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List of abbreviations

BAIC	Beijing Automotive Industry Holding Co Ltd
BMW	Bayerische Motoren Werke AG
BRIC	Brazil, Russia, India and China
e.g.	for example
FAW	First Automobile Works
GAZ	Gorkovsky Avtomobilny Zavod
GM	General Motors
JV	Joint Venture
M&A	Mergers and Acquisitions
Mercosur	Mercado Común del Sur
MG	Morris Garages
Nafta	North American Free Trade Agreement
OECD	Organisation for Economic Co-operation and Development
OEM	Original Equipment Manufacturer
OICA	International Organization of Motor Vehicle Manufacturers
PSA	Peugeot Citroen, S. A.
R&D	Research and Development
RBV	Resource Based View
SAIC	Shanghai Automotive Industry Corporation
SCP	Strategic Choice Perspective
TCT	Transaction Costs Theory
U.S	United States
VDA	Verband der Automobilindustrie
VW	Volkswagen
WTO	World Trade Organization

1. Introduction

“The greatest change in corporate culture, and the way business is being conducted, may be the accelerating growth of relationships based not on ownership, but on partnership.”¹

In times of rising competition and increasing production costs, companies need to rethink their corporate strategies. From market transactions to hierarchical integration, companies hold a wide range of possible expansion forms in order to increase the company's profitability and value. In this thesis, hybrid arrangements of market transactions and vertical integration², namely strategic alliances, are analysed. There exist many different forms of inter-firm collaborations, such as joint ventures, joint development projects or joint production agreements.

Academics and consultants see in strategic alliances a source of competitive advantage and multiple benefits. However, high levels of failure, demonstrated in different studies³ have proven that the development and implementation of strategic alliances is a challenging task.

Nevertheless, alliances have become a crucial part of many global companies' expansion strategies. Inter-firm collaborations turned out to be beneficial in many ways, for instance by strengthening the competitive position, increasing efficiency and accessing needed resources, as well as entering new markets.⁴ Especially in industries with high R&D costs, strategic alliances serve to decrease the development and production costs. According to Booz & Co., alone two-thirds of the global R&D spending in 2007 was related to computing and electronics, health and the automotive industry in 2007.⁵

Regarding the automotive industry, car manufacturers tend to rely on inter-firm cooperation in order to stay competitive for further reasons, such as rising competition and increasing technological requirements and distinctive customer demands.

¹ Drucker (1996) in Elmuti & Kathawala (2001); p. 205

² Cf. Kyle & Teece (2008); p. 1

³ Cf. Kalmbach & Roussel (1999); pp.1-8; Kale & Singh (2000); p. 45

⁴ Cf. Kale & Singh (2000); p. 45

⁵ Cf. Booz & Co; 11.05.2012

In the nineteen eighties, car companies from Japan, Western Europe and the United States dominated the global automotive market. However, after the fall of the Iron curtain and due to the advancement of globalization over the past fifteen years, the BRIC countries have gained in influence and new competitors mainly from China and India entered the existing markets. In addition, the newly developed markets offered great opportunities for the leading car manufacturers. Furthermore the car manufacturing companies had to bear great challenges such as the shift of growth markets, changing mobility requirements and the recent financial crisis.

In future, the car industry has to face increasing production costs due to wider product ranges, higher fuel prices, as well as the development of electric and hybrid vehicles. However, many companies lack in financial resources and technological capacities to bear all these challenges by themselves.

In this context, this present thesis serves as an analysis of the development of strategic alliances between original equipment manufacturers (OEMs) over the past thirty years from a practical and theoretical point of view. It is questioned whether the rate of alliance formations increased in comparison to mergers and acquisitions, with the advancement of globalization and structural changes or not. Furthermore, theoretical approaches such as the Resource Based View, the Transaction Costs Theory, the Strategic Choice Perspective, as well as the Diversification Theory are elucidated and it is analysed if the theoretical perspectives serve as explanatory approaches for the conclusion of strategic alliances.

Ensuing the theoretical perspectives, the different motives for the formation of alliances are derived and it is examined, whether the major motivation for alliance formations remained the same over the past three decades or not. In addition, the empirical data, which contains a listing of all the concluded alliances from 1980 to 2011, is analysed to find further indicators for the rate of alliance conclusions such as the number of competitors and the economic situation.

The analysis is divided into four chapters. The focus lies on the theoretical explanations, a description of the cyclical evolution of the automotive industry, an explicit illustration of the connections between the car manufacturers, the bonding between theory and practice, as well as on the elaboration of the different hypotheses. Chapter 2 presents the basic considerations of strategic alliances and describes the different types, the motives and the risks of strategic alliances. Furthermore, the different theoretical approaches are described.

The first part of chapter 3 offers an overview of the cyclical evolution of the automotive industry. Mainly based on reports from different automobile associations, this chapter serves to comprehend the development of alliances in the automotive industry from a more general point of view. The second part of the chapter illustrates, in chronological order, the formation of strategic alliances in comparison to mergers and acquisitions within the industry. Furthermore, the evolution of the motives is presented. For instance, badge engineering was very common in the nineteen eighties, whereas the agreements between the companies became much more complex in the twenty-first century.

In chapter 4, an analysis of whether the Transaction Costs Theory, the Resource Based View, the Strategic Choice Perspective or the Modern Portfolio Theory serve as sensible explanatory approaches will be demonstrated. Four different hypotheses are elaborated and tested in order to illustrate the conclusion of strategic alliances from a theoretical point of view. Furthermore, the results are presented and additional reflections are laid out.

Finally, a conclusion is drawn and the main findings of the thesis are summarised.

2. Strategic alliances

2.1 Definition

The concept of strategic alliances refers to different types of partnership agreements between two or more companies that pursue clear strategic collaboration objectives, with different levels of possible integration among the members. According to Elmuti and Kathawala, “strategic alliances are partnerships of two or more corporations or business units that work together to achieve strategically significant objectives that are mutually beneficial.”⁶

Furthermore strategic alliance can be seen as a “voluntary, formal arrangement between two or more parties to pool resources to achieve a common set of objectives that meet critical needs while remaining independent entities.”⁷

The companies invest in an activity or number of years, they share the risks and the potential returns, but they remain independent economic agents. Only if, the partner companies found one form of an alliance, a joint venture, then the companies form a new legal entity.

These inter-firm collaborations⁸ involve exchange, sharing, or co-development of products, services, procedures, and processes. The main goal is to sustain long-term competitive advantages in a fast-changing world. This can be achieved by reducing costs through economies of scale, boosting research and development efforts, increasing access to new technology, entering new markets, breathing life into slowing or stagnant markets, reducing cycle times, improving quality, or inhibiting competitors.⁹

According to Hyder and Abraha strategic alliances occur by necessity and are engineered to create and exploit new opportunities. The key parameters are opportunism, necessity and speed. On one hand, the companies try to maintain knowledge and leadership. On the other hand they try to minimize time to market in order to exploit the briefest of business opportunities.¹⁰

⁶ Elmuti & Kathawala (2001); p. 206

⁷ Serrat (2009); p. 2

⁸ Cf. Cools & Roos (2005); p. 8

⁹ Cf. Serrat (2009); p. 2

¹⁰ Cf. Hyder & Abraha (2007); p. 17

The topic is widely discussed in literature and there is no general definition of a strategic alliance. For instance, Wheelen and Hungar say that “a strategic alliance is an agreement between firms to do business together in ways that go beyond normal company-to-company dealings, but fall short of a merger or a full partnership”¹¹. Ernst and Bamford define an alliance as “an agreement between two or more separate companies in which there is shared risk, returns, and control, as well as some operational integration and mutual dependence.”¹²

Alliances are defined as “strategic”, if there is a sharing of capabilities, such as R&D or manufacturing, that affects long-term competitiveness of the organisations involved. This implies a relatively long-term commitment of resources by partners.¹³

Although the main focus of this thesis lies on strategic alliances, companies also apply other methods of development. In addition to strategic alliances, Johnson and Scholes list two further methods - internal development and acquisition (or disposal).¹⁴

Internal development means that a company’s strategy consists in building up own resources and knowledge. Some companies want to grow organically and do not want to rely on external partners.

There are two basic types of mergers and acquisitions. First, one company buys the equity shares of another company, which then loses its decision-making power.

After the acquisition, both the companies will become a single legal entity. Second, a new legal entity is created to combine the assets and operations of two companies and shareholders of both companies will be offered shares of the new entity.¹⁵ In other words, one organisation develops its resources and knowledge by taking over another company or by merging with another company.

¹¹ Wheelen & Hungar (2009); pp.125-134.

¹² Ernst & Bamford (2005); pp. 133 – 141.

¹³ Cf. Lasserre (2007); p.99

¹⁴ Cf. Johnson & Scholes (2002); p. 374

¹⁵ Cf. Financial Times; 11.05.2012

2.2 Types of alliances

There are different perceptions of how to classify the different types of alliances. Barney for instance names three categories – non-equity alliances, equity alliances and joint ventures.¹⁶ Concerning the legal form, there are three different types of alliances – equity joint ventures, minority equity investments and contractual arrangement, also known as non-equity alliances.

Contractual arrangements do not involve sharing or exchanging equity. Furthermore the partner companies do not create a new organizational entity. The alliance members use their own organizational structure and platform.¹⁷ The concluded contract sets the mutual rights and obligations and specifies each firm's inputs to the alliance and specifies the termination of the cooperation.¹⁸

Non-equity arrangements include unidirectional agreements, such as licensing and distribution agreements, and bidirectional agreements such as joint R&D or manufacturing partnerships.¹⁹ For instance, most car manufacturers are part of an alliance to produce certain car parts more efficiently.

Equity arrangements include joint ventures and minority equity investments. In a joint venture, two or more partners create a new and independent jointly owned entity. The respective equity participations are clearly defined and valuations of contributions are isolated from the parent companies' own accounts.²⁰ The Board of Directors consists of executives from the partner companies. The employees are directly recruited by the Board or transferred by the parent companies. Each partner company possesses controlling and voting rights corresponding to the equity participations and receives a share of the returns in proportion to its level of ownership.

In a minority equity investment, one firm buys an equity participation in the capital of the other. This type of alliance may be close to an acquisition, but as long as the equity partner does not get full control of the operation, it is still considered as strategic alliance.²¹ Further, many companies include cross-equity holdings in order to strengthen the bonding between the respective partners.

¹⁶ Cf. Barney (1996); p. 370

¹⁷ Cf. Gulati (1995), p.88

¹⁸ Cf. Kale & Singh (2009), p. 49

¹⁹ Cf. Gulati (1995), p. 89

²⁰ Cf. Lasserre (2007), p. 116

²¹ Cf. Lasserre (2007), p. 117

However, transaction cost economists consider joint ventures and minority equity investments as being one category, because “a direct equity investment by one firm into another essentially creates an equity joint venture between one firm’s existing shareholders and the corporate investor.”²²

Johnson and Scholes differentiate between organisations, with no shareholding or ownership involved, loose arrangements of cooperation and informal networking.

They name joint ventures, consortia, networks, opportunistic alliances, franchising and licensing as different types of strategic alliances.²³ There are many examples of such alliances in the automotive industry. For instance car manufacturers and car dealerships sustain franchising agreements, the car dealers belong to different networks and car manufacturers and suppliers maintain opportunistic alliances.

Nevertheless a more specific classification for alliances between car manufacturers is required.

In this sense, Lasserre differentiates between global and local alliances. Local alliances under the form of joint ventures are traditional vehicles for market entry in countries that aimed at bringing value adding productive activities to their economy, protecting their natural resources and also promoting the strategic development of national firms.²⁴ For instance, the current Chinese automotive policy states that a foreign carmaker must form a joint venture with a Chinese carmaker if the foreign companies intend to produce its vehicles in China. The logic of these joint ventures is simple, the foreign companies get access to the growing Chinese market and in exchange, Chinese companies get access to foreign technologies.

Global alliances, for instance, are much more complex and elaborated in their strategic and economic scope. Doz and Hamel differentiate between three broad types of strategic alliances – coalitions, co-specializations and learning alliances.²⁵

Coalitions turn potential rivals into allies and providers of the complementary goods and services that allow new businesses to develop. In 1999, the leading car manufacturers, such as Ford, BMW, Toyota and PSA, formed the Alliance of Automobile Manufacturers in the United States. The main goal of the coalition is to

²² Gulati (1995), pp. 88; Pisano, (1989), p. 111

²³ Cf. Johnson & Scholes (2002); p. 380

²⁴ Cf. Lasserre (2007); pp. 100-101

²⁵ Cf. Doz & Hamel (1998); p. 4

represent the common interest of its members.²⁶ Furthermore, the alliance is active in political lobbying on behalf of the industry.

“Cospecialization is the synergic value creation that results from combining previously separate resources, positions, skills, and knowledge sources.”²⁷ Partners combine their unique and different resources, such as skills, know-how and tangible assets, to develop and build new technologies or products, in a joint effort. For example, BMW and PSA concluded an alliance in 2010, in order to bundle their efforts in producing electric and hybrid cars.

Many alliances are also formed for learning and internalization reasons. The companies want to obtain new skills and technologies. The so-called learning alliances²⁸ enable the transfer of know-how between the partners. The alliance of Nissan and Renault is a great example of a well functioning knowledge transfer in strategic alliances.

2.3 Why strategic alliances?

In today’s globalised world, strategic alliances seem unavoidable. Authors and business experts agree on this point, but there are many different explanations for this phenomenon. Some argue, that strategic alliances are essential in today’s business strategy and a matter of survival. According to Kanter „alliances between companies, whether they are from different parts of the world or different ends of the supply chain, are a fact of life in business today”.²⁹

Furthermore, there exist many external driving forces pushing companies to form alliances, such as turbulences in the world markets, high economic uncertainty, globalization of technology or shortening product life cycles. Especially in the automotive industry the fast technological change, e.g. hybrid and electric technologies, leads to increasing investment requirements.³⁰

However, the failure rate of strategic alliances varies between thirty and seventy per cent.³¹ Furthermore, failures can be very expensive. A study by Gonzales has shown,

²⁶ Cf. The Alliance of Automobile Manufacturers; 11.05.2012

²⁷ Cf. Doz & Hamel (1998); p. 5

²⁸ Cf. Lasserre (2007); p. 101

²⁹ Kanter (1994); pp. 96 – 108.

³⁰ Cf. Child et al. (2005); p. 80

³¹ Cf. Kale and Singh (2009); p. 45

that the 15 least successful alliances in 2001 decreased market capitalization by \$43 billion.³²

This shows, that strategic alliances do not guarantee higher profit. In the following paragraphs, the reasons why companies enter strategic alliances, even if the risk of failure is omnipresent, are illustrated.

Growth strategies and entering new markets

The expansion in new markets is very time-consuming and expensive. Especially in today's fast changing markets and highly competitive environments, first mover advantages are becoming indispensable. At the same time, companies simply do not have the resources to establish new markets one-by-one. Therefore an alliance between a technological strong company with new products and a company with strong market access is the only way to take advantage of an opportunity in time.

Internal development would take much longer and acquisitions are more expensive and implicate higher risks.³³ Furthermore local companies mostly sustain closer relationships with local suppliers and other stakeholders.

In this sense, Fiat and Tata Motors concluded a joint venture in 2006. Both companies operate production facilities together in India. This allows Fiat to enter the Indian market, whereas Tata Motors increases its technological know-how.

Learning / Obtaining new technology

According to Kogut³⁴, learning is one of the three major motivations for alliance formation. If a company cannot develop the required technologies, there are two possibilities. Either the company acquires another company with the specific knowledge, or it concludes an alliance with such a firm. However acquisitions have many disadvantages such as the internalization of unwanted assets or moral hazard.

Alliances involve fewer commitments, costs and smaller investments.³⁵

For instance Nissan was nearly insolvent before its partnership with Renault, but

³² Cf. Gonzales (2001); p. 2

³³ Cf. Child et al. (2005); p. 89

³⁴ Cf. Kogut (1988) pp. 319-332

³⁵ Cf. Child et al. (2005); p. 88

possessed a great technological know-how. Consequently, the partnership was a win-win situation for both companies. Nissan received financial aid and Renault could improve its technology.

Cost minimization / Sharing costs of research and development

One main reason for concluding alliances is cost minimization. This may occur in two different ways. First the companies can reduce their expenses through economies of scale and rationalization. When Fiat and Tata Motors opened a production facility together in India, they reduced the production costs for both companies. Due to the increasing number of produced units, the production costs per car decreased. Furthermore the production is rationalized by using the same platforms and the same parts.

Especially in the automotive industry cost minimization is a crucial competitive advantage. Car manufacturers have to bear exceedingly high R&D expenses. Capacity utilization and synergy effects are becoming increasingly important.

In this sense, many car manufacturers sustain platform-sharing agreements with other manufacturers³⁶. Honda, Nissan and Lexus; Ford, Mazda and Volvo or Fiat, Opel and Cadillac are only a few examples of car alliances, in which the companies shared the same platform for some of their cars.

Second, some companies may have the know-how and the financial capabilities, but seek for lower production costs. After the fall of the Iron Curtain, Eastern European countries such as Romania or Slovakia became very attractive for the global car companies, due to the proximity to Western Europe and lower labour costs.

Reduce financial risk

For many companies the financial risk which is involved in pursuing a new product or production method is too big to bear it alone. In such cases, two or more companies come together and agree on spreading the risk among all of them.

³⁶ “An automobile platform is a shared set of common design, engineering and production efforts, as well as major components over a number of outwardly distinct models and even types of automobiles, often from different, but related marques.” Brylawski (1999); pp. 1

Currently there is a growing push in the automotive industry for cleantech technology and the run after new technologies for hybrid or electric cars is very expensive. The processing is still in its infancy and many companies do not want to bear the R&D costs on their own. For this reason many companies form partnerships to unify the financial and the research efforts. A good example would be BMW and Toyota, which recently agreed to collaborate on research for cleaner, next-generation car batteries.³⁷

Achieve or ensure competitive advantage

Many small companies do not have the resources to compete with larger competitors. They simply do not have the financial background and the capacities even if they have the best technology. These companies rely on partnerships or alliances to compete against larger rivals. By forming alliances with other companies, smaller businesses can accomplish bigger projects more efficient resulting in better margins, than if they tried to do it on their own. For instance, Tesla, the leading producer of electronic vehicles in the world, has recently concluded an alliance with Toyota. This enables Tesla to increase the number of cars produced per year and ameliorate its position in the automotive industry, whereas Toyota gets access to Tesla's know-how.

2.4 Risks and problems in strategic alliances

Contracts in alliances are difficult to set up. Full control is not feasible, for legal and practical reasons, and many uncertainties are involved, mainly because none of the parties involved has the ability to develop the needed capability internally.

In this sense, an alliance is an incomplete contract that cannot fully specify what each party should do under every conceivable condition. Furthermore, it requires "that both parties engage in some form of trusting open-ended relationship in which decision-making is shared in order to allocate resources and distribute the outcome of the joint activity according to the prevailing business conditions."³⁸

Das and Teng differentiate between relational risk and performance risk. Relational risk is the risk of unsatisfactory inter-firm cooperation. There is always a risk of the

³⁷ Cf. NDTV; 11.05.2012

³⁸ Lasserre (2007); p. 99

alliance partner lacks commitment and is driven by opportunistic means.

