



TECHNICAL UNIVERSITY OF CLUJ-NAPOCA

ACTA TECHNICA NAPOCENSIS

Series: Applied Mathematics, Mechanics, and Engineering
Vol. 61, Issue IV, November, 2018

OFFSHORING FOR COMPANIES SPECIALISED IN SOFTWARE FOR AUTOMOTIVE

Marius GAL, Claudiu V. KIFOR

***Abstract:** The scope of this paper is to present the reasons why an automotive company, in the context of global market, should do offshoring for its Research and Development department or its software departments. Also this paper reviews what has been written until now regarding the offshoring process. It will present the motives why a company did the offshoring process, how a country and a region should be selected based on certain criteria. Here are presented the biggest four categories of reasons why a big company is starting or expanding the internationalization. Advantages and disadvantages are presented, in order to know both the advantages and the potential risks. In most of the studies, the offshoring is discussed from the manufacturing point of view, but these valuable lessons can be applied to the software or IT department from a car maker. Strategic options are presented to have a clear view about how to approach this process. The main method used in this article is the qualitative research on what other authors have written until now. The goal of this paper is to present why and how offshoring can help a company from the automotive sector to reduce the costs and to obtain a higher quality in the final products.*

***Key words:** Offshoring, management, R&D, automotive, software, Research and Development.*

1. INTRODUCTION

In a global automotive environment, the economic balance for every company needs to be carefully adjusted. Because it is a global market, the competition is very strong and dynamic, firms are trying to improve the processes and it can add more value to the final product in order to be more competitive on the market; when discussing about costs reduction, the department of the Research and Development (R&D) operations, is worth to be taken into consideration. According to [20], in 2015 the automotive industry had costs of 109 billion dollars, while the costs in 2005 were situated at 70 billion dollars. A lot of multinational companies are expanding their R&D department in other countries, for various reasons, but the main reason remains the cost savings. One solution which can boost the firm's balance on middle and long term is internationalization or offshoring. Traditionally, the offshoring strategy included mostly manufacturing activities, but in the recent years

this strategy started to include also "administrative and technical services as well advanced services and R&D-related functions" [23; 6; 1; 11]. This means searching the best cost country, and in that country the best cost city or region for doing business that matches the company's profile. Krishna appreciates that multinationals from very strong markets began to expand their R&D units in China and India, this meaning a new direction for the R&D centres, which were until 1980's placed very close to the headquarters of the companies [15].

2. CLASSIFICATIONS AND REASONS FOR OFFSHORING

2.1 Interests of companies for internationalization

Internationalization is a good strategic choice, for an automotive company, to reduce the costs. First of all the strategy of a company needs to be set, in order to know what to search for and in what to invest.

John H. Dunning, is the most respected author in the area of taxonomy and his study will be considered a starting point. Depending on the interest of the firms, he categorizes the decisions and plans of a firm to do the internationalization in four big categories:

- a. Resource seeking: in this category firms are looking for natural or raw materials that are not available in their homeland or they are available but at a higher price.
- b. Market seeking: in the current days, the physical presence on the market is important in order to keep away potential new competitors; a natural reason is to pursue in a native manner the suppliers or customers that are already established in a foreign country; in saving the costs with the market goods, a good way is by reducing the physical way from production to final customer and to adjust the products to local needs and preferences.
- c. Efficiency seeking: the first situation when firms are making profit is “take advantage of differences in the availability and costs of traditional factor endowments in different countries”; the second situation is when the companies “take advantage of the economies of scale and scope and of differences in consumer tastes and supply capabilities” [3].
- d. Strategic asset seeking: John H. Dunning sets the last category as the scope of the internationalization is to purchase and complement a new technology asset [3].

When making the offshoring for R&D, this decision must be taken with respect to the plans that can be split into four categories based on the targeted customers of the R&D centre [14]:

1. Centre-for-global: creating new products and processes in the home country for global demand
2. Local-for-local: enhancing products and processes for local markets independently in each external R&D branch
3. Locally for global: augment products for global demand in oversee R&D branches
4. Globally linked: developing products with multiple R&D centres in various markets chained together.

