

Relocation of Car Manufacturers: Wise Solution or Costly Setback?

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ABSTRACT

The paper outlines the current concern of relocation in automotive industry in order to adapt to market conditions by shifting production towards emerging countries. Car manufacturers strive to reduce their operational costs to compensate weak sales in an attempt to overcome the slow market revival and remain globally competitive. The paper focuses on the Dacia-Renault low-cost car policy and uses the case research method to describe differences in consumer behaviour on the French, Romanian and Moroccan car markets. Relevant data and indicators for automotive industry from these 3 countries are analysed and compared by using linear interpolation providing an aggregate indicator with an overview on market dynamics and perspectives. Preliminary results show that drivers of relocation are mainly related to market opportunity, workforce costs and infrastructure. Macroeconomic indicators, acquiring needed skills by local workforce and a good management capacity seem to be more delicate issues. Moreover authorities from emerging countries provide fiscal advantages for car manufacturers willing to relocate their activity or build a new factory as they are a source of wellbeing for its population and economic growth for the country. The research conducts an analysis of advantages and disadvantages of relocation and provides recommendations to improve competitiveness and assure sustainable development of both car manufacturing companies and their supply chain.

Keywords: *relocation, automotive industry, supply chain, competitiveness*

1. INTRODUCTION

Car manufacturing has been one of the most important industries during the last century with an impressive development both on technological and social level. As car manufacturers developed so did their activities, business partners and customers. The complexity of car manufacturing has since increased and today car manufacturing is only a part of automotive industry. The high amount of suppliers which work with car manufacturers have made automotive industry one of the most important employers and sources of a country's wellbeing. However as car sales in some markets have reached maturity and are achieving only a slow growth margin some car manufacturers have had to temporarily cease activity, lay off workforce and even close down certain factories to adjust to market demand and reduce losses. Changes in consumer behaviour are also shifting after the financial crisis and car manufacturers are trying to adapt their strategies to meet their objectives in a highly competitive market according to Buckley and Carter (1999).

Automotive industry is a concept which refers to all those companies and activities involved in the manufacture of motor vehicles (cars), as are design, development, manufacture, marketing and distribution of cars towards customers. Last year more than 80 million cars have been sold worldwide, which means an average of 2.5 cars is sold every second. China is the largest car

manufacturing country with more than 22 million cars produced in 2013, while the traditional car manufacturing countries, USA, Japan and Germany account for more than 25 million. Almost 2 million people are employed within the automotive industry in Japan, more than 2.3 million in the EU and almost 3 million in the US. Car manufacturers usually contribute with an average 3% to a country's Gross Domestic Product (GDP), however the amount can add up even to 7% in emerging countries as are China or India and can vary according to market conditions and car manufacturer performance. Moreover automotive industry has an important share in a car manufacturing country's exports and can contribute to its competitiveness: automotive industry has an 18% share of exports in Germany, 19% in the US and reaches 20.8% in Japan.

2013 was the sixth year in a row when European car sales had dropped, giving signs that the market has already reached a phase of maturity and that growth would be possible only in certain conditions and with a weak progression. During 2007-2013 European car sales went down by more than 25% giving an indication that there is no more room left for future growth and that car manufacturers will have to focus on keeping their existing market shares or increasing them in order to boost their own sales figures whilst facing strong competition. As the European market is now a market of consolidation, manufacturers have to find other markets to compensate weak sales and seek development opportunities. Melander (2014) outlines some of the most important aspects of buyer-supplier collaboration within the context of new product development as is their ability to work together effectively. Chatzipanagioti, *et al.* (2011) confirm that reducing costs is one of the main themes and besides operational or tactical cost cutting policies, relocating factories or building new facilities arise as potential strategic decisions in order to adapt to current and future market shifts and development. Eslamipoor and Sepehriar (2013) argue that relocating production is one of the solutions chosen in order to cut down costs, but is it really a winning strategy?

2. AUTOMOTIVE INDUSTRY

Car manufacturing and automotive industry require heavy investments in building factories, equipping them with technology and workforce in order to produce cars. The investment in facilities, equipment, maintenance and indirect costs, car design and development, workforce and marketing can only be recovered if cars sales bring profit to the company so that it can continue to invest in research and development in order to assure better working conditions for its employees and produce better cars for its customers as suggested by Bueno and Ordonez (2004).

When the market is dynamic and sales rise car manufacturers can easily recover investments and make healthy profits, however when the market trend is lagging behind and sales are weak, cars are not sold and generate additional costs of storage and immobilise money. The recent financial crisis, among other effects, has also changed consumer attitude and behaviour and made them more aware of what they can or cannot afford. When referring to car industry, customers have shifted from

complex accessorised cars to ones that are less equipped with gadgets and more practical: a basic car with just the minimum of extras at an affordable price and with decent maintenance and consumption figures.