Companies are interested in accomplishing their self-interests first. Opportunistic behaviour can occur in different forms, such as shirking, appropriating the partner's resources, distorting information and delivering unsatisfactory products and services.³⁹

Nevertheless it may occur that even if the alliance worked well for a few years, partners may become incompatible over time. For instance, firms that once needed each other to enter a market and/or improve a technology may have no longer interests in sustaining the alliance. Thus, opportunistic behaviour can arise at the beginning of an alliance, but also after the accomplishment of the goals, set up by the alliance partners. Therefore the companies must define clear goals and determining an endpoint could make sense too.

Performance risk is the probability that an alliance may fail, even if both parties are fully committed to the alliance. There are many possible internal and external threats such as "environmental factors, e.g. government policy changes, war, and economic recession; market factors, such as fierce competition and demand fluctuations; and internal factors, such as a lack of competence in critical areas, or sheer bad luck."⁴⁰

Toyota and General Motors concluded a joint venture in the early 1980s. GM needed Toyota's help to build small cars and Toyota needed to produce cars in the United States in order to get access to the U.S. market, due to import restrictions set up by the U.S. Congress. So Toyota took over a former General Motors plant, situated in Fremont. The Japanese carmaker even realized to turn one of GM's worst factories in one of GM's best. With the same workforce, Toyota managed to improve the quality of the cars and increase the production capacities considerably. Nevertheless GM did not realize to adapt the production system introduced by Toyota to other plants. Finally GM went bankrupt due to internal reasons and an increasing loss in market share.

Many alliances are concluded, because one partner needs the technological know-how of the other company. This can create an awkward situation for both partners. One company is always confronted with identifying and isolating what types of knowledge it can safely share with the partner. The company cannot control how its knowledge is used, once given away. In this sense firms always run the risk of giving their partner

³⁹ Cf. Das & Teng (1999) p. 51

⁴⁰ Das & Teng (1999); pp. 50-62

more insights into their production skills than intended.⁴¹

On the other hand, the partner company may fear that it is not receiving all the needed information. In other words, one company may presume that the other partner keeps required knowledge in secret and perceived inequity arises. This may result in a loss of trust in the alliance, especially when one firm is more successful than the other. It is easier to make the partnering company responsible for the negative outcome, what only creates further tensions.⁴²

Pitts and Lei, state that the risk of dependence is yet another risk in alliances. Firms that rely on the technological know-how of the partner company can become dependent on its partner without even noticing it. The U.S. car manufacturer Chrysler, for example, concluded a joint venture with Mitsubishi Motors in the 1970s. Chrysler had difficulties with producing small cars with low mileage, so they thought that this alliance would save them time and money. However, over time Chrysler became over reliant on Mitsubishi to build new lines of cars for them. As a result, Chrysler's production skills deteriorated. At this stage, an alliance can become menacing for the weaker partner, because the other company can exercise a high level of control and a hold-up problem can occur.⁴³

A further crucial problem that can appear during a partnership is the cultural clash. Companies from different countries, work in different ways and the problems might consist of language, egos, chauvinism, and different attitudes to business.⁴⁴ American companies for instance evaluate the company's performance on profit and financial benefits, whereas Japanese companies evaluate the performance on how an operation helps to build its strategic position, particularly by improving its skills⁴⁵.

The lack of clear goals and objectives are further reasons of failure according to Elmuti and Kathawala. Furthermore they state that the coordination between the management team can cause problems. Especially, when the companies remain competitors in spite of their strategic alliance.⁴⁶

⁴¹ Cf. Pitts & Lei (2005) p. 228

⁴² Cf. Jiang et al. (2008); p. 185

⁴³ Cf. Pitts & Lei (2005); p. 228

⁴⁴ Cf. Kilburn (1999) p. 20

⁴⁵ Cf. Daniels & Radebaugh (2001); p. 479-511.

⁴⁶ Cf. Elmuti & Kathawala (2001); p. 209

2.5 Theoretical perspectives of strategic alliances

With the increasing importance of strategic alliances, academic researchers have also started paying substantive attention to alliances. Different theoretical perspectives of strategic alliances have already been explored, such as the Transaction Costs Theory or the Resource Based Theory. In the following part the implications of different theories on strategic alliances are elucidated.

2.5.1 Transaction Costs Theory

The Transaction Costs Theory belongs to the “new institutional economics” paradigm and is deals with the minimization of the companies production and transaction costs. The production costs vary depending on learning and experience effects, location advantages, and proprietary influences. The transaction costs are associated with arranging, managing and monitoring transactions across markets.⁴⁷ The theory became widely known via Oliver Williamson’s Transaction Costs Economics, published in 1975.⁴⁸

According to Williamson, all economic activity revolves around a transaction, which is one form of exchange of a good or service between two or more economic actors. Furthermore he questions, when and why a company should acquire a good or service by outsourcing rather than producing it on its own.⁴⁹

The simplest application of the Transaction Costs Theory, also known as transaction costs economics, is the make-or-buy decision. It is cheaper to buy a specific product from a specialized company than producing it itself. However, the market fails, when transaction costs are prohibitive in the judgement of the key decision makers in the company. As a consequence the company is forced to internalize the production instead of acquiring it on the market. The Transaction Cost Economics explain why a company might choose to internalize the production of a good or component instead of buying it even if the production costs are higher than those offered by the specialized company.⁵⁰

However, Williamson assumes two economic hazards in the different governance structures – bounded rationality and opportunism. Bounded rationality refers to the

⁴⁷ Cf. Barringer & Harrison (2000); p. 369

⁴⁸ Cf. Lowensberg (2010) p. 1093

⁴⁹ Cf. Williamson (2010); p. 686

⁵⁰ Cf. Barringer & Harrison (2000); p. 371

fact, that “economic actors have limited data and constrained information-processing abilities and that future is often unknowable.”⁵¹ If bounded rationality did not exist, complete contracts could organize all economic activity efficiently. Opportunism refers to the assumption that economic actors are primarily interested in their own personal success or well-being and will disregard the interests of their partners if they can get away with it.⁵²

Moreover companies seek to optimize the flow of goods and services and minimize the corresponding transaction costs. Naturally, the higher the costs due to incomplete contracts and potential damage from opportunism, the more appropriate governance mechanisms are needed to protect the alliance from these potential hazards. This leads again to higher transaction costs.⁵³

Heide and John argue, that opportunistic behaviour can be lowered by relational norms, such as trust. They affirm, that trust can enhance control mechanisms to boost mutual beneficial exchanges.⁵⁴ Logically a partnership can better withstand uncertainties of environmental and organizational changes, when partners trust each other. Furthermore companies are rather willing to invest in the relationship, when they are convinced of the partner’s competence and trustworthiness.

Further governance mechanisms are equity control and contractual safeguards. Gulati and Singh stated, that mutual equity investments reduce the risks of opportunistic behaviour. According to the authors, the absence of cross shareholdings can lead to a moral hazard problem. If one partner does not hold equity interests in the partner company, the risk of opportunistic behaviour rises again.⁵⁵

Contractual safeguards stand for the efforts during the negotiation of the alliance to avoid self-interested behaviour during the alliance. The contracts need to clearly implicate the goals and expectations of each partner.⁵⁶

Barringer and Harrison expanded the application of the common make-or-buy decision to make, buy or partner. According to the authors, an inter-firm cooperation, such as a joint venture or a network structure, is an adequate alternative to a market or

⁵¹ Judge & Dooley (2006); p. 26

⁵² Cf. Judge & Dooley (2006); p. 26

⁵³ Cf. Judge & Dooley (2006); p. 26

⁵⁴ Cf. Heide & John (1990); p. 32

⁵⁵ Cf. Gulati & Singh (1998); p.807

⁵⁶ Cf. Judge & Dooley (2006); p. 27

organisational hierarchy.⁵⁷ In this context, strategic alliances can be seen as hybrid arrangements of market transactions and hierarchy or full internalization.⁵⁸

2.5.2 Resource Based View

According to the Resource Based View, a company consists of a collection of resources. Tsang differentiates between physical resources, human resources and organizational resources. Physical resources include tangible assets, such as plants, equipment, finished and semi-finished goods, as well as intangible assets like the brand name or patents. The organizational resources include corporate culture, organizational structure, procedures and management systems.⁵⁹

According to Das and Teng, many resources are firm-specific and perfectly imitable, therefore firms remain heterogeneous in terms of their resource base. As a consequence, “sustained firm resource heterogeneity becomes a possible source of competitive advantage, which then leads to economic rents, or above normal returns”.⁶⁰

In contrast to different strategy models defining a company’s strategy through its competitive environment, the RBV states that a company’s strategy is critically influenced by accumulated resources. In other words, a company should pay more attention to its own resources than to its competitive environment.

Birner Wernerfelt, being the first author to apply the Resource Based View in the field of strategic management, stated “a firm wants to create a situation where its own resource position directly or indirectly makes it more difficult for others to catch up”.⁶¹

In the context of the automotive industry, this would be a new technology like a specific fuel-efficient propulsion system or innovative designs of a car manufacturer.

Wernerfeld also created the concept of acquiring or merging with other companies to buy or sell resources. Through the acquisition of a company one could also gain its technological capabilities for instance.

The Resource Based View seems particularly appropriate for examining strategic alliances, because firms often use strategic alliances to gain access to another

⁵⁷ Cf. Judge & Dooley (2006); p. 28

⁵⁸ Cf. Kyle & Teece (2008); p. 1

⁵⁹ Cf. Tsang (1997); p. 208

⁶⁰ Das & Teng (2000); p. 32

⁶¹ Wernerfeld (1984); p. 173

companies' valuable resources.⁶² In this context, Eisenhardt and Schoonhoven found out, that companies tend to conclude alliances especially when they are in need of resources or when they are in a strong social position. Furthermore, their empirical results indicated, that with an increase in competitors, the rate of alliance formations increases too.⁶³

According to the Resource Based View, companies enter strategic alliances to share, aggregate, combine or exchange resources with other companies, when these resources cannot be efficiently obtained through market transactions or merger and acquisitions. Furthermore, strategic alliances should be favoured over mergers and acquisitions for two reasons. First, a company mostly does not want to acquire all the resources of another company. Through an alliance, the company only gets access to the desired resources. Second, some of the less valuable resources in an acquisition cannot be easily dropped without taking a loss.⁶⁴ For instance, BMW was mainly interested in the Mini and Land Rover brands when acquiring the Rover Group. Nevertheless, BMW had to buy the whole group.

2.5.3 The Strategic Choice Perspective

The Strategic Choice Perspective, established by John Child in 1972⁶⁵, is based on the assumption that companies conclude inter-organizational alliances to increase competitiveness or market power.

Thereby this management theory focuses on the role played by managers in shaping conditions and processes outside and within the company in order to reach certain objectives, such as increased market power or increasing sales volumes.⁶⁶ According to Judge and Zeithaml, organizational members are free to shape their own fates. Hence the perspective focuses on the executives and managers within organizations to explain organizational processes.⁶⁷

Firms use different reasons to justify the conclusion of alliances, such as increasing market power, increasing speed to market or blocking the moves of competitors.⁶⁸

⁶² Das & Teng (2000); p. 33

⁶³ Eisenhardt & Schoonhoven (1996); p.147

⁶⁴ Das & Teng (2000); p. 37

⁶⁵ Child (1972); p. 4

⁶⁶ Child et al. (2005); p.88

⁶⁷ Judge & Zeithaml (1992); p. 770

⁶⁸ Barringer & Harrison (2000); p. 374

Shan and Hamilton highlight, that in alliances with local companies, the selection of a local partner may be a strictly strategic decision. The choice of the local partner is sometimes crucial for the long-term competitiveness in a foreign market and rather strategically motivated than based on specific resource dependency needs or transaction costs considerations.⁶⁹ This seems to be particularly applicable in China. The Chinese automotive industry increased considerably in size and importance in the last twenty years. At the moment more than eighty Chinese car-manufacturing companies exist.⁷⁰ The company constructions differ from fully state-owned to private companies and there are great differences in terms of government support, licenses, distribution and access to suppliers. In this sense, it is important to find a local partner, where an equal distribution of controlling and voting rights as well as the protection of intellectual property is guaranteed. These are crucial factors for a long and successful partnership.

Barringer and Harrison state that the Strategic Choice Perspective is still very broad and motivations from many different perspectives can be incorporated into the strategic choice theory. Therefore there is no consensus on how the “inter-organizational relationship strategies” should be sorted into meaningful groups for studies.⁷¹ Furthermore, joint ventures are often concluded due to market entry barriers. In order to protect domestic industry or to ensure, that foreign companies to cooperate with local partners, many governments set up market entry barriers. This means that, although different theoretical perspectives, such as the Transaction Costs View deliver good explanations for the conclusion of inter-firm collaborations, the reason is sometimes more pragmatic. Namely, the companies are forced to choose a joint venture as market entry form. According to Miles and Snow, the Strategic Choice Perspective is defined by three major characteristics. They state, “that the perspective views managerial or strategic choice as the primary link between organization and environment, focuses on management’s ability to create, learn about, and manage the organization’s environment and encompasses the multiple ways that organizations respond to environmental conditions.”⁷² In this sense, car-manufacturing companies seeking to enter an emerging market need to scan, identify

⁶⁹ Cf. Barringer & Harrison (2000); p. 375

⁷⁰ Cf. Zhao (2009); p. 2

⁷¹ Barringer & Harrison (2000); p. 375

⁷² Judge and Zeithaml (1992); p. 770 citing Miles & Snow (1978)

and capitalize on opportunities on the market and bear the costs and risks of possible market and contextual changes.⁷³

In the 1980s, for instance the U.S. government constricted the import rate of Japanese vehicles. As a consequence, Japanese car manufacturers opened production facilities in the U.S. in collaboration with local companies such as GM or Chrysler.

The BRIC countries China and Russia also restricted the establishment of wholly foreign-owned enterprises in order to promote the local economy. In China, foreign car manufacturers must conclude a 50:50 joint venture with a local manufacturer, if they want to operate in China.⁷⁴ In 2010, the Chinese government even considered to force foreign OEMs to reveal their electric-vehicle technology to Chinese companies in exchange for access to the nation's huge market.⁷⁵

To sum up, the Strategic Choice Perspective explains how organizations adapt to environmental forces in order to increase competitiveness or enter new markets.

2.5.4 The Modern Portfolio Theory

The modern portfolio theory indicates that through greater diversification in an investment portfolio, the financial risk of unexpected losses is lowered.

Introduced in 1952 by Harry Markovitz, the theory attempts to maximize the expected return of a portfolio or equivalently minimize the risk for a given level of expected return by carefully choosing the proportions of various assets with different levels of risk. The theory is widely used in the financial industry.⁷⁶

However, diversification can also be beneficial on the corporate level. For instance the use of economies of scale, market power and economies of scope can be implemented at the enterprise level through diversification strategies. This means that companies can lower the risk of failure by offering different products, by entering new segments or by opening a new market. Moreover, the companies can pursue a diversification strategy through mergers, acquisitions and the conclusion of strategic alliances. On the financial market, diversification leads to a relative increase in yield, whereas on the corporate level, diversification may lead to an increase of the market value of the respective companies.⁷⁷ However, the financial risk of a merger or

⁷³ Cf. Luo and Tan (1998); p. 24

⁷⁴ Cf. Auto Focus Asia; 11.05.2012

⁷⁵ Cf. The Wall Street Journal; 11.05.2012

⁷⁶ Cf. Financial Times; 14.06.2012

⁷⁷ Cf. Fichtner (2007); pp. 24, 25

acquisition is high. In case of financial troubles of the newly acquired company, the market value of both companies may decrease. For instance, after the fusion of Daimler and Chrysler, both companies had to face significant declines in the market value due to a breakdown of the sales volumes and subsequent financial losses of Chrysler.

From the point of view of the automotive industry, diversification leads to a reduction of the financial risk on two different levels. First, OEMs can reduce the risk of failure by diversifying their product range and entering different segments. In this context, companies form alliances in order to reduce the financial risk of the required investments. Second, the companies should conclude partnerships, other than mergers or acquisitions, in order to reduce the financial risk of an inter-firm collaboration. Thus, the conclusion of different strategic alliances generally requires minor investments than the acquisition of a competitor.

In this sense, the concept of a diversified portfolio, which leads to more consistent returns, can be applied for companies maintaining different partnerships. The conclusion of different alliances leads to a diversification of risk, as well as more secure and consistent cash flows.

3. The Automotive Industry

3.1 The economic development of the automotive industry

This chapter offers an overview of the evolution of the automotive industry from 1980 on. The products and the companies have evolved a lot since that time and many carmakers disappeared or merged with other companies. The product range prospered considerably and the costs for new innovations increased. Furthermore the markets in Europe, the United States and Japan have become more and more saturated and new markets such as India, Brazil or China have emerged.

Indeed the automotive industry includes industries associated with the production, wholesaling, retailing, and maintenance of motor vehicles⁷⁸, but however, in this dissertation, the focus lies on car manufactures, also known as original equipment manufacturers (OEM). OEMs are companies that combine self-made or bought-in components to complete vehicles and offer them to consumers on the market. Suppliers are companies in the supply chain that provide the OEMs with industrial intermediate products and bring appropriate services.⁷⁹

After the oil crisis in the 1970s, the automotive companies started developing more fuel-efficient cars and put greater emphasis on safety. Furthermore the electric components became more important. In 1980, 88,9 % of the cars were produced in Europe, Japan and the U.S., whereas, Japan outran the U.S. as biggest car manufacturer and became a big threat for the American and European car manufacturers, even on their home markets.⁸⁰ However, the Japanese government concluded a voluntary restraint agreement with the U.S. and several European countries to limit Japanese exports.⁸¹

In 1980, the companies started to improve the efficiency and quality of their cars. Japanese and European car manufacturers started establishing plants in the U.S. and global competition rose. Especially the U.S. companies had to face severe problems. The production costs were too high and the quality of the cars was poor. The sales

⁷⁸ Cf. The Bureau of Labour Statistics; 11.05.2012

⁷⁹ Cf. Wallentowitz et al. (2009), p.1

⁸⁰ Cf. VDA Report 1980; pp. 22-24

⁸¹ Cf. Singleton (1992); p. 3

volumes decreased and several plants had to be closed. As a consequence, several U.S. carmakers concluded collaborations with Japanese companies.⁸²

The companies had to face several challenges, such as the internationalization of production and sales, higher production costs and increased competition. As a consequence some companies were taken over or disappeared.

However, the industry expanded in the eighties and the production volume increased from 38,56 million cars in 1980 up to 48,7 million cars in 1990.⁸³ The companies from Japan, the U.S. and Western Europe even realized to increase their combined market share from 88,9 % up to 90,9 % in the same period.