Other reasons for offshoring or internationalization are proposed by Gammeltoft who realizes the next classifications on the basis of an ample empirical research of R&D internationalization [14]:

1. Technology-driven: the acquisition of state-of-the-art local technologies and monitoring technologies of technological trends.
2. Market-driven: incorporating local consumer needs and locating products.
3. Policy-driven: responding to local regulations, participating in local standardization movements and incentives for R&D.
4. Production-driven: technology support for local production branches.
5. Cost-driven: use of local low-cost work.
6. Innovation-driven: the acquisition of ideas for new products in local markets and strengthening the overall product development structure through optimal labour division.

2.2 Reasons for offshoring

According to [8], after seeing the results of a questionnaire about offshoring, which was sent to around 100 purchasing managers from the French market and addressed to companies of all sizes in all industries, some conclusions can be made. This survey took place in 2011 and involved 158 French companies. From 220 answers received, 158 could be used to track down the results.

Without any surprise, the first two reasons for offshoring are about reduction of the cost production, therefore a bigger profit (81.6%); and the second reason is to reduce the selling price of the product, in order to become more competitive (80%). A big surprise was the third reason (62%), was to do the same steps as competitors, who already bought goods abroad. The last cause can be seen as an “imitation effect” described by Moatti [12], a lot of managers believe that deliver abroad, especially in countries with a low cost production can boost the advantage of the company on the market, thus they follow their competitors when they decide to offshore part of their purchasing.

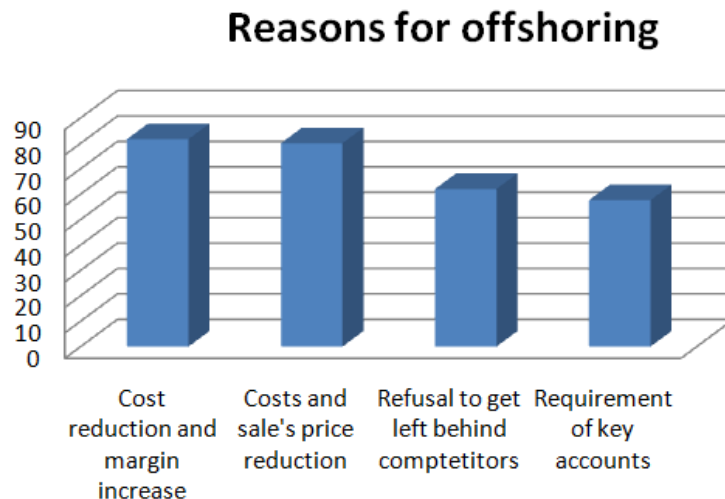


Fig.1: Main reasons to go abroad [8]

Based on the companies' size, the results show that all the firms have basically the same motives; for small to medium sized companies (SMEs), it seems that they have two motives that have a higher priority compared with big companies':

The first motive is denial to be behind their competitors. This reason is very decisive or almost decisive for more than 78% of the small to medium sized companies', but it is less than 60% for big firms. Therefore, the imitation effect is important for small or medium companies, and the reason for this may be the fact that big companies started to offshore years before SMEs.

The second motive, where the gaps are big between small and big companies, is the request of customer key accounts, which is decisive for 75% of small companies, compared with 53% of large firms. The reason for this could be the power of negotiation, power depending on the size of the company [8].

2.3 Benefits

A big advantage in offshoring is that the company can benefit from the capabilities and expertise from the country selected for offshoring; these things can help the parent company to have a higher performance and a better knowledge creation thorough what is called reverse technology transfer, RKT [2; 19; 30].

Another benefit from offshoring, is that relocating low-skill activities and operations can have positive effects on complementary complex activities in the home country [16]. Simpson [17], shows that an analogues result for plants occurs in low skills industries. Becker [1], shows that offshoring in German multination companies, leads to a higher reliance on the high-skill employees and the possibility to have tasks with less routine implied.

All these facts show that R&D expansion is a solution that worth to be taken in consideration and other companies are using it to increase their knowledge, to develop their business and also to reduce the costs.