3. WORKFORCE

The main reason for relocating a factory is of economic nature and consists in companies not making enough or even losing money in the current state of their businesses. This kind of decision is however strategic and will need serious consideration before being implemented as it affects and challenges the company's current way of integrating operations. Pennings and Sleuwaegen (2000) point out that savings in workforce wages are the driver of such a decision as they prove to be quite important in the aggregate costs of car production.

Usually wages account for up to 10% of costs in a car and depending on automatization levels and manual labour the percentage can vary accordingly. In time salaries will rise, thus slowly increasing their proportion in total costs and adding extra pressure on car manufacturers to improve their performance by selling as much of their cars as possible in order to sustain a healthy business development. These increases are generally covered from a company's benefits or profit which usually ranges around 5% but can vary according to several factors and be very scarce during tough times and even double when business is booming. However when company performance is lagging behind and results do not improve within a certain time horizon management will try to cut down costs in all areas where this is possible and the most convenient solution is to cut down wages based on weak company performance, which is justified, but Guo (2011) insists this should not be the primary and only solution taken into account and applied by the executive.

Relocating business to other countries where wages are lower than in the current one provides an immediate effect on the expenditures with workforce and savings of up to 50% or even more can be made. Jungnickel, *et al.* (2008) imply that contribution of wages in the cost of a car is also proportionate to the amount and volume of tasks to be done manually by workers, the more the processes are automatized the less human intervention is required and hence the less wages with workforce impact total costs. If automatization is however low and manual labour is performed to a certain extent, then the contribution of wages in total costs will be higher and thus relocating could be considered.

At the same time when breaking down costs associated with car manufacturing research and development costs with current models have already been undertaken and the associated financial effort made, parts have been designed and engineered and contracts are usually under way to support manufacturing of the models in a horizon of up to 5 years with suppliers. Equally marketing expenditures have also been made in order to advertise the brand's model or models and thus workforce expenditures are among the few ones where adjustments can be made as to reduce their impact within total cost as claimed by Woolliscroft, *et al.* (2012).

4. INVESTMENT AND TRAINING

Having plants throughout more locations provides a series of important advantages for carmakers: proximity towards clients, a more smoothed production capability and benchmarking amongst the different facilities. Infrastructure and transport networks also account for key factors as presented in **Table 1**. Wells (2013) suggests that factories in different parts of the world mean a much better capacity to provide quicker and more adapted services for customers as distribution accounts for less time and effort as it would be in case of a single-based factory premises. As it is in essence a mean to provide better customer service and support, Woolliscroft, *et al.* (2013) underline that the location of these factories should be well thought out to assure optimum market coverage and a high customer service rate. Another advantage is the fact that having several plants allows carmakers to adjust production levels of each facility according to demand and have a more flexible production planning and follow-up. This provides for better organisation and can help generate important savings in costs and help make corporate activity more efficient and account for improved performance. Of course operating different facilities in different parts of the world implies a more costs than in the case of a single-based facility, but the multiple-based factories provide for further important assets for a carmaker: benchmarking among the different plants, possibility to relocate a part of business towards other locations according to unexpected

and unforeseeable events and increased negotiating power with local authorities.

Benchmarking among several production sites provides a rich information, organisation and synergy exchange and serves as a continuous performance improvement tool for both individual plants as well as for the global group operations. Lind, *et al.* (2012) emphasize that when working on international level, cultural differences and differences in handling specific market differences often provide for productivity and efficiency gains as they serve towards better understanding employees work-related challenges and problem-solving techniques. Benchmarking is thus a simple to use key-tool for continuous improvement and provides a dynamic an up to date data on current and future challenges which contributes to the company's organisational culture and its global competitiveness.

One of the most important factors which influence the investment decision is predictability. Special fiscal policies are provided for foreign direct investments (FDI) as incentives as shown in **Table 2** to encourage investments, but GDP growth, exchange rate dynamics and inflation are equally important. FDI provide employment and contribute to the country's well-being, therefore authorities seldom ignore or engage in policies without consulting or giving consideration to industry opinions prior to policies susceptible of affecting them. Having multiple-based plants enhances the negotiation power of the company as it can choose to relocate thus blowing a big hole in the country's budget whilst rendering workers unemployed.