The collapse of the Soviet Union had extensive consequences for the Western economies and consequently for the automotive industry. Countries with huge raw material resources and unsaturated high sales potential now took part in the global competition for wealth and growth. Hence globalisation began. The changes of the global economic environment hit the automotive industry particularly hard. On the one hand, the companies had to reconsider its production locations due to high-level differences in factor costs. On the other hand, the opening of the Iron Curtain allowed the attainment of millions of new potential clients. Henceforth the automotive industry had to cope with locational competition and cut-throat competition.⁸⁴

In addition to this, the automotive industry suffered under a recession in the early nineties and the global sales volumes decreased from 48,7 million cars in 1990 to 47,2 million in 1992. Only the U.S. companies realized to overcome their structural problems and the sales volumes increased compared to the late 1980s. Furthermore, the impact of emerging countries like Brazil, Mexico, Argentina or South Korea, on the market rose. In 1992, already 16,2 % of the cars produced worldwide, were produced outside of the triad (Japan, Western Europe, United States), whereas Germany suffered under a sharp decline in demand.⁸⁵

In the mid-nineties, the impacts of globalization became more and more apparent. Especially the Asian countries started playing an important role in matters of production and sales potential.

⁸² Cf. Singleton (1992); p. 3

⁸³ Cf. VDA Report (1990); p. 27

⁸⁴ Cf. Becker (2006); pp. 1-3

⁸⁵ Cf. VDA Report (1993); pp. 16-18

In China, the government put great efforts in the development of transport infrastructure. The immense amount of potential customers and the continuing economic growth made the country very attractive for the automotive industry. Furthermore China needed the support of foreign car companies, because Chinese car manufacturer were not competitive yet, due to a lack of auto-making expertise. Besides, the Chinese government decreed, that car manufacturers must conclude a joint venture with a Chinese company, if they plan to set up a production plant in China. However, in the nineties, China was only relevant as sales market and production site.⁸⁶

India, Thailand and Taiwan also started arousing the interests of the automotive industry. Indeed the car density was still very low in those countries, but the sales volumes were increasing strongly.⁸⁷

All in all one can say, that the proportion of the triad markets of the global automotive demand started declining and the emerging and developing countries became increasingly important. Thus, the car manufacturers had to rethink their strategies and needed to implement local production facilities to bear the rising demand outside of the traditional markets. In the late nineties, the automotive companies continued the restructuring measures and concluded many mergers, fusions and collaborations. However, the automotive industry was in a good condition and reported increasing production and sales volumes. The OEMs even reached a historic high with 56 million produced units in 1999.⁸⁸ Although the Western European car manufacturers suffered under a recession in the mid-nineties, the companies had the biggest production volume worldwide in 1999. Furthermore 75 % of the produced cars were sold in the triad markets and the Chinese market pursued growing.⁸⁹

Slowly but surely the automotive industry emerged as an oligopolistic market. In 1999, the five biggest car companies - General Motors, Ford, Toyota, DaimlerChrysler and Volkswagen - manufactured 55 % of all the cars produced worldwide in the same year.⁹⁰

The global strategy of the leading car manufacturers implicated production plants all over the world, a global sourcing and allocation strategy, as well as a global product

⁸⁶ Cf. Becker (2006); pp. 3

⁸⁷ Cf. VDA report (1994-1995); p. 23

⁸⁸ Cf. VDA report (2000); p.15

⁸⁹ Cf. VDA report (2000); p.19

⁹⁰ Cf. VDA report (2000); p. 25

development strategy.⁹¹ This strategy allowed the companies to take advantage of growth markets and secure themselves against cyclical economic fluctuations and market-structure related fluctuations.

Nevertheless, the car industry had to bear many challenges in the nineties. The triad markets began to be saturated, the demands of the clients rose and the product life cycle decreased as well as the customer loyalty. As a result, the car manufacturers built more technical cars and expanded their product lines. This again led to an enormous increase in car-body variants and increasing R&D costs. At the beginning of the twenty-first century, the production of fuel-efficient and more environmentally-friendly cars became increasingly important. The companies intensified the research efforts in different directions and made progresses in the development of diesel engines, hybrid and electric cars.

From 2000 on, the cyclical trend in the automotive industry was very promising. The dismantling of tariff barriers, the facilitation of customs clearance and the reduction of non-tariff trade barriers facilitated global trade. Furthermore China became member of the WTO in 2003 and committed to comply with the international trading system's rules and its principles of non-discrimination, transparency, free trade and fair competition.⁹² In 2004, China was already the fifth largest car producer worldwide with 5,1 million units. In India the sales volumes surpassed for the first time one million units and the production volume ranged at 1,5 million produced cars.⁹³ In Eastern Europe, the sales expectations could not be reached. However, countries like Poland, Slovakia and the Czech Republic have become very attractive production locations in the past years due to low labour costs and the strategic location between Russia and Western Europe.

Up to the financial crisis in 2008, the car manufacturers realized, due to their global strategies and the rising demand in emerging markets such as Brazil, Russia, Turkey, China and South East Asia, that they had to increase the production volumes. Although, the expectations could not be reached in some countries from year to year, the automotive industry managed to increase the number of produced units up to 73,26 million units in 2007 (Illustration 1).⁹⁴

⁹¹ Cf. Shimokawa (1999); p. 1

⁹² Cf. Centre for International Trade Development; 11.05.2012

⁹³ VDA report (2005); pp 37-38

⁹⁴ VDA reports (2003, 2005, 2006, 2007)

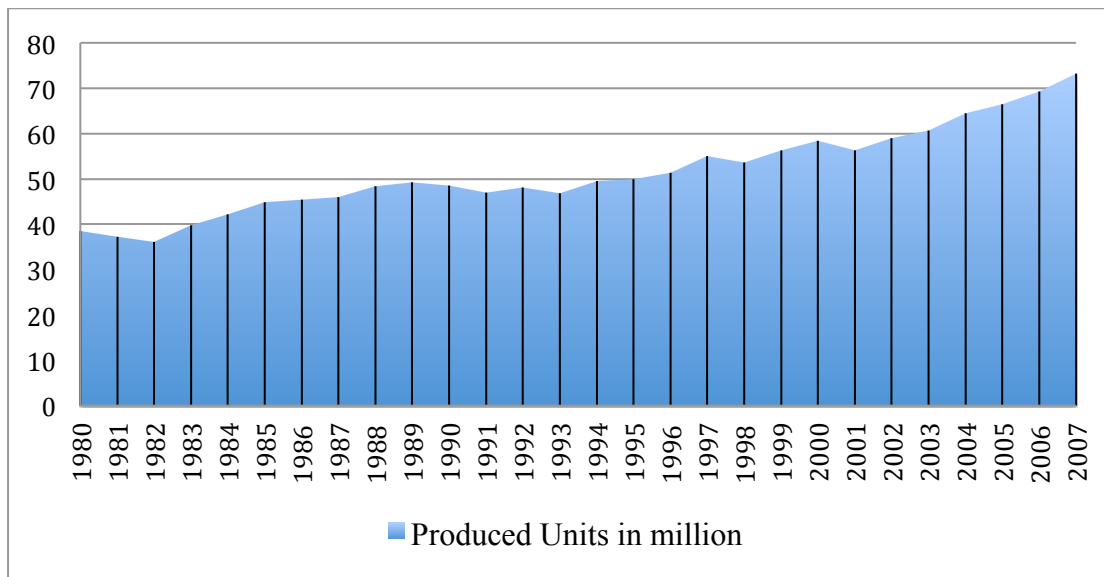


Illustration 1: Globally Produced Units per year

Source: International Organization of Motor Vehicle Manufacturers, own illustration

The following illustration shows of the rising influence of the merging countries. As one can notice, the former triad markets – Western Europe, Japan and the United States – have lost in importance and the emerging countries Russia, China, India and Brazil with their global growth markets have gained in influence over the past years.

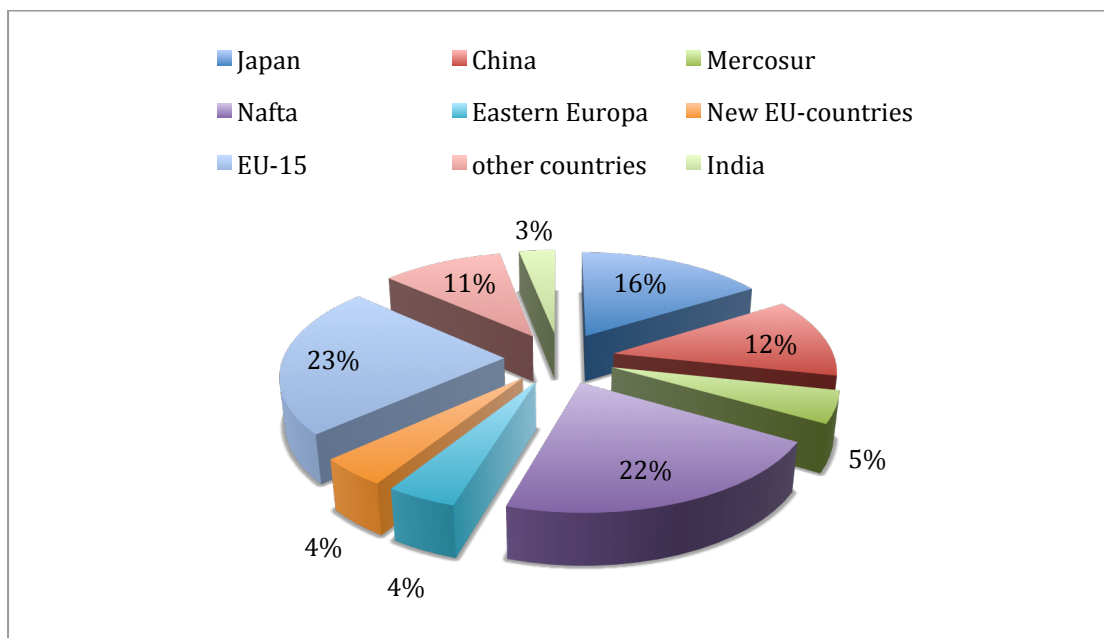


Illustration 2: Global car production volume 2007 per region

Source: VDA report 2008, own illustration

The financial crisis began in 2007 with the collapse of the subprime bubble in the United States. As a result, the car manufacturers had to suffer under massive collapses in growth, especially in countries like the United States, Spain or Great Britain, where the real estate and financial crisis hit the national economy very hard. The leading automotive industries – U.S.A., Japan and Germany - had to register the biggest decreases in production and a collapse of the sales volumes in 2008 and 2009. In the United States, the big three manufacturers Chrysler, Ford and General Motors had severe financial troubles and partly needed financial assistance by the American government to avoid bankruptcy. Furthermore the governments of the different countries tried to boost the economy by implementing different stimulus packages such as the car scrap page scheme in Germany.⁹⁵

The car manufacturers tried to stimulate the demand by granting bounteous discounts on newly acquired cars. Nevertheless, the demand for cars fell sharply and multiple factories had to be closed down, in other plants the production had to be stopped and temporary work was introduced. The U.S. car industry even underwent the worst sales volumes since 1992.

The following figure shows the evolution of the production volume per year between 2006 and 2010. As one can observe, the crisis hit the companies particularly in 2008 and 2009. Only in 2010 the economy recovered slowly and a slight upturn began.

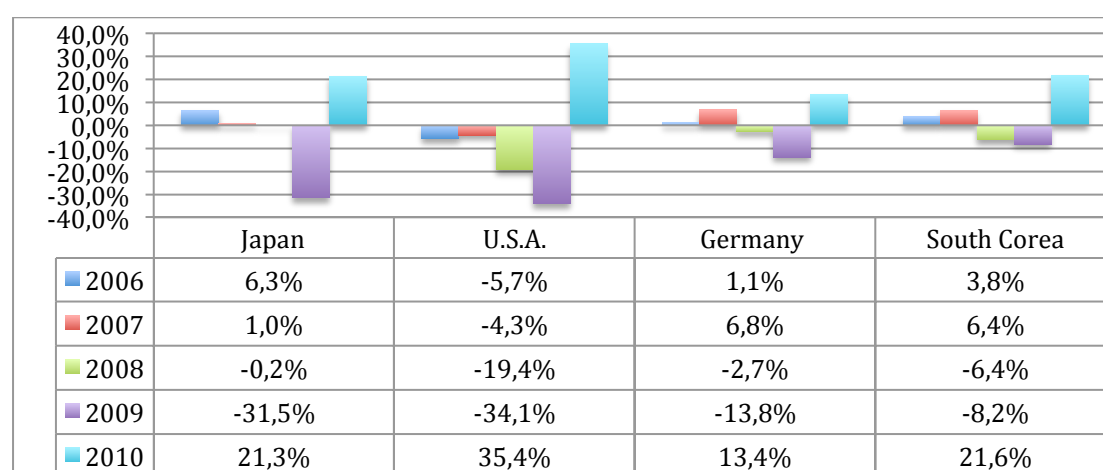


Illustration 3: Evolution of the car production volume during the crisis I

Source: International Organization of Motor Vehicle Manufacturers, own illustration

⁹⁵ Cf. OECD (2010); pp. 1-3

While the triad markets suffered under strong decreases in demand, the dynamic growth ceased in the emerging markets. In 2008, India and China could not reach the rates of growth from the previous years. Nevertheless, the sales volumes kept on increasing. Brazil only had a decreasing production volume in 2009 (shown in Illustration 4).

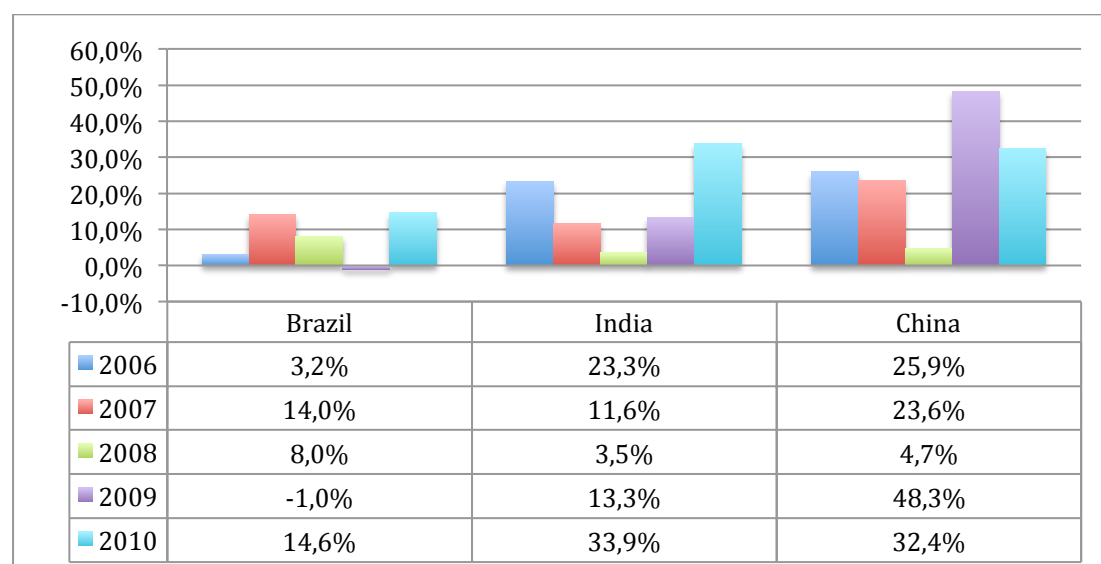


Illustration 4: Evolution of the production volume during the crisis II

Source: International Organization of Motor Vehicle Manufacturers, own illustration

All in all, one must say, that the financial crisis hit the automotive industry less hard, then expected. Government incentives such as tax incentives and car-scrapping incentives pushed the car sales significantly. Furthermore, the markets in China, India and Brazil still performed very well. As a result, in 2009 the demand on the global markets decreased only by four per cent instead of the expected 20 per cent. Indeed the production volumes were still low, but the car manufacturers needed to liquidate their stocks in order to avoid further excess capacities.⁹⁶

Already in 2010, the production volumes were rising again and the recovery of the markets continued. The sales volume on the Chinese market exceeded all expectations. China managed to assure its position as largest car producer and most important sales market worldwide.

Mainly the emerging markets were responsible for the strong market forecast. In Europe and the United States, the government incentives expired and the growth in demand slowed down. Nevertheless, the automotive industry succeeded to recover

⁹⁶ VDA report (2010); p. 20

much faster than expected and the global production volume attained again 71,1 million units in 2010 and 80 million units in 2011.

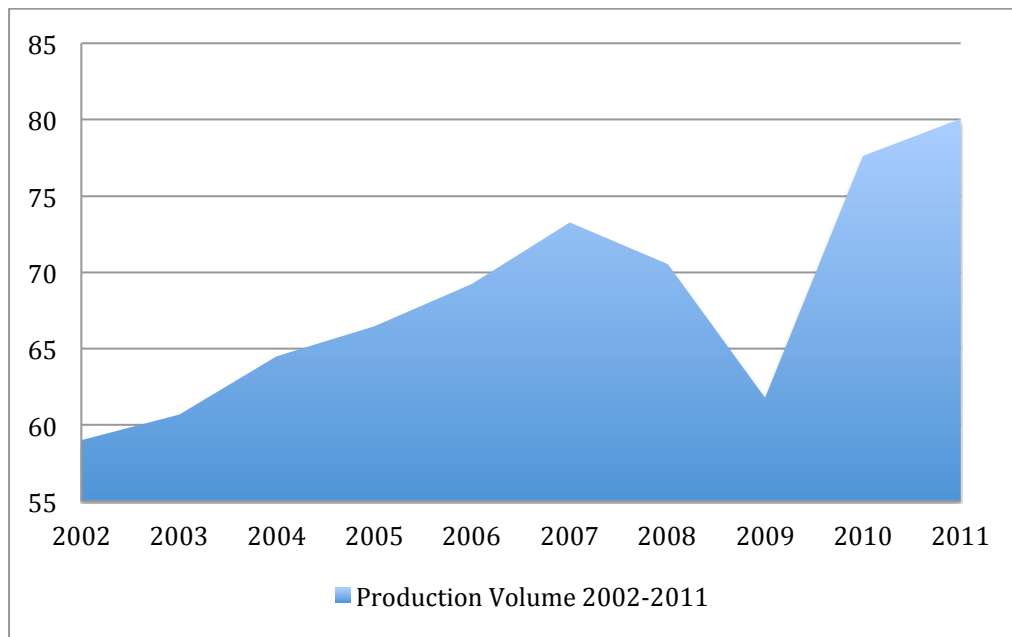


Illustration 5: Global car production from 2002 to 2011

Source: International organisation of Motor vehicle Manufacturers, own illustration

3.2 The future prospects of the automotive industry

The financial crisis has shown that the power structure in the automotive industry has shifted. While the emerging countries were considered as important sales markets and production locations ten years ago, they have become the most important car producers and registered the largest sales volumes worldwide in the recent years.

The industry needs to continue the structural change and has to bear tremendous challenges in the future. New competitors, mainly from Asia, are seeking to enter the market, the technological change to alternate drives must be mastered and the shift of the growth markets must be taken into account. At the same time customers' needs and the mobility requirements are changing.⁹⁷

⁹⁷ Cf. VDA report (2011); p. 19

According to Prof. Jürgen Hubbert, former member of the Board of Directors of DaimlerChrysler, the automotive industry has to face the greatest challenge in its history.⁹⁸

As already pointed out, the competitive landscape is changing and according to the predictions of several experts, China and India will emerge as global players in the industry and the rise of one global car company from China or India is more likely.⁹⁹ Furthermore production facilities in lower cost regions will become increasingly important, due to two reasons, cost and demand. Lower labour costs in emerging countries are one strong incentive to move the production to these regions. Moreover the population in the emerging markets is expanding and people desire the same standard of living as in the Western world. Consequently the number of potential clients is rising too.