2.4 Disadvantages

Until now were presented the advantages of offshoring, but to have a balanced view over the offshoring, disadvantages will be presented together with the mistakes that can cost the company in the offshoring process. Song [18] and Fabienne [8], suggests that insecurities and risks related to offshoring can carry the company to unpredicted costs, and counterbalance strong the cheaper labour, or in the worst case scenario can bring losses. According to Farrell [7], the risks that must be taken into consideration are:

1. Costs:
 - a. Labour costs: risks are coming from unpredicted costs that can occur from various reasons like: lower productivity

abroad, or lower quality of the products. Knudsen [11], agree that the higher risk in offshoring is the reduced quality of the product. Kinkel [10] belief that unimposing the risks of low quality, drive the company towards “unexpected expenses for quality securing measures, quality control and coordination costs for the foreign locations in order to guarantee the necessary product and process quality”. It doesn’t mean that if a country has a minimum wage, a wage that for the company seems very good, the people that will work with that minimum wage will have a good quality of their work.

- b. Supply chain costs: offshoring usually implies especially in production area, longer time to deliver the products, and this fact can produce stock deficits; this problems can be avoided by increasing the stock, but this solution brings additional costs also Moatti [12]. Here a study must be made, if increasing the stock will still allow the company to have a good profit from offshoring. Best practice would be to calculate, with as high precision as possible, the necessary time for the product to be transported at its destination.
2. Fillis [9] is taking into consideration the availability of skilled employees. For example if the area where the company plans to do the offshoring, if now exist or existed not a long time ago companies that produced washing machines, the skilled employees will be easier to find, for manufacturing similar products.
3. Quality of infrastructure is important especially because the products made abroad must be transported in an efficient way and at a satisfactory price; and the second reason is because is it mandatory a collaboration between the headquarters and its foreign suppliers or factories, this coordination being made with a lot of visits from the top managers, and for saving time and costs, it is

important to have close to the factory an international airport. Without an international airport in the nearby area, the visits will be harder to be made, and also the personal of the company will be reticent in spending a lot of time just on the trip.

4. Risk profile, here must be taken in consideration political risks, natural events and intellectual-property risk. Regarding the political risks, a good analyze must be made, for the last 10 years to observe how the country evolved and in which direction is heading to. It is important that reports are done by neutral parts, like this the report will reflect better the real situation.
5. Environment: local culture, business circumstances, government help. Government help should be taken in consideration, especially if the politics are focusing in attracting investors.
6. “The fear is that firms offshoring strategic activities will lose the capabilities offshored as new countries emerge with the basic capabilities needed to provide some technology-based services” [18; 24; 27; 11].

3. THE CRITERIA FOR CHOOSING THE BEST COST COUNTRY

In the literature are available some frameworks that can help in choosing the best country for a company. Next frameworks propose certain factors that should be very greatly discussed. These factors can reveal if a country is suitable or not for offshoring. Because these factors cannot be influenced by the company, it is necessary to choose wise the country for offshoring, based on facts and without emotional implication or just because a competitor choose that specific area.

First example studied, is the framework developed by [2], where are taken into consideration eight factors in the help of making the measurements of the overall situation from a country, can be seen in the next figure:

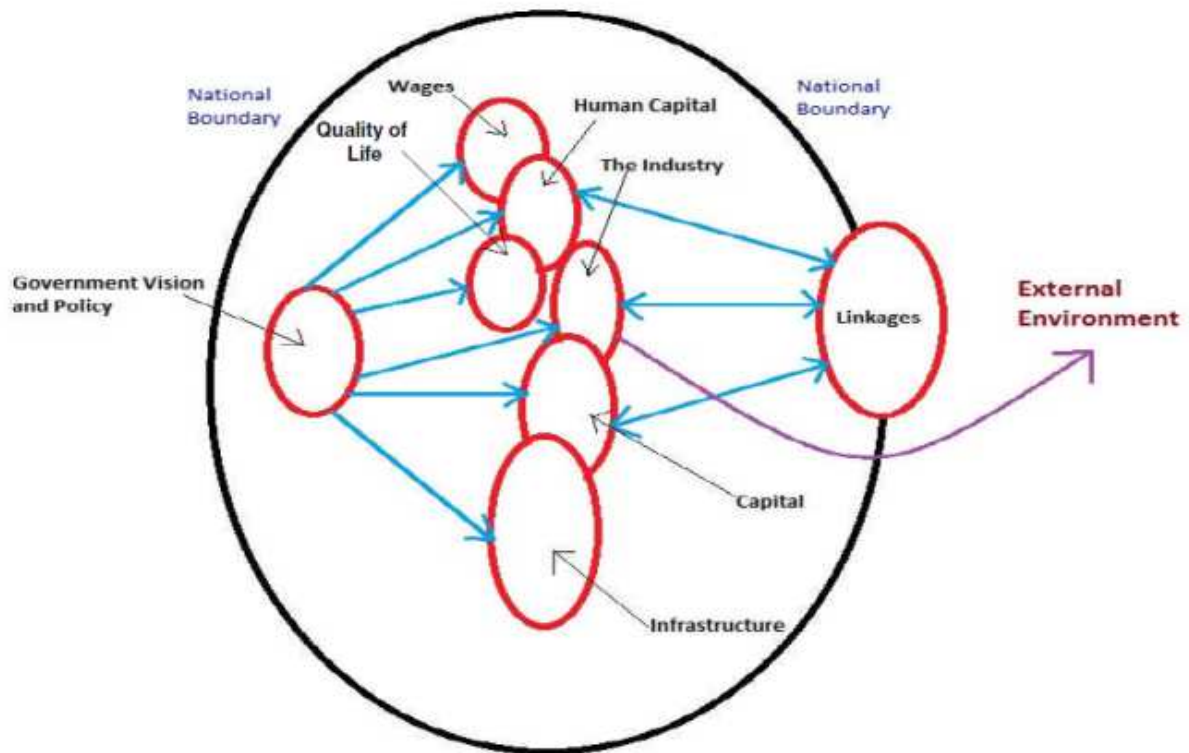


Fig.2: Carmel's oval model for choosing the country [15]

As it can be seen in the Figure 2, the government vision is the factor that influences the most of the factors, so an important study on this factor must be made. It is crucial to have a political stability, with good predictability, a government that is helping the business environment.

The World Economic Forum, finds eleven pillars that can show how appropriate would be a country for offshoring:

In this example, the government plays a secondary role, a role which is limited in influencing the other factors.

These pillars are divided into sub-factors, as for example: Institutions are divided in four subcategories [15]:

- a. Intellectual property rights
- b. Burden of government regulations

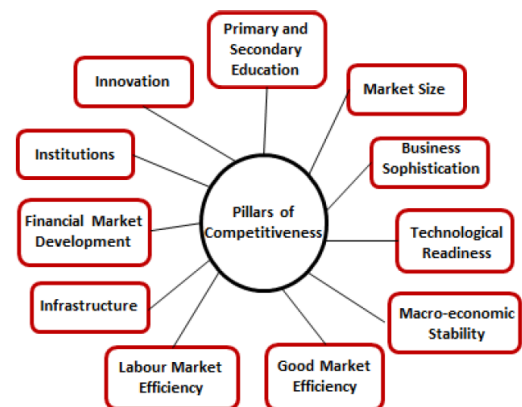


Fig.3: The pillars which help choosing the best cost country [15]

- c. Efficiency of legal system
- d. Transparency of government policy making
- e. Influence of terrorism on business activities

Another example is Infrastructure which is divided in two sub-categories [15]:

1. Quality of overall infrastructure
2. Quality of electricity supply

These eleven factors don't have the same importance when they are taken into consideration.

