

9 The VW Resende Modular Consortium¹

Teaching Note

Here is some more information on López de Arriortúa (*Exame Magazine*, 12/18/96):

In the Brazilian subsidiaries, the second largest operation of the Volkswagen group worldwide, López (VW VP Operations) exercised his power fully. He appeared in surprise visits nearly every week. He interfered in the details of the operation. And placed in strategic positions some of his trusted men. He never hid his admiration for Brazil. "Here is paradise," he once said. That López is a brilliant executive, nobody doubts. In General Motors, it is argued that he reduced the costs in U.S. \$7 billion. He also established a culture of relationship with suppliers that lasts up to today. In Volks, it happened again. Not that Volks Wagen already was completely fit. In the United States, the largest market of the world, its share is only 1.1%. And the profitability of the balance sheet of the group worldwide still is very low, only 0.6%. But there are signs of recovery—partly thanks to López's strategies. The profits of the company more than doubled in the first 9 months of this year compared to the same period of 1995. Then, why did López fall? He fell because GM, which never forgave him for going to Volks Wagen, came down hard.

From a myth in Detroit, where the GM headquarters are installed, López became the number one enemy of the largest assembling company in the world. The wrath has at least two reasons. One, López might have smuggled secret documents for Volks Wagen after he left Opel, GM's German subsidiary, in 1993. Amongst the dozens of boxes of papers were the designs of a new vehicle and of a revolutionary plant (according to GM's version, this plant would be the very same modular consortium installed in Resende). The second reason never was publicly admitted. It was difficult for GM to see López's talent at the service of one of its main competitors. The hate for López reached such an extreme that Opel created for its employees a game called "Let's Arrest López"! Today he cannot enter the United States. His entry visa to the country was refused. GM also took its former executive and Volks Wagen to court. López and other high employees of the company were investigated in Germany and in the USA.

The pressure became unbearable some weeks ago. An American court decided that GM could carry on with a civil action based on the Racketeer Influenced and Corrupt Organizations Act, RICO, the law that has been used to jail the heads of the mob. In case of a defeat in court, Volks Wagen would have to pay an indemnity calculated in nearly U.S. \$4 billion.

With the image damaged by the scandals and in disadvantage in the legal battle, Volks Wagen sat at the negotiation table with GM. The first condition imposed to begin to discuss an agreement: dismiss López. Volks Wagen tried to get round the situation, proposing his assignment to a less glowing job, such as the management of the Brazilian subsidiary. GM refused. López must dedicate himself to consulting in the purchasing area. End of the

1. These notes were prepared by Professor Henrique Luiz Corrêa from Crummer Graduate School of Business, Rollins College, Winter Park, Florida (hcorrea@Rollins.edu). Used with permission.

fight? It seems not. GM wants the dismissal of all the executives that followed López when he left Opel; and did not give up the indemnity. The allegation: López had used Opel's information to cut U.S. \$450 million in costs with suppliers of Volks Wagen. Thus, he reduced GM's competitive advantages. The American assembling company also demanded a public apology. "I have nothing to apologize for," said Ferdinand Piëch, world president of Volks Wagen. At 58 years old, Piëch is going through a delicate moment of his career. Years ago, he took Volks Wagen out of a lethargic status. Now, he is questioned for his participation in the hiring of López. "Each one of us can be replaced. López is replaceable and so am I," said Piëch during the announcement of Inaki's dismissal.

The Make or Buy Strategy and Core Competencies

I normally discuss the VW Resende case as a case of strategic outsourcing and a make or buy decision. Traditionally, the practice of the make or buy decision was predominantly based on the marginal cost concept. If the incremental cost of executing the activity were calculated to be less than the incremental cost of outsourcing, this would imply that the proper thing to do would be to carry out the activity internally. If, on the other hand, the incremental cost of outsourcing were considered less, the recommendation would be to outsource. From the '90s, mainly with the publishing of the already classic "Competing for the future" (Hamel and Prahalad, 1994), it became clear that, in the "make or buy" decision, more strategic concerns should be considered than only the incremental costs involved: one of the main concerns should be with the firm's core competencies. These would include considerations on whether or not the activities to be outsourced are linked to core competencies of the organization.