The OEMs need to show presence in the emerging markets for competitive and economic reasons. Due to high exchange volatility and rising transportation costs, the OEMs came to the conclusion, that regional production systems within a specific trade zone make more economic sense than importing outside of a trade zone. Therefore the car manufacturers will need to establish plants in low cost areas within a region. In this sense, cars for the European market are more likely to be produced in Hungary or Romania for instance and cars produced in Mexico will remain in North America.¹⁰⁰

The OEMs have to face another crucial challenge concerning the changing demands and customer expectations. On the triad markets the expectations are becoming more discerning. The consumers demand more individual cars including different entertainment features. As a consequence, the car manufacturers leave their niche and offer a wider product range, which again this leads to strong increases in product costs.¹⁰¹ According to a study of the Center of Automotive Research of the University of Duisburg-Essen, the German customer had the choice between 1.706 different vehicle variants out of 376 model lines in 2011. In 1995, 227 different model lines existed and the amount is expected to rise up to 415 model lines in 2015.¹⁰²

⁹⁸ Cf. Thiem (2012)

⁹⁹ Cf. Becker (2006), p. 95; Thiem (2012); Zamponi (2011); 11.05.2012

¹⁰⁰ Cf. Deloitte (2009); pp. 3,4

¹⁰¹ Cf. Becker (2006); p. 29

¹⁰² Cf. Dudenhöffer; 11.05.2012

In the emerging countries, a very wide customer field demands for cheap compact cars like the Tata Nano from India, for example. Especially in mega cities like Mexico City, Guangzhou or Delhi small convenient cars will be indispensable. In this context, the car manufacturers also need to consider utilization concepts, like car sharing models.¹⁰³ However, the middle class is growing in the developing world and the demand for luxury brands and high-end products will rise as well. According to Dudenhöffer, the R&D costs in this segment are increasing exponentially and the car manufacturers need to use global platforms to maintain an economically feasible and innovative production.¹⁰⁴

Higher fuel prices and the concerns over global warming have focused attention on more efficient cars and green technology. However, the development costs for electric and hybrid cars are still very high and only few customers are willing to pay a premium for these technologies. In addition, electric vehicles only have a limited range and the required infrastructure to charge the batteries lacks. Nevertheless a study by Deloitte estimates that by 2020, electric vehicles and other green cars will be representing up to a third of total global sales in developed markets.¹⁰⁵ In Western countries, electric cars are the future. However, a lot depends on the progress in the development of cheap and powerful batteries and governmental incentives. If the government continues to support green emission-free technologies with tax concessions and subventions, electric and hybrid cars will much faster become widely accepted much faster. Furthermore, the government needs to provide the required infrastructures, such as charging stations, for example.

In the emerging countries, the demand for traditional, internal combustion engines will probably dominate. First, fuel is less expensive than in Europe or Japan. Second, the largest purchasing segment in emerging markets by 2020 will be first-time buyers and prices remain the most important factor for them.¹⁰⁶ However, the government policy also has a great influence. For instance, in Brazil the government boosts the adoption of flex fuel to relieve the country of its reliance on petroleum imports¹⁰⁷. In China the government makes great efforts to become one of the leading producers of

¹⁰³ Cf. Thiem (2012)

¹⁰⁴ Cf. Dudenhöffer (2009); 11.05.2012

¹⁰⁵ Cf. Deloitte (2009); p. 15

¹⁰⁶ Cf. Deloitte (2009); p. 9

¹⁰⁷ Cf. United Nations Environment Programme; 11.05.2012

hybrid and electric vehicles in order to strengthen its competitive position and to reduce pollution in the mega cities.¹⁰⁸

However, as long as petrol is still affordable and the price for emission-free cars is that high, consumers will prefer traditional combustion engines. As a consequence, car manufacturers will try to reduce the mileage of diesel and gas engines significantly. Furthermore the R&D departments are working on new body components to make the cars lighter and more aerodynamical.¹⁰⁹ Meanwhile, the companies need to keep an eye on development of alternative fuel. In Asia and Latin America, for instance the availability and easy access to natural gas favours the adoption of natural gas-powered vehicles.¹¹⁰

All in all, the parallel development of petrol and gas engines, gas-powered vehicles, alternative propulsion, hybrid and electric cars is very expensive and complex. The companies need the financial resources and technical capacities to bear the challenges on many fronts. Hence, in times of structural changes and shifting growth markets, the OEMs are heading for tough times.

3.3 The development of strategic alliances in the automotive industry

In the following part, the evolution of collaborations, mergers and acquisitions within the automotive industry will be disclosed. The evolution of the automotive industry is described in chronological order and on specific examples and the motives for the different types of cooperation are illustrated. Subsequently, the results of the analysis are outlined and elucidated.

The research data consists only of interactions between original equipment manufacturers only. However, alliances concerning the production of trucks, utility vehicles and buses are not considered in this survey. The data collected derives from different sources, such as Standard & Poor's database Capital IQ, financial reports of the respective car manufacturers and different Internet sources, particularly websites of the different car companies.

¹⁰⁸ Cf. Deloitte (2009); p. 17

¹⁰⁹ Cf. Thiem (2012); 11.05.2012

¹¹⁰ Cf. Deloitte (2009); p.19

In the 1980s, the car manufacturers recovered slowly from the oil crisis in the 1970s and started rethinking their strategies. At the beginning of the decade 30 independent car manufacturers existed, mostly from the U.S., Western Europe and Japan.¹¹¹ As already mentioned, the Japanese companies were very effective in producing efficient cars at that time and posed a big threat to the American and European companies. Consequently these companies tried to gain the technological know-how through collaborations with Japanese manufacturers. Hence out of 18 alliances concluded between 1980 and 1990, eleven collaborations included at least one Japanese company (Table 1).

The alliances were concluded for different reasons. For instance, many manufacturers put their development and production efforts together, to jointly produce cars and sell them under different brands. Kia, for example, concluded a license agreement with Mazda in 1983. This allowed them to produce Mazda derived vehicles for the South Korean market and foreign markets. Due to a collaboration with Ford, these cars were then rebadged and sold as Ford vehicles on the American markets.

British car manufacturers such as Rover, Jaguar or MG had to get through troubled times in the 1970s because the companies were put under the control of the government. After a governmental restructuring program, the companies Austin and Rover formed the Austin Rover Group in 1981. Due to a collaboration agreement with Honda, the Japanese company supplied Austin Rover with cars in kit form, which were rebadged and sold as Rover cars. However, Austin Rover never managed to adopt the Japanese quality standard and manufacturing systems.¹¹²

Moreover, the leading car manufacturer sought to enter new markets. In this context, VW and Ford decided to form a joint venture and merge their development and production facilities in Brazil. Through platforms, body parts and engines sharing, the two companies realized decreasing R&D and production costs.¹¹³

Due to import restrictions, Japanese companies started opening production facilities in the U.S. For instance, Toyota reopened a former General Motors factory in cooperation with General Motors. The companies jointly produced cars and sold them under both brands.

¹¹¹ Cf. Becker (2006); p.77

¹¹² Cf. The Independent; 11.05.2012

¹¹³ Cf. Yoshino (1996); p. 45

In the following table, one can observe, that joint production facilities, license agreements and collaborations of the production departments were very popular in the 1980s. On one hand, these alliances were meant to get access to new markets. The foreign company shared the technologies and the know-how with the local company. In return the local manufacturer produced the vehicles and sold it under the different brands. As a result, the companies maintained production facilities together and jointly produced vehicles. These vehicles were often rebadged and sold under different brands.

Volkswagen pursued three different strategies. First, due to a license agreement, Nissan produced vehicles for Volkswagen on the Japanese market and sold them with a VW and a Nissan badge. Second, Volkswagen concluded a collaboration with SEAT, which allowed them to jointly produce cars for the two brands in Spain. Three years later Volkswagen acquired 75 % of the share of SEAT and became the major shareholder of SEAT.¹¹⁴

Moreover, Volkswagen concluded a joint venture with the Shanghai Automotive Industry Corporation (SAIC) in 1984. As a result SAIC started producing and selling VW cars from 1985 on in China. This joint venture is remarkable, because it shows that Volkswagen was one of the first car companies recognizing the enormous potential of the Chinese market. Furthermore it allowed them, to produce cars at very low production costs.

¹¹⁴ Cf. Seat, S.A.; 11.05.2012

<u>Company</u>	<u>Nation</u>	<u>Company</u>	<u>Nation</u>	<u>Year</u>	<u>Motive</u>
GM	USA	Suzuki	JPN	1981	Joint production facility
Honda	JPN	Austin Rover	GBR	1981	Joint production cars (badge engineering)
Nissan	JPN	VW	GER	1981	Car production / License agreement / Badge engineering
Renault	FR	AMC (now Chrysler)	USA	1981	Joint production cars (badge engineering)
Suzuki	JPN	Isuzu and GM	JPN	1981	Joint R&D and Production / Platform Sharing
Mitsubishi	JPN	Proton	MAS	1983	Joint production cars (badge engineering)
SEAT	SP	VW	GER	1983	Joint production cars
Daihatsu	JPN	Tianjin Cars (FAW)	CHN	1984	Car production / License agreement
VW	GER	SAIC	CHN	1984	Car production / License agreement
GM	USA	Toyota	JPN	1984	Joint production facility
Daewoo	KOR	Nissan	JPN	1986	Joint production cars (badge engineering)
Ford	USA	VW	GER	1986	Joint production facility on foreign market/ Badge engineering
Ford	USA	Kia	KOR	1986	Joint production cars (badge engineering)
Maserati	IT	Chrysler	USA	1986	Joint development & production one car
Isuzu	JPN	Fuji Heavy Industries (Subaru)	JPN	1987	Joint production facility on foreign market
Suzuki	JPN	Mazda	JPN	1987	Joint production cars (badge engineering)
Suzuki	JPN	Daewoo	KOR	1988	Joint production cars (badge engineering)
Rover	GBR	Honda	JPN	1989	Joint production cars (badge engineering)

Table 1: Alliances between 1980 and 1989

Source: Automotive Industry, own illustration

As already mentioned, the British automotive industry had to pass troubled times. Therefore, the major shareholder of brands such as Rover, Austin, Jaguar or Aston

Martin changed several times in the 70s and 80s. Furthermore, Fiat acquired Alfa Romeo and SEAT became a subsidiary of the Volkswagen Group.

The following table shows the different mergers and acquisitions from 1980 to 1989.

<u>Company</u>	<u>Nation</u>	<u>New Owner</u>	<u>Nation</u>	<u>Year</u>
MG (part of British Leyland)	GB	Rover Group (state owned)	GB	1986
Rover (part of British Leyland)	GB	Rover Group (state owned)	GB	1986
Alfa Romeo	IT	Fiat	IT	1986
Seat	SP	VW	GER	1986
Aston Martin	GB	Ford	USA	1987
JEEP	GB	Chrysler	USA	1987
Rover Group.	GB	British Aerospace	GB	1988
Jaguar	GB	Ford	USA	1989

Table 2: Mergers & Acquisitions between 1980 and 1989

Source: Automotive Industry, own illustration

In the nineties the number of alliances increased and the car manufacturer started collaborating in very different matters. For instance, engines or platforms supply agreements came up as well as joint development projects.

BMW delivered engines and body parts to Bentley and Rolls Royce throughout the whole decade. Both partners benefited of this collaboration. Rolls Royce and Bentley did not have the capacities to produce the engine on their own and BMW envisaged a much deeper collaboration. Thus, the engine supplying deal can be seen as the first stage of the merger that occurred nearly ten years later.

Other companies, like Isuzu and Nissan for example, concluded a cross supply relationship in 1993. Both companies benefit of such agreements, because development costs decrease and each company can efficiently enhance its product line-up without incremental costs.

Joint development projects also have the advantage of decreasing development costs. In this sense, PSA and Renault jointly developed a range of automatic gearboxes in 1992.

However, strategic alliances can also be used as a preliminary stadium of a merger or an acquisition. After the collapse of the Soviet Union, the Volkswagen tried to gain influence in Eastern Europe and concluded a joint venture with Skoda. Furthermore,

Volkswagen acquired a 30% stake of Skoda. Three years later Skoda became then a wholly owned subsidiary of Volkswagen.

In many cases equity participations and cross shareholdings serve to deepen the alliance and lead to an acquisition of the weaker partner. The former collaborations between SEAT and Volkswagen as well as Skoda and Volkswagen are only two examples.

Nevertheless, in some cases the alliance partners realize, that the partnership does not fit. The ending of the alliance is then much cheaper than the cancellation of a merger. Renault and Volvo started an alliance in 1990 with the intention of a subsequent merger. But Volvo's shareholders successfully fought against these plans and the alliance had to be dismantled. As a consequence, the two partners stopped all joint projects and reversed their mutual equity participations.

With the growing importance of the BRIC countries, the automotive manufacturers tried to enter the emerging markets. Countries such as China, India or Russia, were very attractive for the automotive industry due to the immense amount of potential customers and the continuing economic growth. However, most of the BRIC countries set up market entry restrictions in order to protect the local industry. For instance, foreign car manufacturers must conclude a joint venture with a local company, if they want to open a production facility in China. With the advancement of globalization in the nineties, more and more companies sought to enter joint ventures with Chinese companies. In this sense, seven major joint ventures were concluded between 1990 and 1999 with Chinese car manufacturers. The leading car companies such as Toyota, Volkswagen, General Motors, Ford, PSA and Daimler now sustained production facilities with local partners such as Dongfeng Motor Corporation, Beijing Automotive Group (BAIC), First Automobile Works (FAW) or Shanghai Automotive Industry Corporation (SAIC). The Chinese partner mostly produced the vehicles on behalf of the foreign companies. Mainly from 2000 on, many Chinese companies started producing their own production range.

In India, the three local companies Tata Motors, Mahindra & Mahindra and Maruti Suzuki, which is a former joint venture between the Indian government and Suzuki Motors, concluded different joint ventures, with Daimler and Ford for instance. The concluded alliances between Western companies and partners from China or India always had a similar procedure. Both companies were equal partners and ran the

production facility together. The Western company provided the know-how and the technologies, whereas the local company provided the workforce.

The following illustration shows which motives appeared how often in concluded alliances between 1991 and 2000. As one can see, the motives for strategic alliances became much more miscellaneous. Although entering new markets is still one of the main reasons for concluding, a partnership the form of the different alliances has changed. The OEMs are forced to conclude joint ventures in China and India. However, the alliances can rather be seen as license agreements because local manufacturers produce and sell the vehicles for their foreign counterparts.

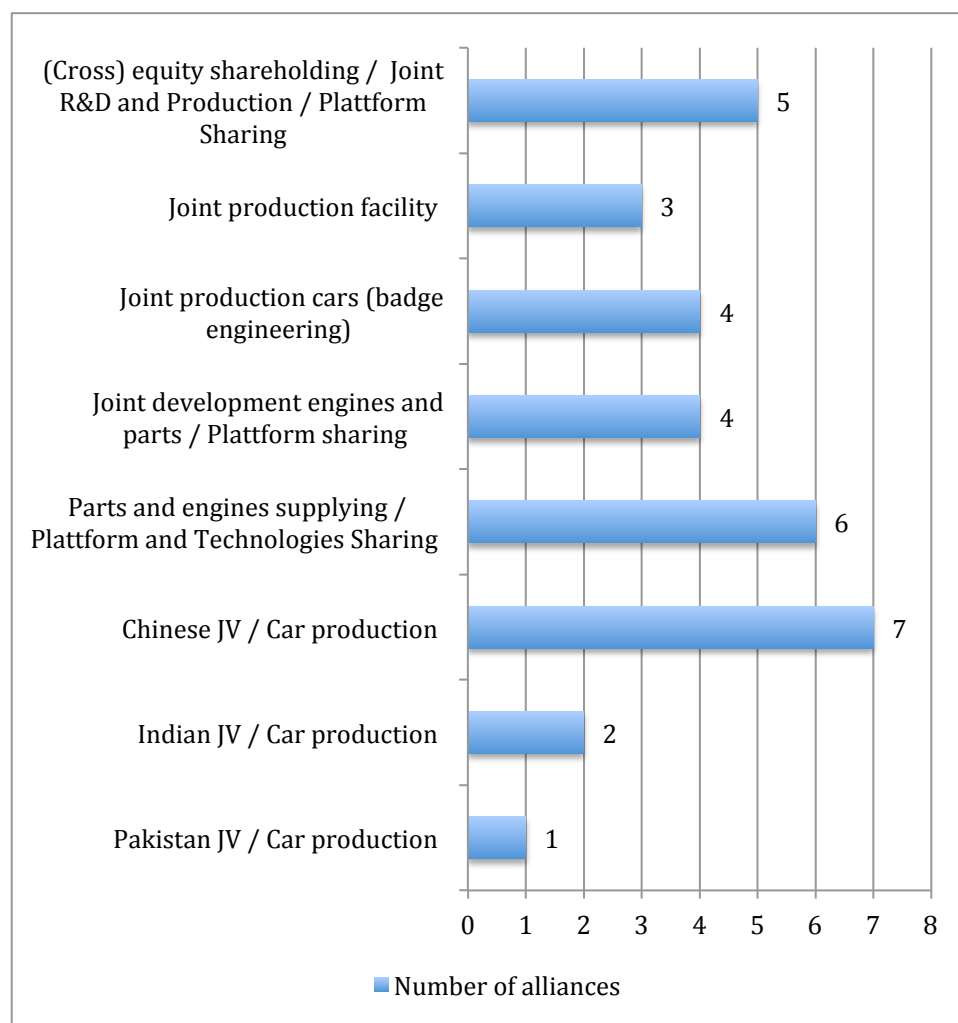


Illustration 6: Appearance of the collaboration motives in strategic alliances 1999-2000

Source: Automotive Industry, own illustration

Furthermore one can observe that the number of alliances between equal partners increased. The OEMs needed to reduce their development and production costs. In

this sense the completion of joint development projects and platform sharing became very popular.

The automotive industry in the nineties was marked by two major happenings – BMW's acquisition of the Rover Group and the merger of Daimler and Chrysler.

In 1994, British Aerospace sold the Rover Group, which consisted of the Rover, Land Rover, MG, Austin and Morris brands, to BMW for £800 million.

BMW was only represented in the large, executive and luxury car segment and wanted to widen the range of products in order to become more competitive. A make-or-buy analysis had shown, that an acquisition would be more advantageous, than internal development. The Rover Group, with its small and medium-sized product range, should also simplify the attainment of new target groups. Furthermore BMW needed to expand to minimize the risk of being absorbed by another company.

However, Rover's product range was very old and the product range, including the different Rover, Land Rover, MGs and Minis, was strongly diverging. The cars had no common platforms and just a few common parts. This made it very difficult for BMW to achieve any economies of scale and Rover did not become profitable. In addition, a newly developed MG F and the Land Rover models stood in direct competition with BMW's 5-series and X-series cars.¹¹⁵

After years of losses, BMW's chairman Bernd Pischetsrieder had to leave the company and in March 2000 BMW finally decided to break up the former Rover Group. Rover Cars and MG were sold to the Phoenix Consortium, Ford acquired Land Rover and BMW retained the rights to build the new MINI.