Pai [15], considers the next factors, from the Figure 4, as the most important:

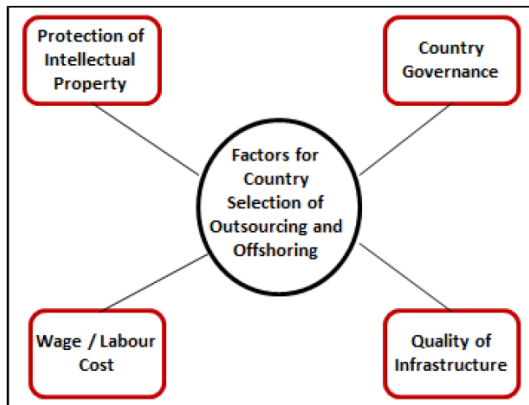


Fig.4: The most important factors of a country for offshoring [15]

The reason for making these reasons the most important, is because these factors cannot be controlled by the company [15]. To find the best solution for the company, the importance of each factor can be set by creating a scale. For example a scale from 0 to 100, 0 meaning the least importance, and 100 signifying the most important element.

In this chapter, it will be discussed each of the most important factors for offshoring. These factors are important for the manufacturing area, but this study that can be easily extended to the IT sector.

Intellectual property

Intellectual property is an important decision factor because patenting requires a lot of money, companies do not patent anything unless it is very important for company's survival, or it is a high-end product, design or technology [15]. Because different countries have different laws regarding intellectual property, this situation must be well studied, in case that it is needed to make sure that, the firm will have the law by her side to protect her in a relatively short period.

Country governance

Either the companies' management agrees or not, the political situation from a country affects the progress of a company, because at the political level are established the regulations, what kind of taxes a company needs to pay, accountability towards the citizens etc. All these

factors play an important role in the development of a country. Also, here must be taken into consideration the evolution of the political context, in order to have a pretty predictable situation for the next years. The political context can take decisions that can influence the wages that needs to be paid both for the state and with the salaries of the employees [15].

Wage/labour costs

In the global market, there is a constant pressure from the consumers, on the producers to create high quality products at low prices [15]. With this objective in mind, organizations try to focus on the core side of the business by outsourcing or offshoring the non-core functions to a service provider who excels in the same way [15]. "Countries in the emerging economies offer a low cost environment, predominantly because they have capable workforce abundantly available at low cost as compared to developed countries." [15]

Because in some of the Asian countries, with fast economic development, the standard of life has increased this means that also the labour wages are growing. This thing made the top management to look for the Total Cost of Ownership when deciding for an outsourcing or offshoring [15].

Infrastructure

A developed infrastructure in a country means that there is available a good network of roadways, airports, railways, good internet speed, quality services in the IT area. Infrastructure is influenced by the politics that drive the country, so their weight in the final decision can be smaller than country governance and labour cost [15].

Until now it has been discussed about how to choose the country in a theoretical way. Further it will be studied which parts of the globe are preferred for offshoring by the French companies.

4. STRATEGIC OPTIONS AND FACTORS

4.1 Analyzing the influence factors

Before the internationalization decision step is made, the strategy needs to be clear and with the main objective precise.

First, a company decides to do an expansion based on various reasons like: market oversaturation, cost reduction, blue ocean creation, and resources seeking and so on.

To take this decision, the managers of the company need to have a discussion based on the weak points of the company or of the market, points that need improvement and can be improved. For example, the company realizes that the market is oversaturated, and decides to search for a new market with fewer competitors, or the costs of producing a product increased a lot in the last two years and an adjustment of the costs is necessary.

In the case that the company decides to offshore a process, the first step consists of the company's management that needs to discuss and to take decisions about which are the most costly processes from the firm, which of them can be off shored abroad, what kind of technology can be taken abroad without a high risk of intellectual theft and the degree of skills needed to fulfil that process. After deciding over the processes that will be placed in another country, the company needs to make sure that has a minimum knowledge in certain areas. A very detailed approach of the costs of internationalization needs to be made, in order that this step is a success, and that it will pay off. Other than the costs, also a specific know-how needs to exist in the terms of offshoring.

Conform [19], for a good internationalization the following types of knowledge are requested:

1. General internationalization market knowledge
2. Market knowledge
3. Institutional knowledge

Market knowledge refers to client's needs, market and opponents; institutional knowledge refers to knowledge about the government, rules and norms that need to be fulfilled [19].

Castellani, [5], states that networks are very important, because through the networks, the information comes first, and also they offer important information, that can change or make the decision of internationalization as final.