Hamel and Prahalad, 1994, pg. 202, define competencies as:

A competence is a bundle of skills and technologies rather than a single discrete skill or technology. As an example, Motorola's competence in fast cycle-time production (minimizing the time between an order and the fulfilment of that order) rests on a broad range of underlying skills, including design disciplines that maximize commonality across a product line, flexible manufacturing, sophisticated order-entry systems, inventory management and supply management.

Once the definition of competencies has been given, Hamel and Prahalad define the three features that are necessary for a competency to be considered a core:

1. Customer value:

A core competency must provide a "disproportionate" contribution to the value perceived by a client. Thus, the distinction between core and non-core competencies rests, in part, on a distinction between core and non-core customer benefits. For example, few clients would choose a Honda product because of some difference noticed in the service rendered by the technical service. This does not imply, however, that a core competence (that is going to support a disproportional perceived value) must be visible or even easily understandable by the client. What is visible is the benefit, not the competence. The authors suggest that the companies continuously question which would be the elements of value present in their products and services or, in other words, what is the client really paying for? Still, according to Hamel and Prahalad, there would be exceptions of competences that bring value not to the client but to the organisation or to some of its stakeholders. An example would be companies with competence in low-cost manufacturing that are not compelled, because of market conditions, to pass the totality of these cost reductions to the client, incorporating as higher margins the benefits of these competences.

2. Competitor differentiation:

For a competence to be qualified as a core competence, it must be competitively "unique", or exclusive. This does not mean that it has to be dominated by a sole company, but that the competence that is common to all industrial sectors should not be considered as core.

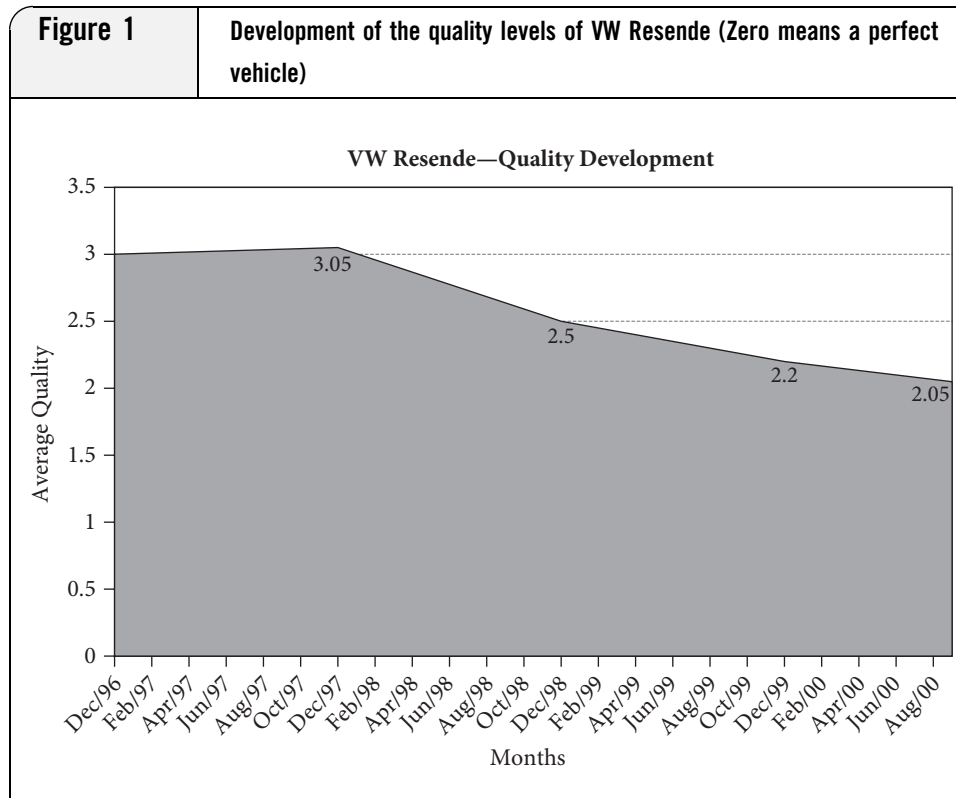
3. Extendability:

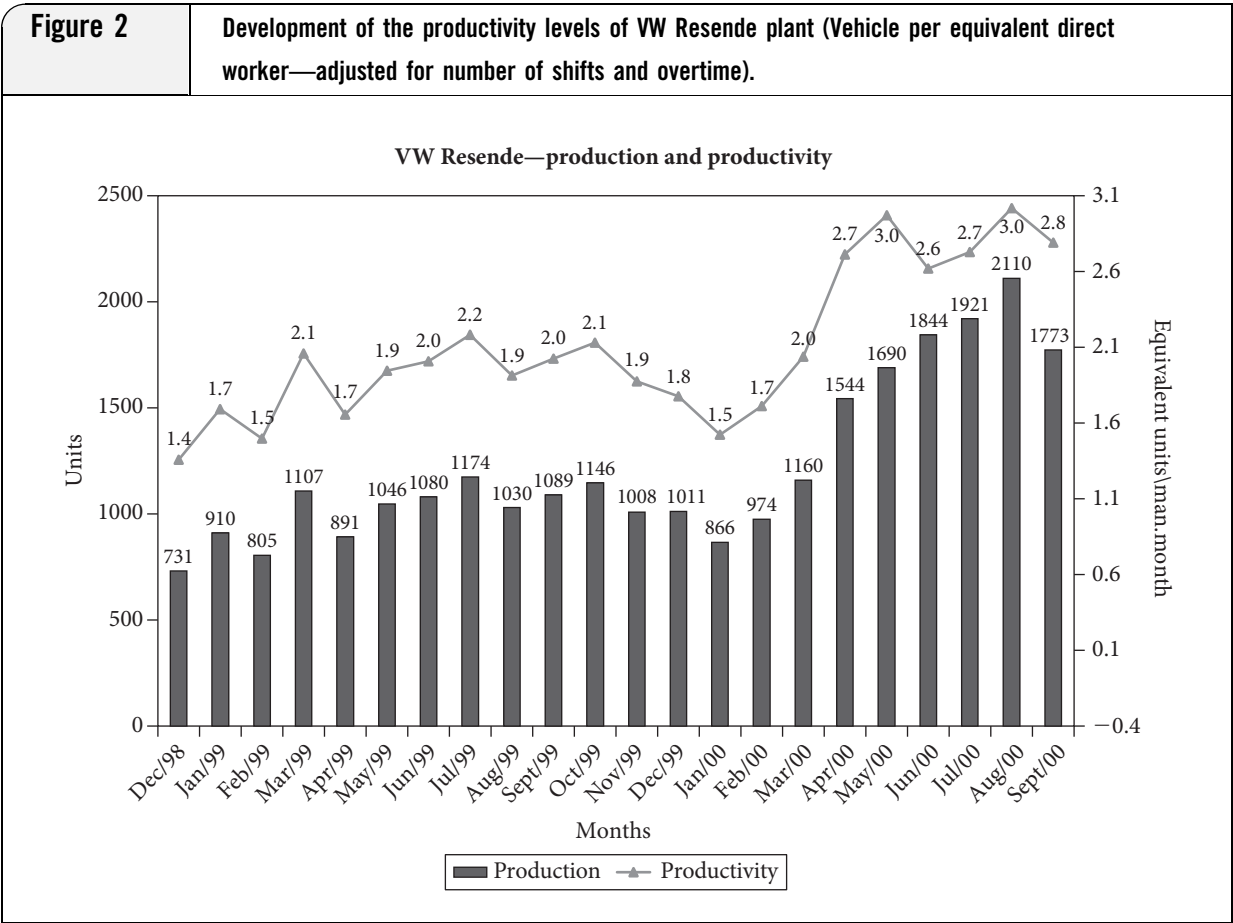
Core competences would be the gateway to tomorrow's markets. This means that the managers must disassociate themselves from today's markets and imagine what type of new opportunities the possession of competencies can open in the future. A competence is really a core one when its possession has an important role in the opening of new markets and opportunities in the future.

This is a framework that I normally use to help students realize why, in 1996, VW decided to outsource the truck parts production activities (of which VW had no previous experience), but less visibly, kept activities linked to VW core competences of that time: brand, marketing, cabin and truck configuration engineering and design, coordination of all the partners from design to production, and after sales services. These competences had been developed in the light vehicle business, and most are easily "translatable" to the truck business.

Development of the Quality and Productivity Indicators

Below there is some data on the development of the performance indicators of the VW Resende plant.





