies may come not only from the mere fact that they opened branches in a high rate of return area; in fact their inner capabilities, as a multinational corporate/company, allow them to adjust easier, faster, and with higher success rate to any foreign country, with respect to smaller companies that do not possess these skills and blocked by fears, commitment requested by the operation, involvement, and amount of capital needed, they directly chose to not cover a foreign far market.

Out of the companies that invested in East Asia, results will be crossed between the results attained at home and the ones attained singularly by the new firm, the so called “newco” born after the injection of capital. For the companies that did not commit to a foreign investment results will be checked only in the financial statements of the corporate company (at home). The end results again is to check how much contribution, the foreign subsidiary can guarantee to a corporate in the medium run, and what is the main final difference in years between companies that invested and companies that did not. Who grew more? How much did debt contribute to the growth? How much did equity contribute to the growth? How profitable is to open branches outside home, and how long does it take on average to cover the costs of the investment and reach the break even?

These above questions could be answered through a series of ratio that are commonly used in the business practice and some other designed ad hoc for this project.

What will follow now will be the ratios that I deem as important to analyze and the premises related to them that led me to choose them:

In the B2B of industrial transformers the mid-end 90’s business practices for growth, consolidation and higher profitability for MNEs were represented by the opening of new branches (in different possible methods, including M&A). The operative activity of the Newco could result in high expenditures allocated for its goodwill, machineries, transfer of knowledge, plant rent, qualified personnel hiring, etc. in the medium-long run on the other hand could dramatically improve the overall performance of the Investor Holding/the whole Corporate Business. The new foreign company not only will produce its own streams of revenues and will affirm its independence, but could indirectly refine upon the economic and financial results of the company that wanted and invested in its birth.
To assess the positivity of the investment choice *ex post* the following measures could be used; where the coefficient states “Consolidated”, the data should be gathered from the overall result achieved by the group, while where stated “local” only the result achieved by the new subsidiary will be essential (note: the ratios will be considered after a time horizon of 4 years, deemed as the right period to assess investment results in this segment).

1. **(Local/ Consolidated) Foreign Subsidiary return on Investment FSROI:**
   Incremental Revenue (from subsidiary, and global but amenable to the branch opening) - Investments on Subsidiary / Investments on Subsidiary: The greater the operative success on the total amount of investments that led to the branch opening, the better.

2. **(Local) Foreign Subsidiary Marketing ROI FSMROI:** Incremental Revenue (from subsidiary) - Marketing Expenditures / Marketing Expenditures.

3. **(Consolidated) ROE post-Branching / ROE before-Branching -1:** growth rate of the ultimate profitability measure across time.

4. **(Local) Break even Rapidity:** years used in order to reach the break even after the first opening (payback period and NPV calculation).

5. **(Local) Correlation between type of Internationalization used and ROE achieved:** Ownership, Joint Venture, Export, etc. Ownership can be reached through a brand new opening, or through a merger or an acquisition.

6. **(Local) Market Shares %:** at a local level and its growth during time, and as well.

7. **(Consolidated) N° Radically new clients/ Clients already in Group portfolio:** the more new clients over the total clients are acquired, the better the business acquisition of the opened branch worked [*clients are the most valuable asset in the B2B, therefore new clients acquisitions most likely will contribute to boost sales volumes and cash flow generations in the future*]

8. **(Consolidated) EV change %:** no matter the evaluation used (preferably an evaluation that takes into account Brand Value) EV change % shows the goodness of the investment in the foreign country; Brand Equity (I) = Effective Market Share (%) * Relative Price * Durability (Loyalty Index).

9. **(Consolidated) Market Shares %** = how the consolidated market shares increased/decreased and how much of the change can be due to the “Newco”.
10. Exit of the subsidiary from the market.

5. Methodology: Company Survey

This section of the research focuses on the results coming from the 163 respondents to a company survey that was drafted for the purpose of finding “other” benefits, negative sides, intangible benefit (off balance sheet) that could stem from branching out strategies. This was done by collecting answers from employees, managers and in some cases directors, of The Company and 3 other firms playing in this market but on the clients’ side. All of the four companies internationalized in East Asia, and it was indeed asked to respondents to think about that process (if they were already working in that environment) when giving out their answers. The survey was composed of 20 total questions and the method used was by email with attached the link of the survey composed with the support of Qualtrics. Most of the questions are in Likert scale format with evaluation range from 1 to 10 in order to avoid the possibility of neutral answers, and also to have more quantitative date rather than qualitative. It would normally take up to 10-15 minutes for a person to successful answer to all of the questions included in the survey. Questions aimed at:

- Qualitative data: always with defined answer range, and nominal type;
- Quantitative data: all of them interval type except for age where it was used an open question because it was sure that the output would be a number.
- There is no question that involves a comment or a not analyzable data, in order to ensure generalization of data.