The merger of Daimler and Chrysler in 1998 was supposed to be a merger of equals. Nevertheless the merger did not deliver the promised synergies and the integration of the two businesses did not succeed. In 2007, Chrysler, whose company value had decreased from \$ 36 billion in 1998 down to \$5,5 billion, was sold to the investment company Cerberus.

At the end of the twentieth century, many car companies started rethinking their strategies. The companies pursued a global strategy and tried to gain influence by concluding new corporations or acquiring rival companies. A cutthroat competition took place and the car manufacturers sought to amplify their product range and increase their market share in order to remain competitive.

¹¹⁵ Cf. The New York Times; 11.05.2012

Table 4 shows the different mergers and acquisitions in 1998 and 1999. As one can see the formation of just a few global automotive corporations, such as Volkswagen, General Motors or Toyota, proceeded.

<u>Company</u>	<u>Nation</u>	<u>Acquired</u>		<u>Year</u>
		<u>Company</u>	<u>Nation</u>	
Daimler	GER	Chrysler	USA	1998
Ford	USA	Volvo	SWE	1999
GM	USA	Isuzu	JPN	1999
Hyundai Motor Company	KOR	Kia	KOR	1998
Renault	FRA	Dacia	RO	1999
Toyota	JPN	Daihatsu	JPN	1998
VW	GER	Bentley	GB	1998
VW	GER	Bugatti	FR	1998
VW	GER	Lamborghini	IT	1998

Table 3: Mergers and Acquisitions in 1998 and 1999

Source: Automotive Industry, own illustration

The following illustration shows the decrease in independent automotive manufacturers from 1980 on. The number of OEMs decreased considerably. From 1991 to 2000, 18 different mergers or acquisitions occurred in the automotive industry.

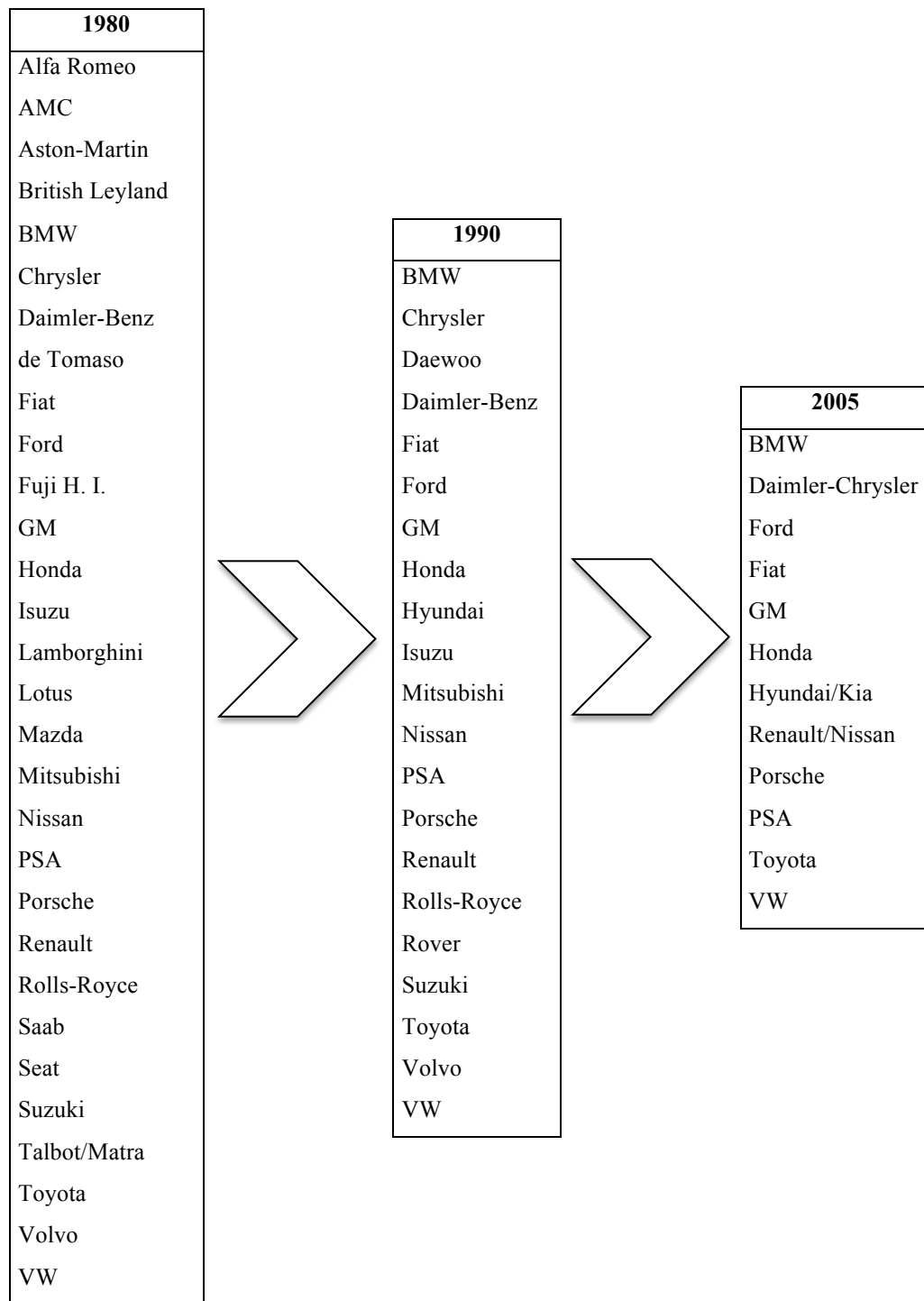


Illustration 7: Concentration of automotive manufacturers 1980-2005

Source: Becker (2006), own illustration

However, many companies, such as Renault and Nissan or GM, Suzuki, Isuzu and Subaru for instance, concluded strategic alliances to improve their competitive position. Especially after the failure of BMW's acquisition of Rover and the failed merger of DaimlerChrysler, many companies hesitated of taking the financial risks of an acquisition.

The reasons and forms of the partnerships differed in many ways. In former partnerships, badge engineering was common, but the clients became more demanding and individuality became a relevant aspect when choosing a vehicle. Hence, the alliances concluded in the twenty-first century, rather comprised platform and engine sharing and joint purchasing agreements, joint development projects, production collaborations etc.

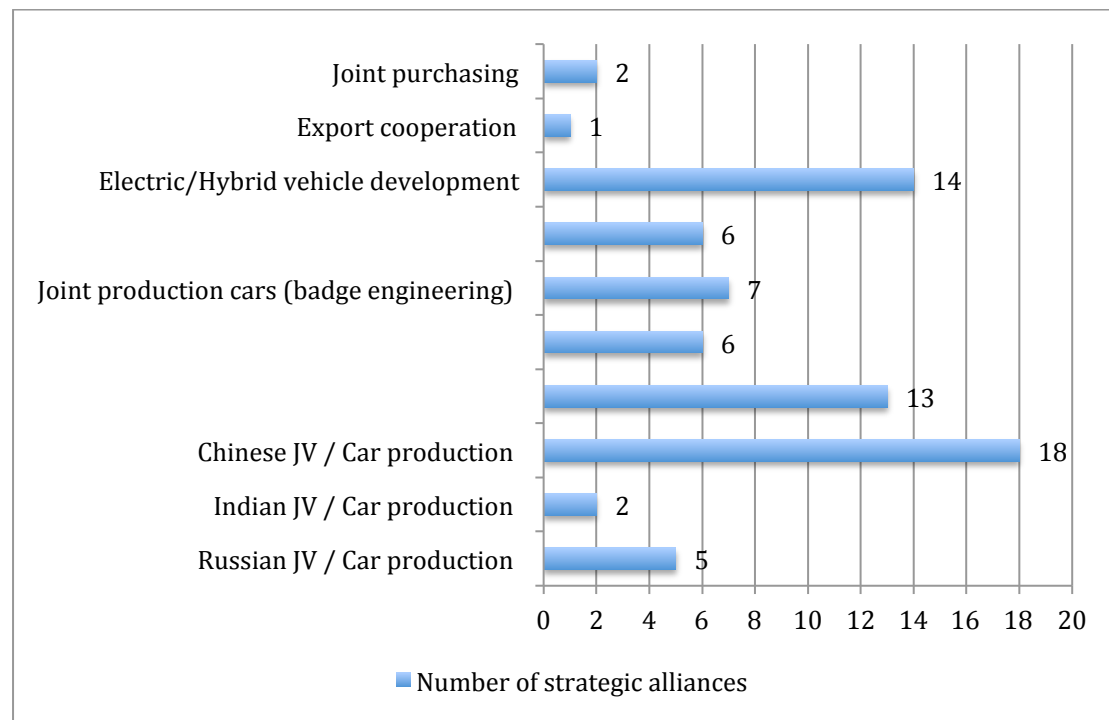


Illustration 8: Collaboration motives in Strategic Alliances 2001-2011

Source: Automotive Industry, own illustration

Illustration 11 gives a review of all the documented strategic alliances from 2001 to 2011. One can observe, that three categories are of a rising importance.

First, companies need to reduce costs and become more profitable. Due to the increasing expectations of the customers, the car companies are forced to widen their product range. In the eighties, one differed between eight different car segments. Nowadays, the OEMs need to abandon their niche and expand their product line-up. This led to an enormous increase of variants (Illustration 12). According to Dudenhöffer the number of different series will even increase from 376 in 2011 up to 415 in 2015.¹¹⁶

¹¹⁶ Cf. Dudenhöffer; 11.05.2012

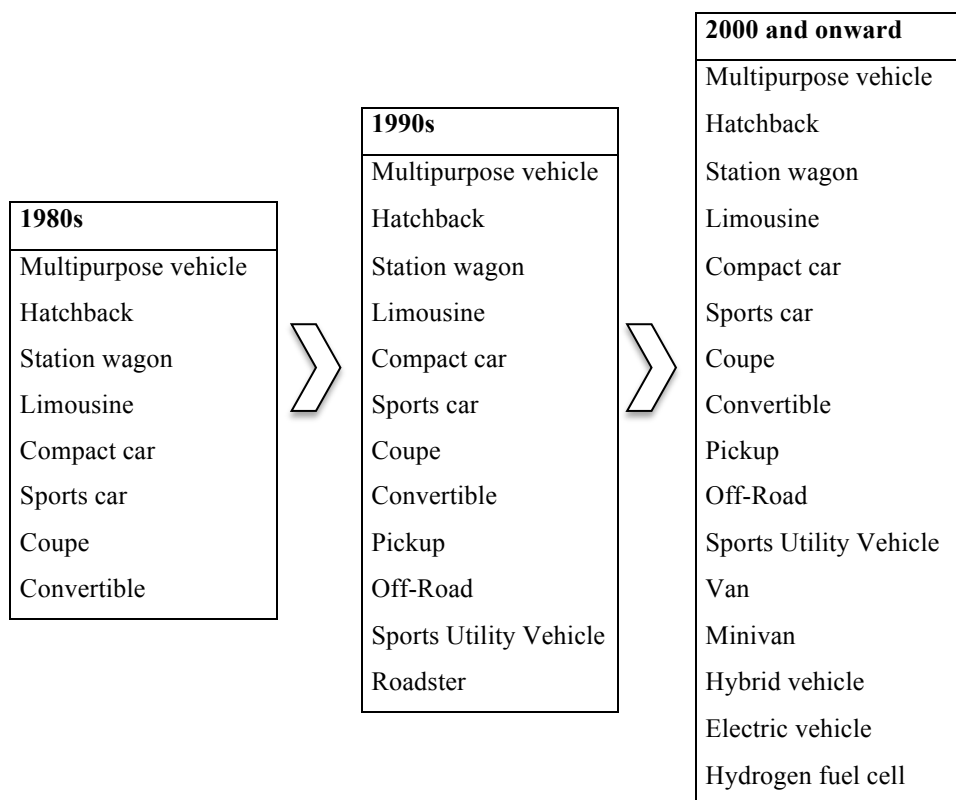


Illustration 9: Evolution of the variant diversity 1980-2011

Source: Becker (2006), own illustration

Due to the evolution of the variant diversity, the conclusion of new collaborations became indispensable. Therefore, the number of joint development project, as well as platform, engine and technologies sharing agreements rose continuously. For instance, Daimler joined the Renault-Nissan alliance in 2010. The new partners agreed on sharing resources in four different areas: platforms for small cars, small petrol and diesel engines, technology for electric and hybrid vehicles and bigger diesel engines.¹¹⁷

PSA concluded different joint development and production agreements with Toyota in 2002, Mitsubishi in 2005, BMW in 2006 and Ford in 2010. In recent years, the companies tended to arrange different partnerships with different OEMs. This allows the companies to exchange the technologies or products with the respective most specialized partner companies.

In addition, the emerging markets of China, India and Russia gained even more influence. Especially in China, the number of joint ventures has risen considerably in

¹¹⁷ Cf. The Economist; 11.05.2012

the past ten years. The leading car manufacturers are now all represented in China and sustain numerous production facilities in collaboration with local companies. 18 out of 73 collaborations concluded between 2001 and 2011 were joint ventures with Chinese companies. Thus, China has become the biggest car manufacturer and most important sales market in the world. All variants, from small sized to luxury cars, are produced and sold in China.

Consequently, domestic car manufacturer like SAIC (brand name Roewe), Dongfeng, Chery, Brilliance or Geely gained the technological know-how and managed to increase their market share in China significantly. Furthermore, Chinese companies managed to increase their export rates considerably. The current largest foreign markets are South America and the Middle East.¹¹⁸

In India, the companies Tata Motors and Mahindra & Mahindra sustain partnerships with leading Western car manufacturers. Maruti Suzuki is a former joint venture between Suzuki Motors and the Indian government and is currently the leading car manufacturer in India.

In the recent years, the Chinese and Indian automotive industry has made substantial progresses and has started producing vehicles independently from Western partners. As a consequence, many car manufacturers started investing in production facilities in Russia.

The alliance of AvtoVAZ and Renault as well as the joint venture of VW and GAZ are just two of six major cooperation agreements between one of the world's leading car manufacturers and a domestic company.

Altogether, the emerging markets of China, Russia and India have made a great development in the past eleven years. 26 out of 73 partnerships (36%) were concluded with companies from those countries. The car production volumes and the sales volumes have grown extensively.

One can mostly observe the same development in China, India and Russia. First, a license agreement or joint venture between an external car manufacturer and a domestic company was concluded. The domestic company produced the vehicles and in some cases rebadged and sold them under different brands. At a certain point, the domestic companies had gained the specific knowledge and started producing their own cars. Some of these companies, such as Tata Motors, Geely or SAIC, became

¹¹⁸ Cf. INAutonews; 11.05.2012

very successful, put great efforts in exporting the vehicles and can be seen slowly but surely as important rivals among the settled car manufacturers.

Due to the rising concern about environmental pollution and global warming, the car manufacturers start building more fuel-efficient cars. Again, the development of the engines is very expensive and many of the joint development projects serve to develop fuel saving technologies. However, in the recent years, the companies have put the greatest efforts in developing hydrogen-powered and electric cars.

Between 2008 and 2011, 35 strategic alliances were concluded. Eleven (31%) of these alliances focused on the development of hybrid and electric technologies. Moreover the leading global car manufacturers started concluding alliances among themselves, which was rather uncommon in the previous decades. Usually stronger companies sought for a weaker alliance partner. An explanation could be the decreasing number of independent car manufacturers and the fear of being acquired by a competitor. The cross-linking with other car manufacturers makes a hostile takeover more complicated.

Illustration 13 shows the development of mergers and acquisitions compared to alliances from 1980 to 2011. One can observe, that in the nineties many mergers and acquisitions occurred. While VW was quite successful with its company integrations of Skoda, Bentley, Bugatti and Lamborghini, other fusions, like DaimlerChrysler and BMW Rover were not meant to be successful. According to Helmut Becker, a former top executive of BMW, after the failure of DaimlerChrysler and BMW Rover many companies favoured concluding alliances over mergers and acquisitions, because of the high financial risks.¹¹⁹

¹¹⁹ Manager Magazin Online; 11.05.2012

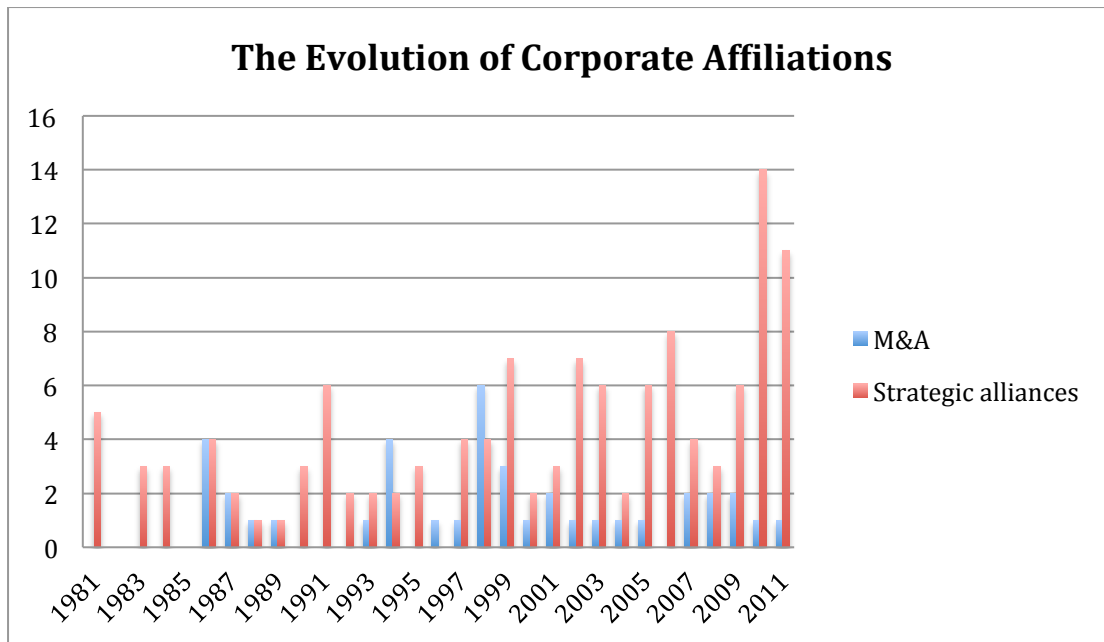


Illustration 10: The Evolution of Corporate Affiliations 1980-2011

Source: Automotive Industry, own illustration

This would also explain the rising number of alliances from 1998 on (Illustration 14). A restructuring of the markets took place and the car companies sought for different partners to bear the different challenges. During the last ten years, the respective integration mostly concerned indebted companies, like Land Rover or Volvo that already belonged to a larger portfolio of brands.¹²⁰

¹²⁰ Manager Magazin Online; 11.05.2012

4. Empirical Analysis of the development of strategic alliances in the automotive industry

After describing the different theoretical perspectives in chapter 2 and giving an overview of the development of the automotive industry in the past thirty years in chapter 4, this chapter serves to evaluate the influence of the theoretical perspectives on the decision making in practice.