According to Fabienne and Eric, [8], the most important sources for offshoring countries decision can be seen in the next figure:

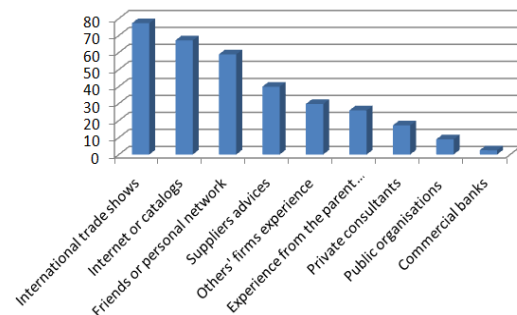


Fig.5: The main sources for information [8]

4.2 Strategy options

According to Cuervo-Cazurro's study [19], a company before internationalization can see if it prepared for offshoring by running in the home market multiple operations, not very close related one to another, this step helping the management capabilities, which will count a lot in the first internationalization. The company should know that the lack of experience in internationalization is not a negative effect, other firms did it and they have reached the objectives. It is important for the company to have good management, able to solve various problems in the internationalization process, problems like Kastamonu Entegre [19] encountered and managed to overcome them, and with good strategically moves on the market, they managed to become one of the leaders in their industry.

A company that does not have the time to wait and invest in a protected market can take the decision to invest in a new emerging market, with certain levels of risks, but with good perspectives ahead. Kastamonu Entegre, for fast capitalization decides to adopt a more risky and active strategy like acquisition, knowing the fact that the opportunities in an emergent market cannot be found very easily and fast. Of course, investing in a new emerging market comes with high risks, but, it also comes with high advantages like the market has a high demand and there are just a few players or maybe no player at all, on the market to support the present demand.

Companies can acquire external knowledge by making alliances with complementary companies, in order to create a better and high

technological product. Alliances can be defined as “formal, legal entities that take time to establish and, being costly in terms of managerial time and attention, must be limited in their number, and targeted to specific needs. In an environment where the nature, location, and type of potential knowledge sources are continuously changing, firms need to develop flexible mechanisms of knowledge acquisition” [21]. Alliances of two companies, for example, can embrace the form of a research project, empirical studies, joint development of a software solution, personnel exchanges, and equipment purchase.

An organic strategy would be the one which follows the steps described by John H. Dunning, in which the company is doing the offshoring step by step, first by indirect exports, afterwards direct exports, next is local production and the last step is defined as consolidated sales and production centers [5].

4.2 R&D point of view

The reason for offshoring the R&D’s activities must be clear in order to know how to approach the process. If it is cost driven, the accent should be on the cost reduction and how to have a better balance compared with the actual country. Of course, when discussing about software or IT companies from the automotive area, most the influence factors and the strategic options discussed earlier must be taken in consideration.

For example the infrastructure for moving the products to another market will not have the same importance. Also the supply chain costs will be very low in this industry. The airport is very useful, for management, but as far as the company doesn’t sell a physical product, trucks won’t be needed especially in the case that the strategy for R&D centres is “globally linked” [14].

If the country and the region are choose according with the needs and with the strategy set, the offshoring process will have a good start.

One important factor that should be added to the list is the internet infrastructure available in the targeted country for offshoring. Another important factor is the availability of students, specific faculty in order to have a large pool of

candidates from where to choose, and professionals in the industry. In the context of cost driven strategy or efficiency seeking, a good strategy would be to choose a city where are not concentrated a lot of companies of the same profile, this situation can add extra costs to the wages.

The strategy of what will be offshored must be set before starting to evaluate candidates to know exactly what kind of particular skills are needed. For a software department from an automotive company, it is a good strategy to start with a small number of employees, in order to see the results and the benefits, and if they are in accordance with what is needed then the number can increase.

Dachs [4], proposed for manufacturing activities to be offshored can be activities that require low skills can help to improve the complex activities in the home country. This strategy can also be applied when expanding to another country the R&D department, by starting with simple, small or repetitive activities and when the employees are prepared and these tasks are easy to be handled, more complex tasks can come. This will have an advantage with the employees that are handling very complex tasks and will help them to concentrate on them [4].