The first part is characterized by behavioral questions, seeking to find out the actions, and the reasons behind actions taken by companies of the transformers and reactors market. Question number 5 is a conjoint question, of which the 9 scorecards were properly generated by IBM SPSS software through an orthogonal design that helped restricting the field of research. There are importance questions as well as perceptions questions up to number 14, while the last ones are primarily demographics. In the responses collected there have not been any outliers, probably due to the strict interval already provided in the possible answers and the digital format of the survey that reminds when mistakes or missing values are in place.

6. Results and managerial implications
By following the main research questions outlined in chapter 1 we will now follow with the main outcomes and relative implications.

- Do investments in the East Asian market reach break even and high sales growth within 4 years?

The Balance Sheets of foreign subs were analyzed and the 3 ratios and variables that have relevance here are Foreign subsidiary Return on Investments (FSROI), Foreign subsidiary Marketing Return on Investment (FSMROI), and Payback Period. Only 15% of companies were able to achieve high results in everything, where more in general 25% achieved high FSROI and 31% achieved high Payback Period. We conclude from this that some companies focus on economic results and cash flow management and others focus on generating revenues through dumping.

- Are companies required to have specific characteristics in order to have a successful international expansion?

Successful companies show some common characteristics findable in:

- Large corporations;
- Multinational experience prior to foreign investment;
- Attained high FSROI abroad with a 3 year payback period.

They did not share the same entry mode, but still a very similar approach: one invested in joint venture (with majority interest), while the second one established two fully owned companies.

The main differences on the other hand could be found in:
one invested the minimum in the market (Trafo U-NION with 1.5 $m) and the other one was the second biggest investor (Click with 9.8 $m)

This outcome is supported by the conjoint analysis matrix of importance that appears like this:

<table>
<thead>
<tr>
<th>Importance values</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial_investment</td>
<td>27,837</td>
</tr>
<tr>
<td>Control</td>
<td>41,342</td>
</tr>
<tr>
<td>Prior_International_expertise</td>
<td>30,821</td>
</tr>
</tbody>
</table>

Average importance level

- To what extent are the benefits from the new foreign branch extendable to the Corporate Business?

By running correlation tests through SPSS between local subsidiary results and corporate consolidated results the following points stood out:

- Low local payback period = Better consolidated EV/EBITDA multiplier
- A better evaluated company (EV/EBITDA) = more capability to increase its international reputation and attracts motivated employees
- High FSROI = higher consolidated market shares growth
- Prior to operations international expertise = overall consolidated better performances
- Low local payback period = higher consolidated ROE CAGR

- Are there intangible benefits attainable by internationalization strategies?
According to the intangible benefit attainable, defined in the analysis as a standardized factor, 3 clusters were outlined representing the population of players in the industrial transformers market and the behaviors and strategies implemented by such players.

1. All-Arounders: this cluster represents the majority of the market and is composed by companies that internationalize as a follower strategy. No factor has an impact substantially in a positive or negative way and it looks like they branch out as a form of survival in the market, as a form to stay competitive just by attacking a market portion and signaling their presence. They do it empowering employees, but without transferring great resources or know-how to the new foreign subsidiary and they do not seem to quickly respond and adjust to the customer needs. They care more about giving continuity to the business than making profits in the financial year, and they surely don’t prioritize creating brand identity over consolidating a material market presence. It employees though feel like they are working in a successful environment and they feel like they all give a small contribution to the company results; unlike the other two clusters, probably because everyone thinks is worth the same, they share a very collaborative mindset.

2. Profit and brand identity snipers: these companies accounting for more than 20% of the market population are driven by 2 and only factors and are highly goal-oriented: making high net profits and having their brand recognized for this reason internationally. They are Machiavellian as they would do anything to reach these goals and objectives, from spending/wasting money for hidden purposes to exploiting both customers and employees of which they have an extremely low consideration. On the other hand the employees that work in these firms are really bold and give valuable suggestions to the management; this could be due to the fact that they really feel part of a multinational successful identity, and they feel the responsibility to do more, even though they do not receive the proper company gratitude.