The transaction costs theory is the most quoted theory, when it comes to explain the conclusion of strategic alliances. Further, the Resource Based View and the Strategic Choice Perspective, as well as the portfolio theory, examine inter-firm collaborations from different angles and serve as solid explanatory approaches.

The Transaction Costs Theory distinguishes between three different institutional arrangements – market, hierarchy and hybrid arrangements. Companies have to select between these forms in order to minimize the costs, such as transaction and production costs, and secure themselves against opportunistic behaviour by partners. Production costs vary according to learning and experience effects, location advantages and proprietary influences such as patents and trade secrets. Transaction costs include expenses associated with arranging managing and monitoring across markets and include costs for finding the right partner.¹²¹

However, market transactions are often connected with high uncertainty leading to opportunistic behaviour and high transaction costs, whereas internalization can be very cost intensive, because the desired product or activity might be difficult and expensive to produce internally due to a lack of the required know-how. In this sense, a hybrid structure, e.g. strategic alliance, might be a good alternative, because it helps avoiding the problems of market and hierarchy structures. On the one hand, strategic alliances help avoiding opportunistic behaviour through equity investments and contractual safeguards.¹²² On the other hand, strategic alliances are advantageous, if the R&D and production costs are too high to produce or develop a product or service internally.

In this sense, one could argue that strategic alliances are primarily concluded in order to reduce the production and transaction costs.

¹²¹ Barringer & Harrison (2000); p. 369

¹²² Judge & Dooley (2006); p. 27

Hypothesis 1:

Although the automotive industry experienced a great development in the past thirty years, the major motive for the conclusion of alliances remains minimizing the transaction and production costs.

The Transaction Costs Theory has been criticized for several reasons. For instance, the theory is restricted to the cost-minimization and efficiency problem. There are other reasons to form an alliance, such as learning or obtaining new technologies as well as entering new markets. Furthermore the Transaction Costs Theory disregards the different corporate cultures and the possibility of clashes caused because of the cultural differences.¹²³ Furthermore, Das and Teng criticize that the value creation in alliances is neglected.¹²⁴

Another theoretical approach puts emphasis on exploiting and developing a firm's resources, the Resource Based View. Penrose regarded a company as a bundle of resources, which had to be combined internally or with external partners in order to maximise long-term profits.¹²⁵ Resources can be divided into three different groups – physical resources, human resources and organisational resources.¹²⁶

According to the RBV, companies enter strategic alliances to share, aggregate, combine or exchange resources with other companies, when these resources cannot be obtained efficiently through market transactions, fusions or acquisitions. Furthermore, strategic alliances should be favoured over mergers and acquisitions, because company generally do not want to acquire all the resources of another company. Through an alliance, the company only gets access to the desired resources. In addition, some of the less valuable resources in an acquisition cannot be easily dropped without taking a loss.¹²⁷ In the automotive industry, intangible and tangible resources such as technological know-how or parts and engines are crucial for the success or the failure of a company. Therefore the acquisition or exchange of desired resources pose the principal reason for the conclusion of strategic alliances.

¹²³ Cf. Barringer & Harrison (2000); p. 372

¹²⁴ Cf. Das & Teng (2000); p. 56

¹²⁵ Cf. Rugman & Verbeke (2001); p. 769

¹²⁶ Cf. Tsang (1997); p. 208

¹²⁷ Cf. Das & Teng (2000); p. 37

Hypothesis 2:

The acquisition and exchange of needed resources is crucial for the success of a company, even if the exchanged resources changed greatly over the past thirty years. Therefore the Resource Based View rather serves as a theoretical explanatory approach of strategic alliances, than the Transaction Costs Theory.

However, the Resource Based View disregards the decision-process, whether companies should choose between market transaction, an inter-firm cooperation or internalization to obtain the needed resources. Furthermore, the Resource Based View does not examine how the company resources are developed. The theory simply concentrates on the need for critical resources and the necessity to exchange them.¹²⁸

The Strategic Choice Perspective elucidates strategic alliances from a very different angle. This theory, elaborated by John Child in 1972¹²⁹, focuses on the strategic choice made by a company's decision-makers in order to reach certain objectives, such as increased market power or increasing sales volumes.

According to Child, a company's top executives define the future goals or objectives after evaluating the company's position. The choice of goals, e.g. entering new markets, is then reflected in the strategic action of the company¹³⁰. Thereby, the company needs to respond to external environmental conditions and adapt their strategic action to given local conditions.¹³¹

In other words, many automotive companies try to enter new markets to increase their market power and record greater sales volumes. However, many countries, especially emerging countries, set up market entry barriers in order to protect the local economy. As a response, the OEMs conclude strategic alliances, mostly joint ventures, with local car manufacturers to evade the restrictions.

Hypothesis 3:

In order to gain greater market power, managers seek to enter new markets. Due to external environmental conditions, such as market entry barriers, the formation of strategic alliances is a major expansion tool of multinational companies.

¹²⁸ Cf. Barringer & Harrison (2000); p. 374

¹²⁹ Cf. Child (1972); p. 2

¹³⁰ Cf. Child (1972); p. 17

¹³¹ Cf. Judge & Zeithaml (1992); p. 770

However, the strategic choice perspective is very broad and not elaborated yet. Moreover the motivations to conclude an alliance, which are elaborated in many other perspectives, such as the Transaction Cost Theory, the Game Theory or the Resource-based View could also be incorporated in the Strategic Choice Perspective.¹³² Furthermore, many authors criticize, that alliance structures are affected by executives' personnel perceptions. This makes it difficult to comprehend the conclusion of strategic alliances from a theoretical point of view.

Thus, strategic alliances can also be analysed on the basis of a financial perspective, the Modern Portfolio Theory. The MPT says that through greater diversification in an investment portfolio, the financial risk of unexpected losses is lowered. A diversified investment portfolio of various assets with different levels of risks leads to a diversification of risk of unexpected losses, as well as more secure and consistent cash flows.

Car-manufacturing companies can diversify the risk of failure on two different levels. First, the OEMs should conclude different partnerships with other car manufacturing companies. This reduces the risk of extensive financial losses if one partnership fails. Besides, the financial risk of strategic alliances is much lower than mergers or acquisitions. In addition, companies should diversify their product range. However, entering new segments is very cost-intensive. Therefore companies should spread the financial risk and cooperate with other car manufacturers.

Hypothesis 4:

Strategic alliances are concluded to reduce the financial risk of company's ambitions to reach a wider product diversification, as well as, different partnerships reduce the risk of a cost-intensive failure.

4.1 Research methods

As empirical data I used the collected data of strategic alliances, mergers and acquisitions of the automotive industry. As already mentioned, I took a sample of 68 car companies and analysed, if they were acquired, merged or concluded alliances

¹³² Barringer & Harrison (2000); pp. 375

with other companies. Twelve companies are sub brands of global car manufacturers without any discrete collaboration, so they were excluded from the survey.

The research data was collected through different sources such as Standard & Poor's database Capital IQ, financial reports of the respective car manufacturers and different Internet sources, particularly websites of the different car companies.

Furthermore only horizontal alliances between car manufacturers were analysed. Collaborations concerning trucks, buses or utility vehicles are not included in the survey.

In order to analyse the hypotheses, I analysed 125 captured alliances on their motives and assigned at least one motive to every concluded alliance. Therefore I used the main motives for strategic alliances elaborated by Faulkner and Child and added the categories "Resources exchange" and "Market entry barriers". The different motives refer to the described theoretical approaches, which allowed me to examine which alliance can be explained by which theory.

Respectively, one motive refers to the Transaction Costs Theory and the Modern Portfolio Theory, whereas two motives refer to the Strategic Choice Perspective and the Resource Based View (Illustration 14). This enables me to analyse the different motives of strategic alliances on the one hand. On the other hand, the results show to what extent strategic alliances are explainable through the different theories and to comprehend which motives were crucial in the different alliance formations over the years. In this sense, Mitsubishi and Guangzhou concluded a strategic alliance in 2010 in order to jointly produce vehicles in China. Hence, the alliance was concluded for several reasons. On the one hand, the Chinese car manufacturer was mainly interested in concluding the partnership to gain Mitsubishi's technological know-how. On the other hand the alliance was a consequence of Mitsubishi's ambitions to enter the Chinese market and the Chinese market entry barriers. Thus, the Resource Based View (obtaining new technologies) and the Strategic Choice Perspective (market entry barriers, entering new markets) serve as explanatory approaches for the conclude partnership.



Illustration 11: Motives for the conclusion of strategic alliances

Source: Own illustration

The different motives are divided into the following categories:

- Cost minimization (TCT): this category refers to the cost minimization that can be obtained through rationalization and economies of scale. For instance, companies lower their expenses by combining their R&D efforts or by acquiring tangible assets from partner companies, which allows them to save the development, production and transaction costs.
- Reduce the financial risk (MPT): the development and production of a new product or technology is very expensive. The collaboration with one or more partners reduces the costs and so the risk of high financial losses.
- Obtaining a new technology (RBV): technologies can be gained through joint R&D projects, technology and engines supply agreements, joint production facilities or license agreements.
- Resources exchange (RBV): as described in the Resource Based Theory, companies can be seen as a collection of resources. Thus, companies form alliances to exchange needed resources. The category includes tangible assets such as equipment, finished and semi-finished goods.

- Strategic action / entering new markets (SCP): this category refers to strategic alliances that were concluded in order to enter new markets. The conclusion of the partnership is a strategic choice made by a company's decision-makers.

The following table serves as an overview of the different theories and to clearly distinguish the different approaches and the respective motives.

Theoretical Paradigm	Description	Rationale for the formation of strategic alliances	Motives	Hypotheses
Transaction Costs Economics	Is concerned with the minimization of the companies production and transaction costs. The focus lies on the make-buy-or-partner decision.	Strategic alliances are less risky than acquisitions and more certain than internal development.	- Cost minimization (transaction & production costs)	Although the automotive industry experienced a great development in the past thirty years, the major motive for the conclusion of alliances remains minimizing the R&D and production costs.
Resource Based View	Focuses on the question of how firms can create competitive advantage by combining their resources internally or with external partners.	Companies form alliances in order to exchange tangible or intangible resources	- Obtaining new technologies - Exchanging tangible resources	The acquisition and exchange of needed resources is crucial for the success of a company, even if the exchanged resources changed greatly over the past thirty years. Due to decreasing transaction costs, the Resource Based View rather serves as theoretical explanatory approach of strategic alliances, than the TCT.
Strategic Choice Perspective	Focuses on how organizations adapt to environmental forces in order to increase competitiveness or enter new markets. Thereby the role played by managers in shaping conditions and processes outside and within the company is crucial.	A strategic alliance is a strategic choice of a company's management or a response to environmental conditions.	- Market entry barriers - Growth strategies / Entering new markets	In order to gain greater market power, managers seek to enter new markets. Due to personnel preferences of the top executives as well as market entry barriers, the formation of strategic alliances is a major expansion tool of multinational companies.
The Modern Portfolio Theory - Diversification Theory	Attempts to maximize the expected return of a portfolio or equivalently minimize the risk for a given level of expected return by carefully choosing the proportions of various assets with different levels of risk.	In order to guarantee a diversified product range, alliances are concluded to reduce the financial risk of the required investments. Second, different strategic alliances pose a lower financial risk than M&As.	- Reduce the financial risk	Strategic alliances are concluded to reduce the financial risk of company's ambitions to reach a wider product diversification, as well as, different partnerships reduce the risk of a cost-intensive failure.

Table 4: Overview over the different theoretical approaches

Source: Own composition

4.2 Results

The elaboration of the hypotheses has shown, that 77 % of all the strategic alliances had the minimization of transaction and production costs as major motivation. Furthermore, 74% of the collaborations had the sharing of tangible resources as main objective. Moreover, "Obtaining new technologies" and "Reducing the financial risk" appeared in 71,5%, respectively 55% of the alliances as motivation factors. The governmental obligation of creating a joint venture played a decisive role in only 25% of the alliances.

	SCP	RBV	TCT	MPT	RBV	SCP
	Strategic actions/ entering new markets	Obtaining new technologies	Cost min. (Trans. / Prod.)	Reduce Fin. Risk	Sharing tangible resources	Market- entry barrier
1980-1990	50,0%	61,1%	88,9%	50%	88,9%	27,8%
1991-2000	51,5%	60,6%	78,8%	54,5%	75,6%	21,2%
2001-2011	44,4%	79,2%	73,6%	55,6%	69,4%	26,4%
Total	47,2%	71,5%	77,2%	54,5%	74,0%	25,2%

Table 5: Occurrence of the different motives in strategic alliances

Source: Automotive Industry, own calculations

As one can see in table 4, the dispersion of the different motives remains quite stable over the three decades. However, the motive “Sharing resources” decreases significantly over time. The reason is that in the nineteen eighties strategic alliances were primarily concluded to jointly produce cars. The vehicles were then rebadged and sold under different brands. At that time product diversification was not that important yet and the consumers’ desire for individuality was not elaborated yet. However, the development and production costs were already immense. As a consequence, many car manufacturers combined their resources and jointly produced cars, in order to save development and production costs. The cars were then sold in different countries under different brands.

The importance of minimizing costs also slightly decreased, even though three out of four alliances were concluded between 2001 and 2011 to reduce transaction and production costs.

Furthermore, one can observe that “Obtaining new technologies” has become much more significant over the past 10 years. First, the conclusion of joint ventures between Chinese companies and foreign partners increased considerably. Chinese companies conclude these alliances mainly to obtain their partners know-how. Second, the development of new technologies for hybrid and electric vehicles has become very important in the recent years.

The rate of alliances concluded to promote diversification remained constant over the whole period. Further, the motivation to enter new markets has not varied over the past thirty years. One could rather observe, that in the eighties, mostly companies from Japan sought to enter the Western European and the U.S. markets. From 1990

on, emerging markets such as South America, China, Russia and India, have become increasingly important.

Analysing the data from the different theoretical perspectives, one notices, that 97,6% of the alliances could be comprehended by applying the Resource Based View. Nevertheless, also 77,2% of the alliances are comprehensible through the Transaction Costs Theory. Only 47,2% of the alliances appear reasonable, when one considers the conclusion of an alliance only from the Strategic Choice Perspective and 54,5% of the concluded alliances are comprehensible by the means of the Diversification Theory (Table 5).

	Strategic Choice Perspective	Resource Based View	Transaction Costs Theory	Portfolio Theory
1980-1990	50,0%	100,0%	88,9%	50,0%
1991-2000	51,5%	100,0%	78,8%	56,9%
2001-2011	44,4%	95,8%	73,6%	55,6%
Total	47,2%	97,6%	77,2%	54,5%

Table 6: The Explicability of strategic alliances from the perspective of the different theoretical approaches

Source: Automotive Industry, own calculations

Although, the Resource Based View and the Transaction Costs Theory seem to be solid explanatory approaches, this also illustrates the need of examining strategic alliances from different angles.

Having a look at the first hypothesis, one notices that, the Transaction Costs Theory serves as very decent explanatory approach for the conclusion of strategic alliances, as 77,2% of the captured alliances could be explained by the means of the TCT. However, the Resource Based View (Hypothesis 2) even serves as an explanatory approach for 97,6% of the concluded alliances. Therefore the RBV seems to be more appropriate to reason the conclusion of strategic alliance. Nevertheless, many authors, such as Eric Tsang for instance, argue that both theories should be used complementarily to analyse strategic alliances.¹³³

¹³³ cf. Tsang (2000); p. 215

From the point of view of the Strategic Choice Perspective, it is proven to be true that many alliances can be seen as strategic action in order to enter new markets and to evade market entry barriers. However, the theory can only be applied in 47,2% of the captured alliances and the theory rather serves as an explanatory approach for strategic alliances in emerging markets.

Even though the Modern Portfolio Theory is widely used in the financial sector, the theory could only be applied in 54,5% of the captured partnerships as an explanatory approach. The theory seems to be rather useful in matters of portfolio management in the financial sector, than for general inter-firm collaborations.

The analysis of the collected data demonstrates that most alliances are concluded for several reasons and could be analysed by the means of different theoretical approaches. Therefore, I analysed, if there is any correlation between the different motives. On one hand, the analysis reveals that there is a connection between the different motives of a respective theoretical approach. On the other hand, this allows detecting if there are combinations of different motives, which are more likely to appear than others.

	SCP	RBV	TCT	PFT	RBV	SCP
	Growth strategies/entering new markets	Obtaining new technologies	Cost minimization (R&D)	Reduce Financial risk	Sharing tangible resources	Market-entry barrier
Growth strategies/entering new markets	1	0,191	-0,508	-0,410	-0,494	0,619
Obtaining new technologies	0,191	1	-0,255	-0,339	-0,176	0,295
Cost minimization (R&D)	-0,508	-0,255	1	0,572	0,880	-0,829
Reduce Financial risk	-0,410	-0,339	0,572	1	0,519	-0,498
Sharing tangible resources	-0,494	-0,176	0,880	0,519	1	-0,798
Market-entry barrier	0,619	0,295	-0,829	-0,498	-0,798	1

Table 7: Correlation matrix of the different motives

Source: Automotive Industry, own calculations

	SCP	RBV	TCT	PFT	RBV	SCP
	Growth strategies/entering new markets	Obtaining new technologies	Cost minimization (R&D)	Reduce Financial risk	Sharing tangible resources	Market-entry barrier
Growth strategies/entering new markets		3,329%	0,000%	0,000%	0,000%	0,000%
Obtaining new technologies	3,329%		0,412%	0,011%	4,976%	0,084%
Cost minimization (R&D)	0,000%	0,412%		0,000%	0,000%	0,000%
Reduce Financial risk	0,000%	0,011%	0,000%		0,000%	0,000%
Sharing tangible resources	0,000%	4,976%	0,000%	0,000%		0,000%
Market-entry barrier	0,000%	0,084%	0,000%	0,000%	0,000%	
	p < 5%		p < 1%		p < 0,1%	

Table 8: Levels of significance of the different motives

Source: Automotive Industry, own calculations

The motives “Sharing tangible resources” and “Cost minimization” are strongly correlated. This shows us, that it is very probable, that the two motives were considered in the conclusion of the same alliance. Besides these two motives, also appear in around 80% of the alliances. The fact that the two motives refer to two different theoretical perspectives strengthens the assumption, that strategic alliances must be examined from different angles.

Moreover, “Sharing tangible resources” and “Reduce financial risk” are correlated. Obviously, companies save R&D expenses, when they exchange the needed resources with an alliance partner, which again diminishes the financial risk.

Furthermore, “Entering new markets” and “Market entry barriers” are strongly correlated. This results, from the fact, that many emerging markets sustain entry barriers, in order to protect the local economy. The motives “Cost minimization” and “Reduce financial risk” are also strongly correlated. However, this is not surprising, because both motives are strongly related.

Finally one can observe, that some motives are strongly positively correlated, whereas other motives are strongly negatively correlated, e.g. “Market entry barrier” and “Cost minimization”. This tells us, that the same compositions of motives appear consistently.

All the correlations were tested on their significance (Table 8). The p-values are all below 5%. This means that the relationships between the different motives are highly significant.