Table 1. Infrastructure data

| Data | Roads [km] | Of which paved [%] | Motorways [km] |
|---------|------------|--------------------|----------------|
| France | 1,000,960 | 100 | 12,000 |
| Romania | 198,817 | 30.2 | 644 |
| Morocco | 57,625 | 70.32 | 1,511 |

Table 2. Taxation and FDI incentives

| Data | France | Romania | Morocco |
|-----------------------|--|---|---|
| Corporate tax | 33% | 16% | 30% |
| Value Added Tax (VAT) | 20 % | 24% | 20% |
| Average earnings tax | 48.9% | 45% | 12-40% |
| Imports/Exports | EU regulations | EU regulations | Customs due |
| Other | <ul style="list-style-type: none"> - 155 million euros State aid to encourage buying more eco-friendly cars (2003) - 800 million euros to support hybrid cars (2006-2008) - scrapping program (2008-2010) - 6.5 billion euro loan for Renault and PSA during crisis (2009) - 850 million euros State aid to support electric and hybrid vehicles (2012) | <ul style="list-style-type: none"> - 100 million euros state aid (until 2007) - corporate tax exemption until 2007 - no customs and VAT for imports (prior to EU accession) - 3 year lag to pay VAT for cars sold on the local market - 3.5 million euros from the Ministry of Environment (2000-2002) - scrapping program (since 2005) | <ul style="list-style-type: none"> - site provided free of charge by the State - corporate tax exemption for the first 5 years and 8.75% for the Tangier platform for the following 20 years - customs facilities - 47.6% aid from the Deposit and Management Fund (CDG) for the Tangier platform investment (523 million euros) - training infrastructure set up costs covered by the state |

5. METHODOLOGY

The proposed methodological approach assumes a two-step comparison of economic indicators which are considered relevant in identifying positive evolution within a company, especially car manufacturers which account for an important impact in national economies. The first step of analysis is to calculate the yearly utilities for the four

proposed indicators: GDP, new car registrations (NCR), net profit (NPr) and average net salary (AvSal). Data reported by Renault, Dacia and the National Institute of Statistics from France, Romania and Morocco between the years 2004 - 2013 was processed using linear interpolation in order to make data comparable among each country, resulting in a high level of accuracy for the analysis. The yearly utilities

for each individual economic indicator (u_{ij}) are calculated by using the following formula:

$$u_{ij} = \frac{a_{ij} - \min a_{ij}}{\max a_{ij} - \min a_{ij}} \quad (1)$$

where a_{ij} is the corresponding value for each economic indicator; i represents the indicator analysed whereas j represents the year for which values of that indicator have been calculated using the methodology

Values will range between 0, for the least best value and 1 for the best value within the considered range of data while the rest will be intermediate values. In the next step of analysis we consider the results identified for each period of time, these are being summed up in order to obtain a global market dynamics and perspectives indicator for every year since 2004 where the initial aggregated elements from step one are equally weighted. The newly obtained market dynamics and perspectives indicator (MDP) shows an evolution from year to year of each carmaker's results within its country and provides an indication on possible future development. Year to year growth of utilities indices for the proposed indicators suggests good performance and is the basis for achieving an encouraging dynamic for the MDP indicator. A value of 0.75 or higher for the MDP indicator is considered to be very good, 0.5 is good whereas a value under 0.5 is a sign that development is rather scarce. A value of 0.25 is considered worrying. The decision of relocating plants in other countries needs to assess the capacity of the economy to assure sustainable development through economic growth and good car market perspectives which will bring about profits for the manufacturers and competitive wages for its employees. These two latter indicators will enhance economic competitiveness and will provide further development possibilities. Relocation to countries where such dynamics are not met is considered inopportune.

6. RESULTS

6.1 Automotive Industry in France

The French car market has had a constant level of newly registered cars between 1999 and 2011 with years of growth and reduction, but still within the same amount of cars sold and registered in France, around 2 to 2.2 million each year (see Figure 1). Being a country with indigene car manufacturing the French have a pronounced preference towards their local brands, today roughly 50% of all cars in France are national brands. Renault models account for around 20% of new cars sold, whilst the second hand market has been at a steady 5.3-5.5 million.

The drop in new car registrations in recent years by more than 10% has its roots in the customers' change of behaviour after the financial crisis. Even in countries like Germany and France a slight shift is noticeable as customers are more and more oriented towards more practical cars, which better suit their needs rather than spending money on over equipped models which provide options most of them don't even use. As foreign brands are winning more and more market shares and car sales are dropping local manufacturers like PSA Peugeot Citroen that have mainly focussed on the French market are facing severe difficulties and have had to turn to the French government as well as private foreign investors to

help them temporarily overcome serious issues like bankruptcy and remain in business. Renault's policy to introduce the range of low-cost models Dacia has won them an important part of the market and is making up for its own brand's slight downturn and rendering company figures efficient. Today just over 25% of Renault passenger cars are sold in France, while the rest are shipped towards the company's most important foreign markets: Brazil, Russia, Germany and Turkey. **Table 3** presents data for the French car manufacturer Renault whilst by using formula (1) we obtain the yearly utilities values for those economic indicators (see **Table 4**).