5. CONCLUSIONS

Internationalization can boost up a company’s profit, make it more visible, create a bigger market and open new opportunities in other directions.

The best direction for offshoring is by creating a blue ocean, not to compete with other solutions offers in a red ocean, where is a lot of competition, pushing down the profits and the revenue [13].

Internationalization strategy, as in the example of Kastamonu Entegre, can start with a goal set, but the changes are coming in the market so the goal can be changed. This must not be seen as a problem, rather an opportunity, like this the company can diversify its business in other related fields, and can have a higher revenues than if it would compete in a red ocean market.

Except a few options must not be taken in consideration when offshoring from the

manufacturing side to the R&D side. The most important is that the process is a success and this can help the company to save money, to have a powerful position in the global market and to have more people connected from different geographical zones who can bring valuable ideas in the company. If the entire process of offshoring in the R&D from automotive area is built step by step and the most important factors are taken in consideration, the process has big changes of becoming a success for the employees, clients and the entire market.

As a conclusion, the following steps should be made for a proper offshoring:

First step is that the company is aware that in R&D the costs can be reduced by offshoring.

The second step is to analyse what must be improved and the targeted customers with offshoring process.

Based on the second step, the third step will mean developing the strategy for offshoring.

The fourth step is to choose the best cost country that meets the strategy set.

The last step is creating the plan for offshoring in the chosen country.

6. REFERENCES

- [1] Becker, S.O., Ekholm, K., Muendler, M.-A., *Offshoring and the onshore composition of tasks and skills*, Journal of International Economics 90, 91–106, 2013.
- [2] Carmel, E.: *The New Software Exporting Nations: Success Factors*, The Electronic Journal of Information Systems in Developing Countries 13(4), 1–12 (2003)
- [3] Chiara Franco and Rentocchini, Francesco and Vittucci Marzetti, Giuseppe, *Why Do Firms Invest Abroad? An Analysis of the Motives Underlying Foreign Direct Investments*, December 15, 2008, Available at SSRN: <https://ssrn.com/abstract=1283573> or <http://dx.doi.org/10.2139/ssrn.1283573>.
- [4] Bernhard Dachs, Bernd Ebersberger, Steffen Kinkel and Oliver Som, *The Effects of Production Offshoring on R&D and Innovation in the Home Country*, Fraunhofer ISI Discussion Papers Innovation Systems and Policy Analysis No. 39 ISSN 1612-1430 Karlsruhe, January 2014.
- [5] Davide Castellani, Sandro Montresor, Torben Schubert, Antonio Vezzani, *Multinationality, R&D and productivity: Evidence from the top R&D investors worldwide*, <https://doi.org/10.1016/j.ibusrev.2016.10.003> International Business Review Volume 26, Issue 3, pages 405-416, June 2017.
- [6] Ellram, L.M., Tate, W.L., Petersen, K.J., *Offshoring and reshoring: an update on the manufacturing location decision*, J. Supply Chain Manag. 49 (2), 14–21
- [7] Farrell, “*Smarter off shoring*”, Harvard Business Review, pp.84-92, June 2006.
- [8] Fel Fabienne, Griette Eric, *An Analysis of the Off shoring Decision Process: The Influence of the Company's Size*, Procedia - Social and Behavioral Sciences, Volume 58, Pages 596-605, 12 October 2012, https://ac.els-cdn.com/S1877042812044990/1-s2.0-S1877042812044990-main.pdf?_tid=a34cb648-e952-11e7-bc62-00000aab0f6b&acdnat=1514192859_4fdb7b5969afcc8f79396a316a801882.
- [9] Fillis, I., “*Small firm internationalization: an investigative survey and future research directions*”, Management Decision, 39 (9), 767-783, 2001.
- [10] Kinkel S., Maloca S. *A German perspective*, Journal of purchasing and Supply Management, (15), 154-165, 2009.
- [11] Knudsen, MP, and Servais P, “*Analyzing internationalization configuration of SMEs: the purchasers' perspective*”, Journal of Purchasing & Supply management, 13 (2), 137-151, 2007.
- [12] Moatti V., “*Sourcing: gare aux surcouts des pays a bas couts*”, L'Expansion Management Review, juin, number 133, 28-33, 2009.
- [13] Motohashi K., *International R&D Management*, In: Global Business Strategy, Springer Texts in Business and Economics. Springer, Tokyo, 2015, https://doi.org/10.1007/978-4-431-55468-4_11.
- [14] Patra, S.K. & Krishna, V.V. J. open innov.: 7. <https://doi.org/10.1186/s40852-015-0008-6> ; Online ISSN2199-8531; Springer Singapore, 2015.