Location of Resende



Discussion Questions

1. Do you think the Modular Consortium model is a trend today? Why or why not?

No, if we consider the new plants inaugurated post-Resende. The new investments are on light vehicles and have been made with the “industrial condominium” logic, in which the assembly plant is the manager of the large area around its assembly activity, where module suppliers’ manufacturing plants (not necessarily only assembly, as in VW Resende) are located. As in a petrochemical production complex, this configuration works for large volumes, since issues related to scale prevent productive plants to be built without a guarantee of minimum production quantities. VW Resende would not manage to attract suppliers to invest in productive plants to produce parts at a scale of 80 to 100 per day. This would be easier for scales around 1,000 per day, as is the case of light vehicles.

However, it must be pointed out that only with this model of suppliers assembling the modules on the line can some advantages be obtained, such as the best quality of assembly because of the supposed greater care and specialisation (suppliers only assemble their modules and related parts). Another advantage of the Modular Consortium model would be the reduction of the influence of the managers’ parallel agendas in the solving of conflicts, since in a consortium model the managers responsible for the various modules are not competing in their careers for the same promotion.

Therefore, the issue to be discussed in relation to the differences between modular consortium and industrial condominium is not mainly the issue of who assembles on the line, but which modules are outsourced. It can even be inferred by the news in the press of large circulation that the more contemporary models will be hybrid, i.e., modular, with some modules kept within the assembly plants and, for some outsourced modules, the presence of suppliers in the assembly line of the assembly plants.

2. Is there a risk of VW becoming empty of competencies and, therefore, dispensable?

Although the possibility, at a first glance, seems very plausible, it merits a more careful analysis. Jarillo (1993) mentions three risks in the outsourcing of activities that can result in the complete “emptying” of the company that outsources:

- a. company transfers its competitive advantage to a third party that becomes an efficient competitor;
- b. company has its distinguishing competitive advantages spread to its competitors through a common third-party supplier;
- c. company stops having important innovation and learning sources, which have been passed over to third parties.

Of the three possibilities listed by Jarillo (1993), none strictly applied to VW trucks in 1996 (maybe and only partially number three, but it refers more to the creation of future competencies). In fact, when the situation previous to the establishment of the new plant is considered, it could be noticed that it is impossible to lose what one does not have. Historically, firstly VW based itself on the products and processes of the operation that had been Chrysler’s up to the beginning of the ’80s. VW remained as a pure assembly company up to the formation of Autolatina in 1987, when Ford brought in the technology of manufacturing trucks. Therefore, instead of losing competencies because of delegating them to third parties, VW in fact benefited from the competencies of the suppliers (at least in terms of designing and manufacturing the modules).

Table 1**Supply models in the new automobile plants in Brazil.**

Plant	Supply Model
GM Gravataí (Celta, compact)	Industrial condominium
Peugeot Resende (Picasso—van and compact)	Industrial condominium
VW São José dos Pinhais (Golf and Audi A3)	Hybrid
Ford Camaçari (Fiesta, Focus)	Hybrid
Chrysler Curitiba (Dakota), now closed down	Hybrid

3. Why do you think the new plants of VW and the other auto assembly companies have not followed the MC model?

The new investments are in light vehicle plants, being that all the manufacturers have (still) relevant core competencies in relation to the production of certain modules, such as engine, transmission, suspension, external and internal finishing, etc. Therefore, they have not thought convenient the idea of outsourcing these activities. One only has to see the recent publicity campaigns of the competitors in the 1000cc vehicle market, all emphasizing the engine's power as a competitive differential.

Although López had stated that he strongly believed that the Modular Consortium would be the design model of the supply chain for all the VW plants worldwide, neither of the plants belonging to the German group inaugurated in Brazil after 1996 (São Carlos and São José dos Pinhais) were designed according to the consortium model. Even the plants of other assembly companies recently built (or under construction) in Brazil did not adopt the MC, preferring the industrial condominium configuration, with some of them opting for the hybrid configuration as Table I above shows.

Volkswagen strongly bases its competitiveness in the reliability of its products. The decision itself of assembling an engine goes against López's statement that the policy of "outsourcing everything" relative to production was a general trend in the automobile industry, with a concentration of efforts exclusively in activities related to trademark management, marketing and customer service.

In other words, the issue seems to be related to the strategic decision of "make or buy." As VW historically had never had a distinguished competency in manufacturing trucks, at that time it opted for the "buy everything" strategy. However, this is not the case of the manufacturing of light vehicles (cars). Because of this, according to the opinion of the executives, VW did not adopt the MC in the São Carlos and São José dos Pinhais plants.

4. Do you think the option for the MC was the result of a rational analysis of the various alternatives on the part of VW management?