Within the last decade GDP in France has risen by 28% from 1,655 billion euros to 2,119 billion euros. Since 2004 the economy had a steady average increase of around 2 % with 2 years of recession during the crisis. The French economy is showing shy signs of recovery, but only with a scarce progress during the last 2 years. After attaining a record level of 2,268,700 new car registrations in 2009, the auto market is currently recording a 20% fall since 2004 with only 1,790,473 new cars registered. Excepting the loss in 2009, Renault has managed to make profits every year during the last 10 years but the 695 million euros in 2013 represents only 19.5% of the earnings in 2004. The challenges faced by the French car manufacturers are also emphasized by the evolution of the average net salary which today is 22% more than a decade ago, but at the same level as in 2007. The MDP indicator has been for five years over 0.61 and dropped during the crisis. The years 2010 and 2011 showed an impressive recovery as the value of the indicator was around 0.90, more than double the value of 2009. With the yearly 10% drop in new car registrations since 2012 however the tendency has been reversed and the MDR indicator is now at its lowest value of 0.40. This situation can be overcome by a better performing economy and by improving efficiency and productivity within Renault.

6.2 Automotive Industry in Romania

After Renault had bought Dacia and the company started making cars with the aid of the French manufacturer car industry in Romania had managed to boost new car sales year after year in a highly impressive manner until 2007 as Figure 2 shows. The stunning development of the car market was first hit by the crisis which seriously reduced volumes being sold, while on the other hand second hand imports had started growing as the population could more easily afford second hand cars rather than new ones, German brands being particularly preferred.

The government decided to introduce a tax on first registration for all imported vehicles. The tax was mainly introduced to discourage customers buying second hand cars from abroad in an attempt to force them into buying new cars manufactured within the country. Taxation varied according to engine size, year of production and CO2 emissions and in some cases would even double the price of the car whilst in average accounting for an extra 30% on car price. However the tax violated the right to free circulation of goods within the EU and was proved illegal in court after many customers sued the Romanian state. The tax slightly changed its calculation method or its name, but the idea remained the same. Currently the tax is called environmental stamp, but this tax avalanche did not stop second hand imports, as they continuously raised

above new car sales, only last year being four times more in volume than new cars. Despite the environmental stamp, people still prefer buying second hand imported cars (see **Figure 3**). However the new form of the tax works as a

boomerang against the Romanian state and local car manufacturers as the level of the tax renders any sale of a local second hand vehicle unattractive and thus owners prefer keeping their old cars seen as they would obtain only silly money for their current ones in the attempt to finance a new car through the sale of the one they possess.