- [15] Pai R.U., Banerji S., Garza-Reyes J.A., Lim M., Kumar V., *Selection and Ranking of Low Cost Countries for Outsourcing and Offshoring in the Manufacturing Sector*. In: Prabhu V., Taisch M., Kiritsis D. (eds) *Advances in Production Management Systems. Sustainable Production and Service Supply Chains*. APMS 2013. IFIP Advances in Information and Communication Technology, vol 414. Springer, Berlin, Heidelberg, 2013.
- [16] Simpson, H., *How do Firms' Outward FDI Strategies Relate to their Activity at Home? Empirical Evidence for the UK*, *The World Economy* 35, 243-272, 2012.
- [17] Simpson, H., *Investment abroad and labour adjustment at home: evidence from UK multinational firms*, *Canadian Journal of Economics* 45, 698-731, 2012.
- [18] Song N., Platts K. and Bance D., "Total acquisition cost of overseas outsourcing / sourcing: a framework and a case study", *Journal of Manufacturing Technology Management*, vol. 18, number 7, 858-875, 2007.
- [19] Gözde YILMAZ, Anna BENGTON, Amjad HADJIKHANI, *Internationalization of firms from new emerging markets in other new emerging markets: Opportunity development of a Turkish Firm in Romania*, <http://www.sciencedirect.com/science/article/pii/S1877042815039592>, World Conference on Technology, Innovation and Entrepreneurship, WOCTINE, May 28-30 2015. Uppsala University, Business Studies Department, Kyrkogårdsgatan 10, 753 13 Uppsala.
- [20] <https://www.strategyand.pwc.com/media/file/2015-Global-Innovation-1000-Fact-Pack.pdf>
- [21] Patra, S.K. & Krishna, V.V. J. *open innov.* (2015) 1: 7. <https://doi.org/10.1186/s40852-015-0008-6>

OFFSHORING PENTRU COMPANII SPECIALIZATE ÎN SOFTWARE PENTRU AUTOMOBIL

Rezumat: Scopul acestei lucrări este de a prezenta motivele pentru care o companie de automobile, în contextul pieței mondiale, ar trebui să efectueze offshoring pentru departamentul de cercetare și dezvoltare sau departamentele sale software. De asemenea, această lucrare analizează ceea ce a fost scris până în prezent cu privire la procesul de offshoring. Acesta va prezenta motivele pentru care compania a făcut procesul de offshoring, cum ar trebui selectată o țară și o regiune pe baza anumitor criterii. Iată cele patru categorii majore de motive pentru care o companie mare începe sau își extinde internaționalizarea. Avantajele și dezavantajele sunt prezentate pentru a cunoaște atât beneficiile, cât și riscurile potențiale. În majoritatea studiilor, offshoring-ul este discutat din punct de vedere al fabricației, dar aceste lecții valoroase pot fi aplicate software-ului sau departamentului IT de la un producător de mașini. Opțiunile strategice sunt prezentate pentru a avea o viziune clară asupra modului de abordare a acestui proces. Principala metodă utilizată în acest articol este cercetarea calitativă a ceea ce au scris până acum alți autori. Scopul acestei lucrări este de a prezenta motivul și modul în care offshoring-ul poate ajuta o companie din sectorul automobilelor să reducă costurile și să obțină o calitate superioară în produsele finale.

Marius, GAL, "Lucian Blaga" Univeristy of Sibiu, Faculty of Engineering, Name of Department, marius_gal@yahoo.com

Claudiu, V. KIFOR, "Lucian Blaga" Univeristy of Sibiu, Faculty of Engineering, Name of Department, claudiu.kifor@ulbsibiu.ro