3. Stakeholders-centered: these companies represent the minority of the population (nearly 15%) and are extremely attentive and careful about the stakeholders’ management. They prefer to be proactive rather than reactive to the environment, and their first priority are their own employees or internal stakeholders. When opening a branch abroad, they make sure that all of the know-how among intercompany is passed and absorbed, in order to build synergies. Their second priority is represented by the customers for whom they try to be the most responsive as possible to all requests. Their ethical conduct sees the other factors as neutral to the business strategy, and
they may think identity and reputation should come along as a consequence of their primary strategy. The employees of this cluster are intensively motivated to work in such an inspiring work environment and are granted business trips to the foreign branches as rewards or in order to increase synergies.

Arrived at this point we now have enough evidences and results in order to draft general managerial implications related to this market. We have seen in chapter 4 how company size and investment amount are not good predictors of how well a corporate can do in East Asia, and receive benefits at home. We also found a similar finding in chapter 5 where in the conjoint analysis “investment type” was the least important attribute of the entry mode function. As suggested by the previous literature, by the investing firms and by the market research on the other hand the control over the subsidiary and prior to the operations international expertise and experience are good predictors of the home return that a corporate can get from investments in East of Asia. Companies that invested with new establishment or full shares acquisition had higher results than companies who entered the Asian market with a less controlled system. Furthermore the companies that were MNEs before the investment abroad outperform companies who become multinational for the first or second time.

The latter is a firm specific and situational factor which is a function of time and its usage. Managers that find themselves working for a company that does not have this feature when internationalizing face a lower function that the optimal one given out by the conjoint: it will be up to their skills, flexibility and adjustment to the geographical area to try to compensate and still be successful.

Companies of the investor group thanks to their high FSROI, FSMROI and low payback period all in the East Asian market were able receive a valuable contribution that ameliorated their EV/EBITDA. Companies with a better evaluation are more likely to increase their credibility and international reputation (mean of 8.72 in the survey, rated as the most important attribute) as well as attracting the best employees (employees’ satisfaction was the second most important attribute with 8.7 mean). Again companies that invested abroad and prudently managed their cash flow generation in the subsidiary demonstrated to have a very positive impact on the ROE CAGR at a corporate level; at this purpose one of the finding of the bivariate analysis of the survey was indeed that when seeking for profitability, companies are more likely to grant employees’ loyalty and satisfaction. As seen in the financial statement analysis though only a few companies such as Trafo U-UNION and Click Technology were economically
successful in all of the fields examined. This makes it consistent to the clusterization made in the market research that predicts in the population worth 20% of profit seekers that was here named “Profit and brand identity snipers”. What about the rest of the firms present in the market that invested abroad then? The main cluster, the “All-Arounders”, is worth almost 63% and as previously explained features a group that follows the operations abroad to stay competitive. It has to be reminded that out of the 163 respondents nearly 40% indicated the description “vital for success” related to the branching out in Asia strategy.

“The shift from multinational corporation to “globally integrated enterprise” has assumed two distinct forms. The first has involved changes in where companies produce things; the second, changes in who produces them. Until recently, companies generally chose to produce goods close to where they sold them. As a consequence, most foreign investments targeted specific foreign markets. Today, overseas investments continue to be made with a view to gaining access to important sources of foreign demand, but companies are investing more to change the way they supply the entire global market. The global integration of production cuts costs and taps new sources of skills and knowledge” (Samuel J. Palmisano, 2003. “The globally integrated Enterprise”, Foreign Affairs). This passage was taken by an article from Samuel J. Palmisano, former chairman board, president and CEO of IBM. When he talks about a globally integrated enterprise compared to the well-known MNE he wants to make a fine distinction between the past way of doing business, and the one characterizing our present. The liberalization of trade and the huge steps forward taken by the IT made it possible to shift the focus of corporate globalization from products to production; this means that corporates now have the choice to enter a market not only because it's geographically close to the target market, or because of cheap labor (that is still often considered a primary reason to move businesses in East Asia), but also because they can finally focus on their strengths and integrate the rest of the production and value delivery where its partners or subsidiaries are perform the best. That's in fact the explanation why the investing group outperformed the market more with respect to the investing group (111% against 99%): by integrating production worldwide a corporate evolves with an international footprint that becomes a trademark. As found again in the bivariate analysis when a company seeks international brand identity is more likely in this market to attract and retain new customers, inestimable asset for every business company.
What had been observed and analyzed in this research was then the global integration of the players in the industrial transformers and reactors market, and the international actions and investments taken until today are definitely going to shape dramatically the future scenario in favor of those who, although without a clear goal (such as “profit and brand identity snipers”, or “stakeholders-centered”), will have this worldwide footprint to be used in an optimal way.