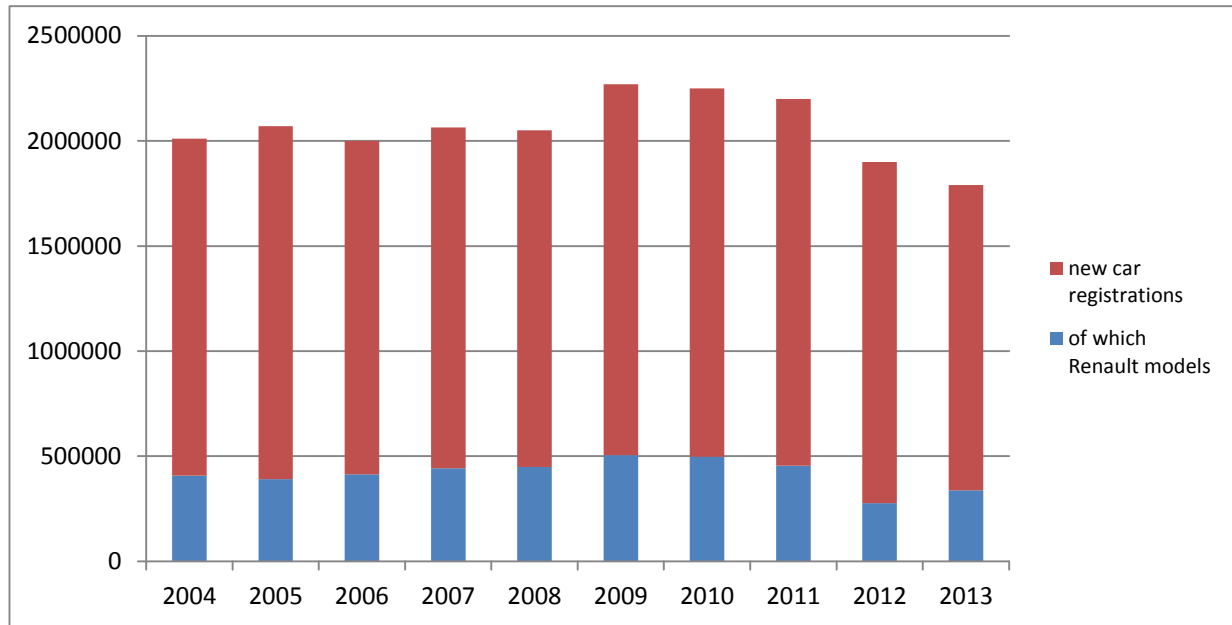


Figure 1. New car registrations in France

Table 3. Economic indicators for Renault, France

| Indicator | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
|---------------------|------|------|------|------|------|-------|------|------|------|------|
| GDP [%] | 2.5 | 1.8 | 2.5 | 2.3 | -0.1 | -3.1 | 1.7 | 2 | 0 | 0.3 |
| NCR [million units] | 2.01 | 2.07 | 2 | 2.06 | 2.05 | 2.26 | 2.25 | 2.2 | 1.9 | 1.79 |
| NPr [million €] | 3551 | 3453 | 2943 | 2734 | 599 | -3068 | 3490 | 2139 | 1735 | 695 |
| AvSal [€] | 1985 | 2150 | 2285 | 2460 | 2850 | 2622 | 2824 | 3019 | 2200 | 2422 |

Table 4. Utilities and MDP indicator for Renault, France

| Indicator | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
|-----------|------|------|------|------|------|------|------|------|------|------|
| GDP | 1.00 | 0.88 | 1.00 | 0.96 | 0.54 | 0.00 | 0.86 | 0.91 | 0.55 | 0.61 |
| NCR | 0.46 | 0.58 | 0.44 | 0.57 | 0.54 | 1.00 | 0.96 | 0.86 | 0.23 | 0.00 |
| NPr | 1.00 | 0.99 | 0.91 | 0.88 | 0.55 | 0.00 | 0.99 | 0.79 | 0.73 | 0.57 |
| AvSal | 0.00 | 0.16 | 0.29 | 0.46 | 0.84 | 0.62 | 0.81 | 1.00 | 0.21 | 0.42 |
| MDP | 0.61 | 0.65 | 0.66 | 0.72 | 0.62 | 0.40 | 0.91 | 0.89 | 0.43 | 0.40 |

Currently 92% of the local car manufacturers' production Dacia and Ford is exported, as Dacia only sells around 5% of its global production in Romania and has a market share of 31.6% on the local market with 24.890 models sold last year. Car manufacturing is an important industry where Dacia accounts for 3% of GDP and 10%

of Romania's exports, with France and Germany being its main markets. Today Dacia is a notorious brand of Renault and its sales have a positive influence on the French car manufacturer's global performance. At the same time it is one of the most important low-cost brands and continues to acquire market share, being a real

success policy of the French group. Other car manufacturers have announced they would also develop low-cost models in the coming years, but until then Dacia still has time to consolidate its strong market position and

gain more brand value on its operating markets. **Table 5** presents data for the Romanian car manufacturer Dacia whilst by using formula (1) we obtain the yearly utilities values for those economic indicators (see **Table 6**).