To conclude one can say that strategic alliances should be examined on the basis of different theoretical approaches. The cost-minimization factor is as important as the development and exploitation of the companies' resources. In future, OEMs need to further increase their product range, develop new technologies and improve the existing technologies. As a consequence, companies need to share and exchange resources to master the different challenges. Thus, inter-firm collaboration lead to an allocation of the financial risk and a minimization of the development and transaction costs. In addition, the companies need to enter new markets to reach more customers.

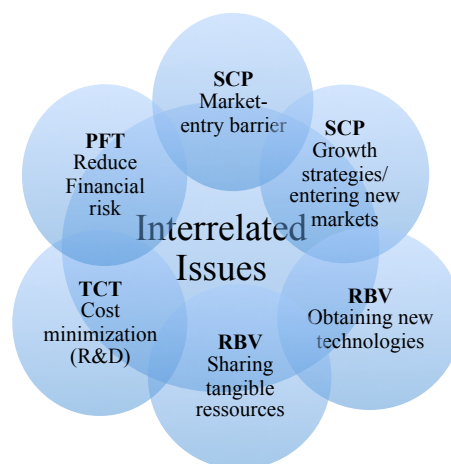


Illustration 12: Interaction of the different motives for the conclusion of strategic alliances

Source: Own illustration

Strategic alliances must be elaborated on the basis of different theoretical approaches, mainly from the Resource Based View and the Transaction Costs Theory. Each collaboration is concluded for several reasons. Thereby same combinations of motives appear consistently. The motives do not mutually exclude each other, but it is rather an interaction of the different motives (Figure 12).

4.3 Further reflections

Although, the Resource Based View and the Transaction Costs Theory proved to be very solid explanatory approaches, there exist other variables that influence the conclusion of strategic alliances in the automotive industry, such as the number of competitors or the economic situation.

High competition entices companies to conclude partnerships in order to get access to resources and share costs and risks.¹³⁴ The number of independent car manufacturers has decreased in the past years, whereas competition, as well as the operational requirements for the automotive companies, have become more demanding.

Thus, the rate of alliance formations has increased, with a decreasing number of competitors. According to my findings, the number of competitors has decreased from thirty companies down to only twelve independent car manufacturers, whereas the rate of new alliance formations has constantly increased (Illustration 15).

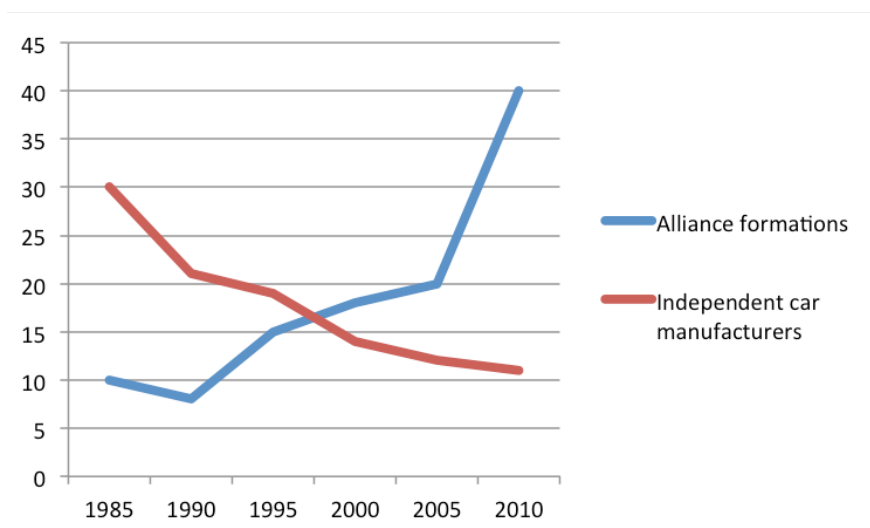


Illustration 13: The relation between alliance formations and the number of independent car manufacturers

Source: Automotive Industry, own illustration

From a statistical point of view, both variables - the number of competitors and the rate of alliance formations - are strongly negatively correlated (-0,718). However, the significance level is above 5%, namely 11%, which means that the decreasing number

¹³⁴ Cf. Eisenhardt & Schoonhoven (1996); p. 138

of independent car manufacturers does not serve as the only solid explanatory approach for the rising number of alliance formations.

Nevertheless, the automotive industry has emerged over the past twenty years to an oligopolistic market. Oligopolistic markets are marked by differentiated product, high production and fierce competition. Hence, companies tend to conclude alliances to bear the rising R&D and production costs. From a Resourced Based View, one could argue that companies need to conclude alliances to get access to the rising amount of needed resources. Many experts of the automotive industry argue, that the cutthroat competition between the car manufacturers and the restructuring of the market are responsible for the diminishment of independent car manufacturers. The competition between the few OEMs becomes stronger and the companies close ranks. To remain competitive and innovative the companies need to cooperate. Furthermore, smaller car manufacturers conclude alliances to avoid being acquired by a stronger competitor and to secure their market power.¹³⁵

In addition, the industry's economic situation has an influence on the rate of alliance formations. In years of a cyclical upturn, car manufacturers want to utilize the positive trend to expand and grow. Especially companies, whose home market suffers under a downturn, are interested in gaining or increasing influence on growth markets.

I used the international production statistics from the International Organisation of Automobile Manufacturers¹³⁶ in order, to evaluate if the automotive market was growing or remained static. The correlation analysis shows, that there is a connection between the state of the global automotive market and the formation of alliances. The correlation amounts to 0,674, which can be defined as medial correlation. The significance level of the correlation amounts to 10%. Again the yearly produced units seem to be a good indicator for the rate of alliance formations, but they do not serve as solid explanatory approach. The following illustration serves to illustrate the findings.

¹³⁵ Cf. Manager Magazin Online; 11.05.2012

¹³⁶ Cf. International Organization of Motor Vehicle Manufacturers; 11.05.2012

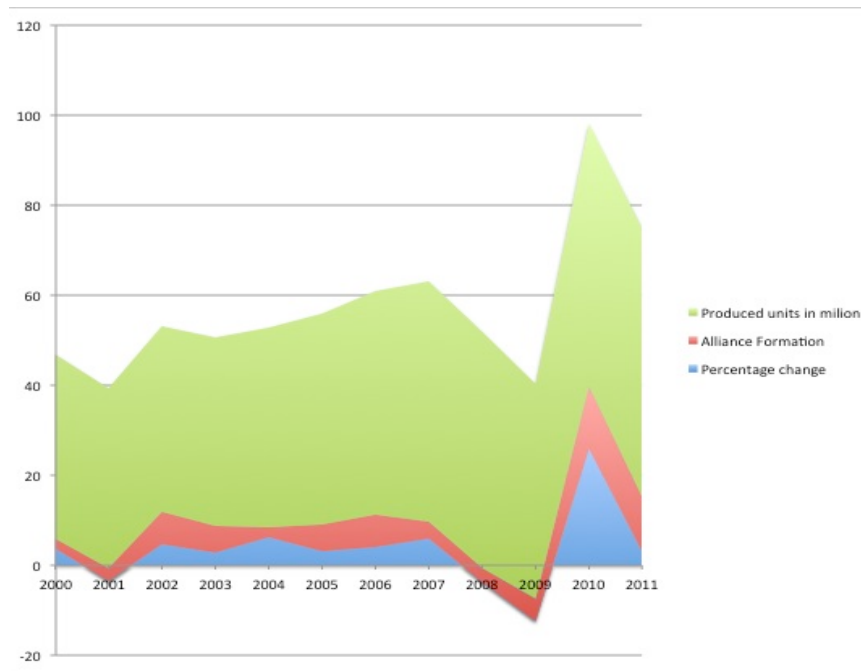


Illustration 14: Correlation between the production volumes and the rate of alliance formations

Source: Automotive Industry, own illustration

On the one hand, this result shows that in times of economic upswing, the car manufacturers rather conclude inter-firm collaborations, than in times of declining markets. Probably, the companies avoid the high financial risk during a cyclical downturn. Furthermore, the process of forming a strategic alliance is very time-consuming and expensive, which holds the company from cooperating with other OEMs.

On the other hand, one could argue, that in times of stagnating markets, the companies must try to enter other markets, mainly the emerging markets. Especially since 49% of the documented alliances between 2000 and 2011 comprehend one partner from a mature market and one partner with an emerging market as home market. However, the correlation analyses showed, that there is no connection between the growth and decline of the respective home-markets of the alliance partners.

In general, one must say, that the decreasing number of independent OEMs and the yearly produced units serve as indicators for the rate of alliance formations, but not as solid explanatory approaches.

5. Conclusion and Future prospects

This thesis dealt with the development of strategic alliances in the automotive industry. A wide range of inter-firm collaborations can be characterized as strategic alliances. In general, one considers a partnership of at least two companies that work together to achieve strategically significant objectives, which are beneficial for each partner, as a strategic alliance.¹³⁷

In literature, one distinguishes mostly between non-equity alliances, equity alliances and joint ventures. Non-equity alliances are contractual agreements such as joint development or production agreements, whereas equity alliances are characterized by partial or mutual equity investments in the partner company. Joint ventures are independent entities created by the cooperating companies. The equity shares are either distributed equally, e.g. 50-50 joint ventures, or one partner possesses a controlling interest, e.g. unequal joint venture.

Even though, joint development projects and parts supplying agreements occur frequently in the automotive industry, most partnerships are consolidated through joint ventures or strengthened through equity investments. In other cases, mainly in emerging markets, the governmental policy requires the formation of a joint venture, if a foreign company wants to enter the local market, in order to promote the local economy and to gain the technological know-how.

Although, there are many reasons for the formation of an alliance, seven major motives emerge from the different theoretical approaches:

- Growth strategies and entering new markets
- Achieve a competitive advantage
- Reduce the financial risk
- Cost minimization (production and transaction costs)
- Obtain new technologies
- Exchange resources
- Market-entry barriers

Regarding the automotive industry, one can formulate more specific motives, such as badge engineering, engines and parts supplying, platform sharing, as well as the

¹³⁷ Cf. Elmuti & Kathawala (2001); p. 206

development of new technologies or joint production facilities. However, in practice the motives can all be derived from the theoretical approaches.

Although many companies favour inter-firm collaborations to pursue their expansion strategies, this expansion form also bears a few important risks. Das and Teng differentiate between relational risk and performance risk.¹³⁸ The analysis of the empirical data has shown that many alliances failed for one of these reasons. Either the companies did not managed to establish a trustful relationship driven by any opportunistic means, or the alliances failed due to external reasons, such as economic recession or fierce competition. The lack of competence of one partner, as well as insurmountable cultural differences emerged as further common reasons for failure.

The analysis of the economic development of strategic alliances gives a first indication on the development of alliance formations from 1980 on. In the nineteen eighties the automotive industry was dominated by companies from Western Europe, Japan and the United States. However, the Japanese companies gained in influence due to technological superiority. In the nineteen nineties, the fall of the Soviet Union and the upcoming globalization, enabled the automotive companies to get access to emerging markets such as Brazil, Argentina or Russia. While the triad markets remained static, the production and sales potential in the developing and emerging countries was enormous. In the late nineties, the global car industry was in a restructuring process and a few crucial mergers were concluded and the automotive industry became an oligopolistic market.

By 2005, China was already the fifth largest car producer in the world and India realized the need to increase its' car production volume constantly. The triad markets lost considerable influence, whereas the BRIC countries were now firmly established in the market.

During the financial crisis, the leading automotive industries - U.S.A., Japan, Germany and South Korea – had to register huge decreases in production. However, the increasing sales volumes in China, India and Brazil prevented an even greater crisis of the automotive industry. From 2010 on, the markets started recovering and the global production volumes increased rapidly in 2010 and 2011.

The analysis of the empirical data has shown, that the economic evolution of the different countries serves as an indicator for the conclusion of strategic alliances.

¹³⁸ Cf. Das & Teng (1999); p. 51

Hence, American and European companies favoured concluding strategic alliances with Japanese companies in the nineteen eighties to get access to their technological know-how. On the other side, the Japanese companies sought to enter new markets. The main motive for the conclusion of an alliance was badge engineering. This allowed the companies to receive the needed resources to produce cars and to reduce the R&D costs. In the nineteen nineties, the rate of alliance formations increased considerably. Further the motives for alliance conclusions became more multifaceted. For instance, the companies jointly developed engines and platforms and concluded cross supply or platform sharing agreements. Moreover many alliances included mutual equity investments, as a response to a rising number of mergers and acquisitions in the late nineties. In addition, most car manufacturers were aware of the rising importance of the emerging markets and joint ventures with Chinese partner companies increased considerably.

At the beginning of the twenty first century, a cutthroat competition had begun. The number of thirty independent car manufacturers in 1980 decreased down to only twelve independent OEMs in 2005. However, due to the failures of BMW-Rover and DaimlerChrysler, the companies dread the risks of acquiring a competitor and strategic partnerships became increasingly important. Thereby most alliances were concluded to get access to the Chinese market, to jointly develop electric and hybrid technologies, as well as to share technologies and platforms.

During the financial crisis, the formation of alliances decreased significantly. However, with the cyclical upturn in 2010, the rate of alliance formations increased again considerably.

In future the car manufacturing companies are facing many challenges. First, hybrid and electric technologies, as well as the traditional combustion engines still need to be improved. Second, the major car companies must handle the shift of the growth markets and the market entrance of new competitors mainly from China and India. Although Chinese car companies still have to improve the quality and safety of their cars, Indian manufacturers are already strongly represented on the global market and both countries will slowly but surely emerge as global players in the industry.

The OEMs need to show presence in the emerging markets, for economics and competitive reasons. Hence production facilities must be opened up in these regions.

Furthermore customer demands are changing considerably. In the emerging countries, the upper class seeks for luxury vehicles. In addition, the demand for low price

compact cars is rising too, due to a growing middle class. In the Western countries, the customers seek for more individuality, which forces the car industry to offer a wider product range.

In order to master these challenges, the car manufacturers need to reduce the R&D and production costs. Furthermore, inter-firm collaborations are indispensable to get access to needed resources.

The Transaction Costs Theory refers to the need of decreasing the production as well as the transaction costs. The Resource Based View however, claims that strategic alliances are concluded to acquire obtain needed resources. The empirical analysis has proven that both theories serve as very solid explanatory approaches. Further, “Minimizing the transaction and production costs” and “Sharing tangible resources” are the major motives for the conclusion of strategic alliances. However, one must not neglect that strategic alliances are also concluded for strategic and legal reasons.

Moreover, the analysis has shown, that alliances are always concluded for various purposes and need to be examined from different theoretical angles. Nevertheless, it seems as if different car manufacturing companies are pursuing the same expansion strategies with a combination of the same motives repetitively. In this context a survey under top executives in the automotive industry would be meaningful in order to find out if the company had any of the theoretical approaches in mind when concluding a partnership.

In addition, the rate of strategic alliances increased steadily, while the number of competitors decreased. The change into an oligopolistic market, the rising competition and the threat of being acquired enticed the companies to conclude alliances, whereas the financial risk deterred the companies from acquiring strong competitors. Furthermore, in times of economic upswing, the car manufacturers are rather willing to conclude strategic partnerships. This can be explained by the fact, that in general, companies are rather pursuing expansion strategies during a cyclical upturn.

For the future one can expect, that the conclusion of alliances will further increase. The companies need to collaborate with different partners to guarantee long-term success. Although there currently exist only eleven independent car manufacturers, one can expect, that in the next years another global player from India and from China will emerge. With the intensification of competition, the hunt for resources and the

need of reducing costs will continue. However, with the increase in equity alliances, the chance for a renewed wave of mergers persists.

Although, the OEMs are very communicative concerning their successful partnerships, it is very difficult to find any information on failed alliances. On the one hand, the companies do not want to reveal their own shortcomings. On the other hand, the OEMs do not want to name and shame their former partners, because they still want to be considered as an attractive alliance partner for future projects. In this thesis, the research is limited on the motives for the formation of inter-firm partnerships. However, it would be very interesting to analyse the durability of strategic alliances and the reasons for their failure. Why are some partnerships doomed to failure, whereas other companies sustain several well-functioning collaborations? In this context, it might be interesting to compare the companies' different cultural backgrounds and their influence on inter-company partnerships.

In addition, the survey only considered alliances between OEMs. The role of the automotive suppliers was neglected, although the rising number of strategic alliances leads to a reduction of needed resources, which again leads to a decline in demand and increasing competition on the suppliers' side. Thus, it would be interesting to analyse the implications for the automotive suppliers.

Finally, it would be of interest to analyse, the rate of strategic alliances that ended in mergers or acquisitions. After the failure of DaimlerChrysler and BMW-Rover, the OEMs avoided taking over rival companies and therefore concluded strategic alliances with important mutual equity investments. In this sense it is exciting to observe, if the recently concluded alliances serve as primary stage for future mergers or, if the era of strategic alliances truly has begun.