The result of a historical survey shows that the decision for the modular consortium was highly influenced by the imposition of López, a professional with a strong background connected to supplies and not much to production technology. He shows, at least in the interviews of the time, that personally he truly believed that the Modular Consortium model would be the model of the future to be adopted by all VW plants worldwide (López, at that time, was the corporate Purchasing director and Latin America vice-president of operations of the VW group). He probably neglected two

things: first the question that one thing is to analyze VW making trucks, without having developed core competencies. A different issue is to analyse VW producing light vehicles, in which VW does have strong and developed core competencies—for example, in engines and transmissions. This means that it will be difficult, in the short to medium term, for the company to outsource the production of, for example, their engines. López, therefore, apparently neglected the core competence issue in his analyses of making-or-buying, when he proposed the consortium model for all the VW plants worldwide. It is obvious that this was a personal position of López when we see a radical change of position of VW in relation to a previous decision taken by López of using the Modular Consortium model for the new engine plant of São Carlos. The new managers, as soon as López left management in November 1996, reviewed this position, and substantially changed the outsourcing rate (to less) at the São Carlos plant.

Another point maybe neglected by López was the importance given to the "technik" in German engineering companies. Today it seems, to a certain extent, that the position of López in believing that VW would agree with the total outsourcing of its engineering activities—such as the production of engines and transmissions for vehicles such as the Audi, Passat and even the less sophisticated Golf and Gol lines—was ill founded.

However, it cannot be said that the decision was ill timed. It was, casually or not, right, and the effort of placing a whole plant in operation in less than one year, using an innovative arrangement with suppliers within the plant assembling their modules was, with no doubt, successful, impressive, and shows nearly unequivocally one of VW's core competencies: the capacity of forming a coalition and coordinating partners without losing total control over the supply chain.

5. Overall, does the Resende experience appear to be successful?

The survey found strong and weak points of the Resende experience. Below is a summary of advantages and disadvantages of the modular consortium, pointed out by those interviewed and also concluded by the bibliographic research work.

a. Advantages

- Commitment of the module suppliers with the success of all and not of parts of the product, since they are only paid when the product is approved and functionally accepted.
- Priority with the headquarters of the module supplier in case of a delivery or quality problem, since there is an "ambassador" of the module manufacturer within the assembly plant.
- Improved assembly quality, since the module supplier tends to strictly follow the assembly instructions, which does not happen in conventional plants.
- Fast improvement of productivity and quality levels, since the cycle of problem solving and improvements is shortened by the presence of the supplier within the assembly plant.
- Increased apprenticeship by the presence, under the same roof, of numerous companies, which bring rich know-how and allow cross-fertilization.
- Shortens the time of developing and launching new products, since the partnership is strong and there are no alternative partners; they have already been working together for a long time, and simultaneous engineering becomes easy.

- For some module suppliers, there is a guarantee of supply, allowing planning for a longer time.
- A smaller and decentralised structure of each supplier within the Consortium allows quicker decisions than if taken within only one large structure, as is the case of a traditional assembly plant.
- Less tendency of parallel agendas of managers and executives interfering in the decisions, since the various managers of the different modules are not competing for the same promotions.
- Organizational apprenticeship in negotiation. As they are separate companies, there cannot be an imposition of positions resulting in a loser and in a winner. The only way of making a point of view prevail is to convince and persuade, which does not generate losers.
- Possibility of the physical presence of module suppliers without the need of establishing independent industrial units—relevant when it is a matter of production volumes that would make it difficult for these independent units to break-even.

b. Disadvantages

- Salary negotiation levelled by the standards of the assembly plant, with a possible margin of losses by the auto-part suppliers.
- Subjects discussed must be agreed on by partners, which can take longer, as is the case of a union negotiation.
- The start-up, described by all those interviewed as having been difficult due to the management/cultural mixture; the learning curve was arduous and could have taken a different direction.

Additional Questions that can be Discussed

- Which are the main problems expected in a Modular Consortium configuration?
- What risks and benefits for VW are involved in the Modular Consortium model? Can the model be generalized?
- What risks and benefits for the module manufacturers are involved in the Modular Consortium model?
- Which organizational culture issues must be considered?
- How must the new investment/technological update issues be approached?
- How must the responsibility issues for possible quality/failure problems be handled?
- How to handle issues of possible need of replacing module suppliers?