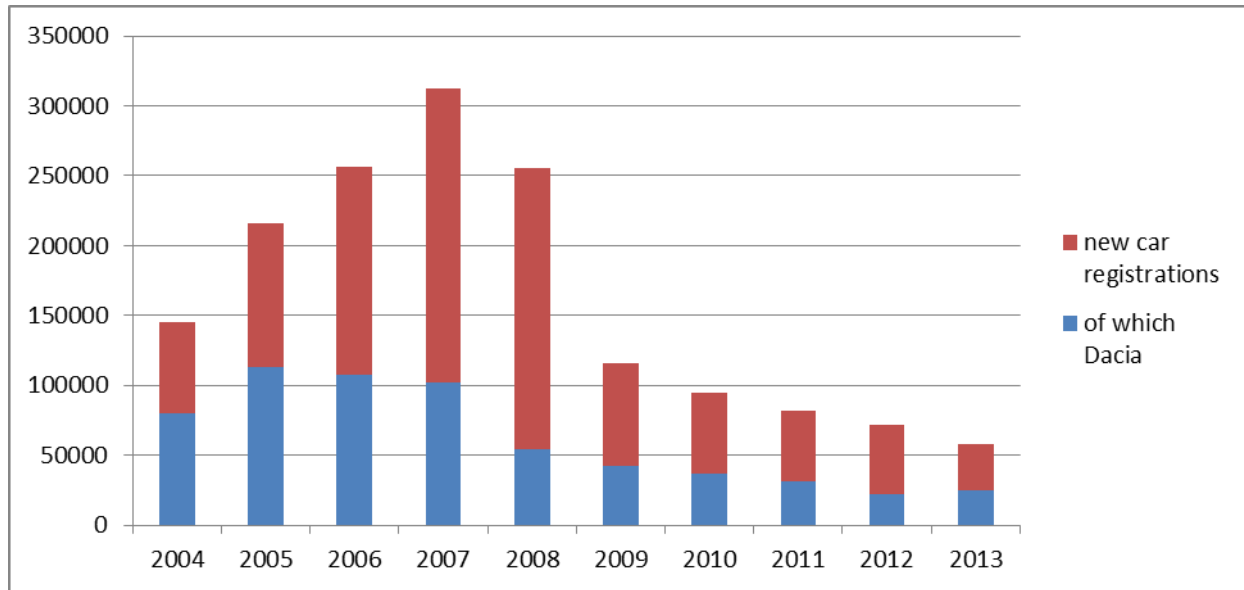


Figure 2. New car registrations in Romania

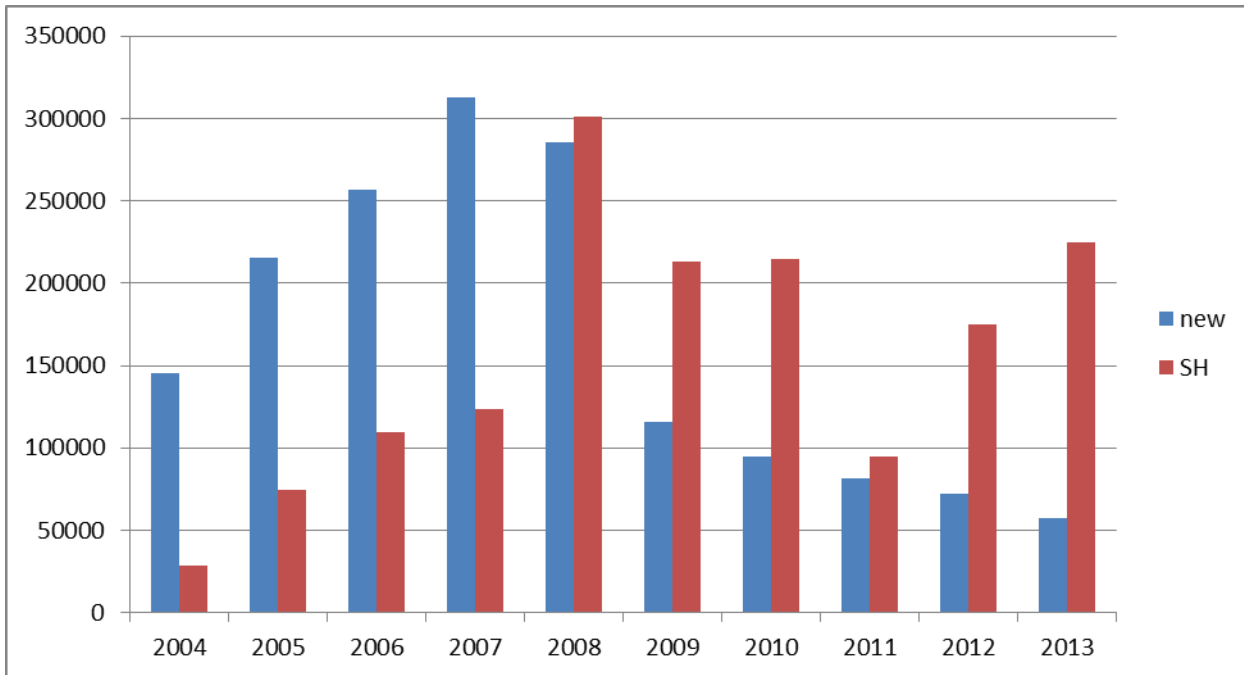


Figure 3. New and second car registrations in Romania

Table 5. Economic indicators for Dacia, Romania

| Indicator | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
|-------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| GDP [%] | 8.4 | 4.1 | 7.7 | 6.1 | 7.1 | -7.2 | -1.3 | 2.3 | 0.7 | 3.5 |
| NCR [units] | 145120 | 215532 | 256364 | 312532 | 285504 | 116016 | 94541 | 81709 | 72179 | 57700 |
| NPr [million lei] | 296.63 | 298.29 | 377.27 | 442.34 | 222.02 | 230.28 | 300.02 | 275.11 | 277.24 | 337.44 |
| AvSal [lei] | 729 | 892 | 1055 | 1328 | 1580 | 1880 | 2288 | 2548 | 2781 | 3154 |