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Appendix

List of the concluded strategic alliances, mergers and acquisitions

Strategic alliances 1980-1989

<u>Company</u>	<u>Company</u>	<u>Year</u>	<u>Description</u>
GM	Suzuki	1981	Joint production facility
Honda	Austin Rover	1981	Joint production cars (badge engineering)
Nissan	VW	1981	Joint production cars (badge engineering)
Renault	AMC (now Chrysler)	1981	Joint production cars (badge engineering)
Suzuki	Isuzu and GM	1981	Joint R&D and Production / Platform Sharing
Mitsubishi	Proton	1983	Joint production cars (badge engineering)
SEAT	VW	1983	Joint production cars
Daihatsu	Tianjin Cars (FAW)	1984	Chinese JV / Car production /License agreement
VW	SAIC	1984	Chinese JV / Car production /License agreement
GM	Toyota	1984	Joint production one car (badge engineering)
Daewoo	Nissan	1986	Joint production one car (badge engineering)
			Joint production facility on foreign market/Badge engineering
Ford	VW	1986	
Ford	Kia	1986	Joint production cars (badge engineering)
Maserati	Chrysler	1986	Joint development and production one car
	Fuji Heavy Industries		
Isuzu	(Subaru)	1987	Joint production facility on foreign market
Suzuki	Mazda	1987	Joint production cars (badge engineering)
Suzuki	Daewoo	1988	Joint production cars (badge engineering)
Rover	Honda	1989	Joint production cars (badge engineering)

Mergers and Acquisitions 1980-1990

<u>Company</u>	<u>Acquired Company</u>	<u>Year</u>
Rover Group	MG	1986
Rover Group	Rover	1986
Fiat	Alfa Romeo	1986
VW	Seat	1986
Ford	Aston Martin	1987
Chrysler	JEEP, AMC	1987
British Aerospace	Rover Group	1988
Ford	Jaguar	1989

Strategic alliances 1990-1999

Company	Company	Year	Description
BMW	Rolls-Royce	1990	Parts and engines supplying
PSA Peugeot-Citroen)	Dongfeng Motors	1990	Chinese JV / Car production
Renault	Volvo	1990	Cross shareholdings / Joint R&D and Production / Platform Sharing
PSA Peugeot-Citroen)	Dacia	1991	Platform and engines supplying
Ford	Nissan	1991	Joint production cars (badge engineering)
Mitsubishi	Volvo	1991	Joint production facility
Skoda	VW	1991	Joint R&D and Production / Platform Sharing
VW	FAW (China)	1991	Chinese JV / Car production
VW	Ford	1991	Joint production facility
PSA Peugeot-Citroen)	Renault (Powertrain...)	1992	Joint development engines and parts
Hyundai	Mitsubishi	1992	Joint production cars (badge engineering)
Nissan	Ford	1993	Joint production cars (badge engineering)
Nissan	Isuzu	1993	Cross supply of parts and engines
Isuzu	Honda	1994	Cross supply of vehicles (badge engineering)
Tata	Daimler	1994	Indian JV / Car production
Ford	Mahindra	1995	Indian JV / Car production
GM	SAIC	1995	Chinese JV / Car production
Suzuki	Chongqing Changan	1995	Chinese JV / Car production
BMW	Rover Chrysler BMW	1997	Joint production facility
Daimler	Ford	1997	Joint development engines and parts
Ford	Jiangling Motors Corporation	1997	Chinese JV / Car production
Kia	Dongfeng Motors	1997	Chinese JV / Car production
Bentley	BMW	1998	Parts and engines supplying
Daewoo	AvtoVAZ	1998	Joint production cars (badge engineering)
Hyundai	Dewan Farooque Motors Limited	1998	Pakistan JV / Car production
Suzuki	GM (now strategic alliance)	1998	Joint development engines and parts
PSA Peugeot-Citroen)	Ford	1999	Joint development engines and parts
PSA Peugeot-Citroen)	Mitsubishi	1999	Joint development engines and parts
Fiat	Nanjing Automobile Corporation (NAC)	1999	Chinese JV / Car production
Honda	GM	1999	Cross supply of parts and engines
Nissan	Renault	1999	Cross shareholdings / Joint R&D and Production / Platform Sharing
Subaru	Mitsubishi	1999	Cross shareholdings / Joint R&D and Production / Platform Sharing
Subaru	GM	1999	Joint R&D and Production / Platform Sharing

Mergers and Acquisitions 1990-1999

<u>Company</u>	<u>Acquired Company</u>	<u>Year</u>
Fiat	Maserati	1993
Ford	Aston Martin	1994
	Rover, Land Rover, MG,	
BMW	Mini	1994
VW	Skoda	1994
Ford	Mazda	1996
Maserati	Ferrari	1997
VW	Bentley	1998
VW	Bugatti	1998
Daimler	Chrysler	1998
Toyota -	Daihatsu	1998
Hyundai Motor		
Company	Kia	1998
VW	Lamborghini	1998
VW	Rolls Royce	1998
Renault	Dacia	1999
GM	Isuzu	1999
Ford	Volvo	1999

Strategic alliances 2000-2011

<u>Company</u>	<u>Company</u>	<u>Year</u>	<u>Description</u>
Fiat	GM	2000	Cross shareholdings / Joint R&D, Purchasing and Production / Platform Sharing
Suzuki	GM	2000	Joint R&D and Production / Platform Sharing
Ford	Changan	2001	Chinese JV / Car production
Hyundai	DaimlerChrysler	2001	Parts and engines supplying
Suzuki	Nissan	2001	Parts, engines and vehicles supplying
GM	AvtoVAZ	2002	Joint production cars (badge engineering)
Hyundai	BAIC	2002	Chinese JV / Car production
Hyundai	Hawtai Motor	2002	Chinese JV / Car production
Mitsubishi	DaimlerChrysler Hyundai	2002	Joint R&D and Production / Platform Sharing
Rover	Tata Motors	2002	Joint production cars (badge engineering)
	General Motors Corp., Fuji Heavy		
Suzuki	Industries Ltd. and Isuzu Motors Ltd	2002	Joint purchasing
Toyota	PSA	2002	Joint production cars (badge engineering)
	Brilliance China Automotive Holdings		
BMW	Ltd	2003	Chinese JV / Car production
Daihatsu	Huali/FAW/Tianjin	2003	Chinese JV / Car production
Honda	Dongfeng Motor	2003	Chinese JV / Car production
Mitsubishi	Nissan	2003	Cross supply of vehicles (badge engineering)
			Chinese JV / Car production / Badge engineering
Nissan	Dongfeng	2003	
Suzuki	Fiat	2003	Joint production one car / Badge engineering
BMW	PSA Peugeot Citroen	2004	Electro-Hybrid development
Rover	SAIC	2004	Joint R&D and Production / Platform Sharing

BMW	GM and DaimlerChrysler	2005	Electro-Hybrid development
PSA	Mitsubishi	2005	Parts and engines supplying
Ford	Fiat	2005	Joint production cars (badge engineering)
Ford	Daimler	2005	Joint development engines and parts
Toyota	Subaru	2005	Joint R&D and Production / Platform Sharing
VW	Audi; Porsche	2005	Parts and engines supplying / Platform Sharing
Daimler	DaimlerChrysler Chery	2006	Export cooperation
GAZ	Daimler Chrysler	2006	Parts and engines supplying and license agreement
GM	Isuzu	2006	Joint development engines and parts / Platform sharing
Mazda	Chongqing Changan	2006	Chinese JV / Car production
Tata	Fiat	2006	Indian JV / Car production
Toyota	Isuzu	2006	Joint R&D and Production / Platform Sharing /
Toyota	Guangzhou (GAC)	2006	Electro-Hybrid development
VW	Chrysler	2006	Chinese JV / Car production
	Fujian Motors Group and China Motor Company (Mitsubishi)	2006	Joint production one car / Badge engineering
Daimler	TATA	2007	Chinese JV / Car production
Fiat	Guangzhou (GAC)	2007	Technologies sharing
Honda	Mahindra	2007	Chinese JV / Car production
Renault	Fuji Heavy Industry (Subaru!)	2007	Indian JV / Car production
Daihatsu	Proton	2008	Parts, engines and vehicles supplying
Mitsubishi	AvtoVAZ	2008	Parts and engines supplying / Platform Sharing
Renault	Tesla	2008	Russian Joint Venture / Car production
Daimler	Guangzhou (GAC)	2009	Electro-Hybrid development
Fiat	FAW	2009	Chinese JV / Car production
GM	VW	2009	Chinese JV / Car production
Suzuki	Aston Martin	2009	Cross shareholdings / Technologies sharing / Market entry
BMW	Fisker	2010	Parts supplying / Platform Sharing
BMW	Saab	2010	Electro-Hybrid development
PSA	Ford	2010	Parts and engines supplying
PSA	BMW	2010	Joint development engines and parts
PSA	Changan	2010	Electro-Hybrid development
Daimler	Renault-Nissan	2010	Chinese JV / Car production
Daimler	BYD	2010	Joint development engines and parts
Daimler	BMW	2010	Electro-Hybrid development
Daimler	Toyota	2010	Joint purchasing
GAZ	Daimler	2010	Electro-Hybrid development
Mitsubishi	Nissan	2010	Russian Joint Venture / Car production
Mitsubishi	Guangzhou (GAC)	2010	Electro-Hybrid development
VW	Maruti Suzuki	2010	Chinese JV / Car production
Toyota	Tesla	2010	Joint production cars (badge engineering)
	BMW, Daimler, Ford, General Motors, Porsche and Volkswagen	2010	Electro-Hybrid development
Audi	Toyota	2011	Electro-Hybrid development
BMW	BAIC	2011	Electro-Hybrid development
Daimler	Sollers (Russia)	2011	Chinese JV / Car production
Ford	Sollers (Russia)	2011	Russian Joint Venture / Car production
Mazda	Chery Automobiles	2011	Russian Joint Venture / Car production
Subaru	Fiat	2011	Chinese JV / Car production
Suzuki	Ford	2011	Parts and engines supplying
Toyota	Mitsubishi	2011	Electro-Hybrid development
Toyota		2011	Joint development parts

Toyota	Sollers (Russia)	2011	Parts and engines supplying
VW	GAZ	2011	Russian Joint Venture / Car production
VW	SAIC FAW	2011	Chinese JV / Car production

Mergers and Acquisitions 2000-2011

<u>Company</u>	<u>Acquired Company</u>	<u>Year</u>
Ford	Land Rover	2000
GM	Daewoo	2001
Daimler	Mitsubishi	2001
Daewoo	SAIC-GM	2002
BMW	Rolls-Royce	2003
Tata	Daewoo	2004
Nanjing Automobile Group (later SAIC)	MG	2005
Cerberus Capital Management	Chrysler	2007
Investment Dar & John Siders	Aston Martin	2007
Tata	Jaguar	2008
Tata	Land Rover	2008
Fiat	Chrysler	2009
VW	Porsche	2009
Geely	Volvo	2010
Mahindra	SsangYong	2011

Calculations of the level of significance

The motives for the conclusion of strategic alliances

	Growth strategies/Entering new markets			
	Correlation	T-Value	Absolute value	P-Value
Obtaining new technologies	0,1905	2,1527	2,152722558	3,32929869%
Cost minimization	-0,5076	-6,5342	6,53416529	0,00000015%
Reduce financial risk	-0,4098	-4,9821	4,982137986	0,00020798%
Sharing tangible resources	-0,4938	-6,2972	6,297214114	0,00000049%
Market-entry barriers	0,6185	8,7301	8,73012987	0,00000001%

	Obtaining new technologies			
	Correlation	T-Value	Absolute value	P-Value
Growth strategies/Entering new markets	0,1905	2,1527	2,152722558	3,32929869%
Cost minimization	-0,2549	-2,9239	2,923869606	0,41165794%
Reduce financial risk	-0,3394	-4,0017	4,00172854	0,01078872%
Sharing tangible resources	-0,1759	-1,9815	1,981527522	4,97624668%
Market-entry barriers	0,2951	3,4251	3,425067287	0,08359085%

	Cost minimization			
	Correlation	T-Value	Absolute value	P-Value
Growth strategies/Entering new markets	-0,5076	-6,5342	6,53416529	0,00000015%
Obtaining new technologies	-0,2549	-2,9239	2,923869606	0,41165794%
Reduce financial risk	0,5718	7,7301	7,730102012	0,00000001%
Sharing tangible resources	0,8800	20,5434	20,54335693	0,00000001%
Market-entry barriers	-0,8289	-16,431	16,43129877	0,00000001%

	Reduce financial risk			
	Correlation	T-Value	Absolute value	P-Value
Growth strategies/Entering new markets	-0,4098	-4,9821	4,982137986	0,00020798%
Cost minimization	-0,3394	-4,0017	4,00172854	0,01078872%
Obtaining new technologies	0,5718	7,7301	7,730102012	0,00000001%
Sharing tangible resources	0,5188	6,7311	6,731134405	0,00000006%
Market-entry barriers	-0,4980	-6,3682	6,368222901	0,00000035%

	Sharing tangible resources			
	Correlation	T-Value	Absolute value	P-Value
Growth strategies/Entering new markets	-0,4937	-6,2972	6,297214114	0,00000049%
Obtaining new technologies	-0,1758	-1,9815	1,981527522	4,97624668%
Cost minimization	0,8799	20,5433	20,54335693	0,00000001%
Reduce financial risk	0,5188	6,7311	6,731134405	0,00000006%
Market-entry barriers	-0,7976	-14,6689	14,66893207	0,00000001%

	Market entry barriers			
	Correlation	T-Value	Absolute value	P-Value
Growth strategies/Entering new markets	0,6185	8,7301	8,73012987	0,00000001%
Obtaining new technologies	0,2951	3,4251	3,425067287	0,08359085%
Cost minimization	-0,8289	-16,431	16,43129877	0,00000001%
Reduce financial risk	-0,4980	-6,3682	6,368222901	0,00000035%
Sharing tangible resources	-0,7977	-14,668	14,66893207	0,00000001%

The relation between alliance formations and the number of independent car manufacturers

Correlation	T-Value	Absolute value	P-Value
-0,718372637	-2,065302538	2,065302538	11%

Correlation between the production volumes and the rate of alliance formations

Correlation	T-Value	Absolute value	P-Value
0,674250787	1,825994704	1,8259947	10%

Abstract (English)

In times of globalization and increasing competition, companies need to rethink their corporate strategies. From market transactions to hierarchical integration, companies hold a wide range of possible expansion forms in order to increase the company's profitability and value. In this thesis, hybrid arrangements of market transactions and vertical integration, namely strategic alliances, are analysed.

Academics and consultants see in strategic alliances a source of competitive advantage and multiple benefits. However, high levels of failure, demonstrated by different studies have proven, that the development and implementation of strategic alliances is a challenging task. Nevertheless, alliances have become a crucial part of many global companies' expansion strategies. Inter-firm collaborations turned out to be beneficial in many ways, especially in industries with R&D costs, like for instance the automotive industry.

The automotive industry evolved considerably in the past three decades. On one hand, new markets emerged and great technological progresses were achieved. On the other side, new competitors mainly from China and India entered the existing markets, the mobility requirements changed, the product ranges became wider and fuel prices are increasing constantly. However, many companies lack in financial resources and technological capacities to bear all these challenges alone.

In this context, this thesis serves to analyse the development of strategic alliances between original equipment manufacturers (OEMs) in the past thirty years from a practical and theoretical point of view. Furthermore, it is analysed if the theoretical perspectives serve as explanatory approaches for the conclusion of strategic alliances. In addition, the empirical data, which contains a listing of all the concluded alliances from 1980 to 2011, is analysed to find further indicators for the rate of alliance conclusions such as the motives, the number of competitors, the economic cycle.

The paper is divided in six chapters. The focus lies on the theoretical explanations, a description of the cyclical evolution of the automotive industry, an explicit illustration of the connections between the car manufacturers, the bonding between theory and practice, as well as on the elaboration of the different hypotheses.

Keywords: Automotive industry, Strategic Alliances, Mergers and Acquisitions, Transactions Costs Theory, Resource Based View, Strategic Choice Perspective, Diversification Theory

Abstract (German)

In Zeiten von Globalisierung und zunehmendem Wettbewerb müssen Unternehmen ihre Unternehmensstrategie neu überdenken. Von Markttransaktionen bis zu hierarchischer Integration, stehen Firmen eine breite Palette an möglichen Expansionsformen zur Verfügung, um die Rentabilität des Unternehmens zu erhöhen. In dieser Magisterarbeit werden strategische Allianzen, und somit eine Hybridform von Markttransaktionen und vertikaler Integration, analysiert. Laut führenden Wissenschaftlern und Wirtschaftsberatern können strategischen Allianzen zu verschiedenen Wettbewerbsvorteilen führen. Allerdings ist das Risiko eines Scheiterns auch sehr hoch.

Somit ist die Entwicklung und Umsetzung von strategischen Allianzen ein anspruchsvolles und aufwendiges Vorhaben. Dennoch wenden viele international agierende Unternehmen strategische Allianzen an, um ihre Expansionsvorhaben um zu setzen. Vor allem in Industrien mit hohen Forschungs- und Entwicklungskosten, wie beispielsweise der Automobilindustrie, finden strategische Allianzen eine häufige Anwendung.

Die Automobilindustrie hat sich in den letzten drei Jahrzehnten erheblich weiter entwickelt. Einerseits entstanden neue Märkte in den Schwellenländer. Andererseits, jedoch drängten neue Wettbewerber, vor allem aus China und Indien, auf den Automobilmarkt, die Kundenanforderungen haben sich verändert und die Produktpaletten werden immer breiter, zudem steigen die Treibstoffpreise unaufhörlich. Allerdings fehlen vielen Unternehmen in finanziellen Ressourcen und technologischen Kapazitäten, um all diese Herausforderungen allein zu tragen.

In diesem Zusammenhang, dient die vorliegende Arbeit dazu die Entwicklung von strategischen Allianzen zwischen Automobilherstellern aus theoretischer sowie praktischer Sicht zu analysieren. Es wird geprüft, ob theoretische Konzepte wie beispielsweise die Transaktionskostentheorie als Erklärungsansätze für die Gründung von strategischen Allianzen dienen können. Darüber hinaus wird analysiert, ob Faktoren wie die spezifischen Motive, die Anzahl der Wettbewerber und der konjunkturelle Entwicklung bei der Gründung von Allianzen ausschlaggebend sind.

Die Arbeit ist in sechs Kapitel unterteilt. Der Fokus liegt auf einer theoretischen

Ausarbeitung strategischer Allianzen, einer Beschreibung der konjunkturellen Entwicklung der Automobilindustrie, einer chronologischen Darstellung der Verbindungen zwischen den Automobilherstellern, sowie auf einer Beurteilung der Zusammenhänge zwischen Theorie und Praxis.

Schlagwörter: Automobilindustrie, strategische Allianzen, Fusionen und Übernahmen, Transaktionskosten Theorie, Resource Based View, Strategic Choice Perspective, Diversifikationstheorie

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PROFESSIONAL EXPERIENCE

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| July – October 2011 | BMW of North America, LLC
<i>Intern – Accounting Operations</i>
<ul style="list-style-type: none">• Preparation of account analysis and reconciliations• Preparation and posting of monthly journal entries• Generally supporting the accounting team• Assisting a newly hired team member with account analysis and reconciliations• Composition of assisting templates | Woodcliff Lake, NJ, USA |
| July 2010 – August 2010 | Mikado Publicis
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<ul style="list-style-type: none">• Reorganisation of the archive and databases, data-backup | Luxembourg |
| September 2008 – January 200 | Ernst & Young
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| July 2003, 2004 & 2005 | Sport Plus, Jean Rock
<i>Sales Assistant and Purchasing advisor</i>
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EDUCATION

03/2010 – current	University of Vienna <i>Master in International Business Administration (MSc)</i>	Vienna, Austria
09/2009 - 02/2010	Vienna University of Business and Economics <i>Master in Finance and Accounting</i>	Vienna, Austria
05/2009	Graduate Managment Admission Test <i>(GMAT), Result: 650 Points</i>	Zurich, Switzerland
09/2004 – 02/2009	University Leopold-Franzens <i>Bachelor in Management and Economics (BSc)</i>	Innsbruck, Austria
06/2004	Lycée de Garçons Luxembourg <i>Diplôme de fin d'études secondaires (High school diploma)</i>	Luxembourg, Luxembourg

LANGUAGES

Language	Conversational Fluency	Reading Fluency	Written Fluency
English	Very fluent	Very fluent	Very fluent
German	Very fluent	Very fluent	Very fluent
French	Very fluent	Very fluent	Very fluent
Luxembourgish	Mother tongue	Mother tongue	Mother tongue
Spanish	Basic	Basic	Basic

ORGANISATION, TECHNICAL SKILLS AND COMPETENCIES

- Computer proficiency (MS Word, Power Point, Excel, Access, SAP, Adobe Photo Shop)
- Team management and event organization (i.e., Creation of snowboard movies, sales of movies, sales of sport clothing and equipment, organizing events for an entire school throughout a whole year, organizing a trip for 10 school classes)
- Strong Leadership skills confirmed by the successes of football team during my years as a captain in the youth national team of Luxembourg.
- Competitive skills shown by performances in football and snowboard championships and successful ascent of the Mont Blanc and completion of an Ironman 70.3
- Organization and active participation in a charity event for SOS Kinderdorf – cycling in a ten-men team from Vienna to Luxembourg for a good cause / Being in charge of the organisation of the sponsoring and logistic