Table 6. Utilities and MDP indicator for Dacia, Romania

| Indicator | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
|-----------|------|------|------|------|------|------|------|------|------|------|
| GDP | 1.00 | 0.72 | 0.96 | 0.85 | 0.92 | 0.00 | 0.38 | 0.61 | 0.51 | 0.69 |
| NCR | 0.34 | 0.62 | 0.78 | 1.00 | 0.89 | 0.23 | 0.14 | 0.09 | 0.06 | 0.00 |
| NPr | 0.34 | 0.35 | 0.70 | 1.00 | 0.00 | 0.04 | 0.35 | 0.24 | 0.25 | 0.52 |
| AvSal | 0.00 | 0.07 | 0.13 | 0.25 | 0.35 | 0.47 | 0.64 | 0.75 | 0.85 | 1.00 |
| MDP | 0.42 | 0.44 | 0.64 | 0.77 | 0.54 | 0.19 | 0.38 | 0.42 | 0.42 | 0.55 |

Within the last decade GDP in Romania has nearly doubled from 79.3 billion euros to around 140 billion euros. For five years the economy had an impressive average increase of 6.6% before the 7.2% drop in 2008. The Romanian economy is recovering however, GDP has grown within the last 3 years with a 3.5% progress last year. New car registrations however are at their lowest ever level, the auto market is currently recording a 39.7% fall since 2004 with only 57,700 new cars registered last year, more than five times less than in 2007. Dacia has made profits every year during the last 10 years, earnings ranging from around 57 million euros in 2004 to 77 million last year, with a peak of 100.6 million achieved in 2007. An average exchange rate of 4.4 lei/euro has been considered. High demand for the Romanian brand has had a significant influence on average net salary evolution which today is four times higher than a decade ago at around 715 euros/month. The MDP indicator for Romania is within its fourth consecutive year of growth with a value of 0.55 in 2013 but it is being slowed down by the drop in new car registrations. Nevertheless the indicator is 30% higher than in 2004 and has attained a record value of 0.77 prior to the crisis. The car market in Romania is still suffering as second hand imported cars are getting the better of the new cars, but a good performing economy may be able to even the odds and reverse this trend within a few years.

6.3 Automotive Industry in Morocco

The rapid development of the Dacia brand and its growing sales in Western Europe have made the factory located in Romania to work very close to its maximum capacity during recent years with a peak production of 343,000 in 2013. In order to smooth production levels, the French group decided to build a new Dacia factory in Tangier, Morocco to ease production for the Mioveni site and to have easier and quicker access towards the Western European markets for its demanded models. The fact that Renault now has 2 factories which will be able to produce the Dacia models means that in ever needed capacities can be shifted from one factory to the other according to demand.

Renault has further plants in Russia, Brazil and India and the factory in Tangier is the second for the group, after the Casablanca site: thus the French car manufacturer covers its current major markets outside France and Western Europe. The range of its factories enables the group to cover more markets and can account for a

smoother distribution in case of important fluctuations in customer demand. In Morocco after a good development between 2003 and 2008 a slight drop interrupted the growing tendency which continued in 2011 and 2012 only to drop again last year. Car industry is important in the country and has increased its importance after Renault opened a new Dacia plant in Tangier, making it the second one after its facility in Casablanca. Renault has a leading 39% market share in Morocco and is a main contributor to the country's 13.6% share in exports of car industry while around 72% of local production is sent towards other countries, as are France, Spain, Portugal, Turkey or Tunisia. **Table 7** presents data for the Dacia car brand whilst by using formula (1) we obtain the yearly utilities values for those economic indicators (see **Table 8**).

Morocco is currently the 6th African economy by GDP as within the last 10 years its economy has risen by more than 16% from around 42.8 billion euros to around 72.1 billion euros. Since 2004 the economy had a continuous increase ranging from 2.69% in 2012 to 7.76% in 2006 with a yearly average of around 4.4%. The Moroccan economy is thus performing well and signs show that future development is to be expected. After attaining a record level of 130,316 new car registrations in 2012, the auto market is currently recording a slight 7.3% fall with just over 120,000 new cars registered last year. However the new car market in Morocco has more than doubled within the last decade. This development has drawn the attention of the Renault and the French manufacturer decided to extend its operations in Morocco by building a new site in Tangier for its Dacia brand. As any new plant, until reaching a certain level of production and efficiency no significant profits will be recorded within the first couple of years. On the other hand, seen as the European market has reached maturity, Africa is among the new emerging markets where carmakers will try to sell their vehicles and continue expansion. Moreover workforce is a lot cheaper than in Europe as the average salary in the Tangier plant will only amount up to around 250 euros, nearly 10 times less than in France or a third of the wages received within Dacia in Romania. The partial MDP indicator for Morocco shows good progress as its value is roughly 3 times the one in 2004 while during the last six years it has only once been under 0.50 with a peak value of 0.73 in 2007. Within a few years the Moroccan MDP indicator has good chances to develop in line with car market development and raise overall competitiveness of the national economy.

Table 7. Economic indicators for Dacia, Morocco

| Indicator | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
|-------------|---------------------------|-------|-------|--------|--------|--------|--------|--------|--------|--------|
| GDP [%] | 4.8 | 2.98 | 7.76 | 2.71 | 5.59 | 4.76 | 3.64 | 4.99 | 2.69 | 4.4 |
| NCR [units] | 54808 | 64000 | 84666 | 103000 | 121511 | 109966 | 103436 | 112100 | 130316 | 120766 |
| NPr | Not enough data available | | | | | | | | | |
| AvSal | Not enough data available | | | | | | | | | |

Table 8. Utilities and MDP indicator for Dacia, Morocco

| Indicator | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
|-----------|---------------------------|------|------|------|------|------|------|------|------|------|
| GDP | 0.42 | 0.06 | 1.00 | 0.00 | 0.57 | 0.41 | 0.19 | 0.45 | 0.00 | 0.34 |
| NCR | 0.00 | 0.12 | 0.40 | 0.64 | 0.88 | 0.73 | 0.64 | 0.76 | 1.00 | 0.87 |
| NPr | Not enough data available | | | | | | | | | |
| AvSal | Not enough data available | | | | | | | | | |
| MDP | 0.21 | 0.09 | 0.70 | 0.32 | 0.73 | 0.57 | 0.42 | 0.61 | 0.50 | 0.61 |

7. CONCLUSION

The market dynamics and perspectives indicator is an aggregate performance indicator which indicates how close one country is towards achieving a positive competitive spiral. The competitive spiral is the effect at a given time generated by the evolution of certain indicators that have the ability to enhance future development for both a car manufacturer and a country by achieving constant growth and providing wellbeing for all stakeholders in a sustainable manner.

Achieving continuous growth is however difficult to achieve and results may sometimes fall from one year to the other. Nevertheless it is important to have a growing tendency throughout the years and engage in performance enhancement which will assure business sustainability.

GDP growth is important for macroeconomic stability, new car sales are the key towards achieving profits for carmakers and provide the possibility to continue development and increase employee wages in line with productivity and competitiveness. The latter will be reintroduced into the economy and will continue to support GDP growth for the following years and will thus create the premises for demand to grow within other sectors (including new car sales) and generate more profits which is an important decision factor to raise wages and so on and so forth. A healthy economy will manage to maintain a positive competitive spiral which will generate wellbeing for its population and increase the overall quality of life.

Research shows that relocation is mainly related to market opportunity, as emerging markets have the potential to sustain a car manufacturers' business when other markets approach maturity. Such a strategic decision has to imply the aspects of quality, cost and lead time which have to fall within brand expectations as is also shown by Surjandari, *et al.* (2010). Economic stability and business predictability are key pillars for any long-term business as well as FDI

incentives, which are important within the decision-making process. Qualifying workforce and integrating specific management capacity are equally important as pointed out by Yokozawa, *et al.* (2012) and need time in order to evenly match a group's organizational culture. Thus performance will lag for a few years before being able to achieve good results. Workforce costs are more important within labour-intensive plants, whereas infrastructure is of utter importance for lead times, delivery dates and transport costs and should account for highly efficient response times.

With a proper implication from all stakeholders relocation can prove to have several benefits and should be seen as an opportunity for future growth, economic and social welfare. The main challenge is however the capacity of the new premises to integrate within a carmakers' supply chain and provide comparable performance throughout all stages. This requires acquiring skills, motivation to increase productivity and improve local and global competitiveness of the group which will in turn provide economic development within the country and assure the premises for further investments.

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