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CREATING A POSTMODERN INDIVIDUAL PRODUCT OFFER

Case Study of Saab Automobile AB

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Abstract

Today, there is a trend towards a customized product offer that provides customers with freedom to individualized products according to their personal preferences. It is a change from traditional mass marketing towards a new paradigm of individual marketing. The rise of this trend might be traced in the postmodernism. In general, postmodern consumers are described as people who escape the standard templates and thus are more willing to purchase products that fit best to their individuality.

This research shows that in order to pursue customization a company should address the following main questions: what type of customization to perform, what level of customization is appropriate to fulfill; and how the manufacturing of customized commodities should be organized. Contrary to many authors on the subject customized manufacturing is considered an approach that is suitable only for a particular products and a special segment of consumers in the market.

The process of customization has been investigated at Saab Automobile AB. Interviews with Saab dealers, managers at Saab Automobile AB and Saab designers have provided the empirical data necessary to analyze the possibilities for the case company to create a postmodern individual product offer for its target audience.

Keywords: customization, postmodern consumers, customized vehicles, individual customization

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Martina Krasteva
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Chapter 1 Introduction

This chapter introduces the overall theme of the thesis. It presents the problem background of the study and relates it to the automotive industry that has been chosen as an area of investigation. It also sets the overall purpose of the thesis and presents the limitations of the study. It ends with a visualized model of the chapter layout.

1.1. Background

Almost 90 years ago Henry Ford launched mass production with the innovation of his assembly line for the legendary Model T. It seemed a perfect system, providing that there were customers waiting at the end of the line ready to purchase. Now, as many market analysts proclaim, this time is over because we have come to the new era of individual marketing and manufacturing (Pine et al. 1995; Gilmore and Pine, 1997; Silveira et al. 2001; Alford et al. 2000). Today, there is a trend towards a customized product offer, i.e., customers have great freedom to individualize products according to their personal preferences. These personalized product offerings are clearly more expensive to develop than standardized commodities intended for the mass market, but customers are frequently willing to pay more for a product closer to their specific needs.

Customized offering has been more or less adopted by companies in automotive industry. Different carmakers have tried to offer different options for car-individualization. Their ultimate goal is to deliver to customers precisely the car they want, and most importantly, to involve customers in the design of their individual vehicle. Even if the goal for offering personally designed cars sounds unrealistic today, in the near future it might be acceptable. We may not be to the point at which all cars are built to order; nevertheless the time is coming when custom cars, or at least semi-custom cars are a must. Henry Ford's famous statement that the customers can have a car painted any colour they want as long as it is black has proved to be the completely wrong marketing approach.

Coupled with the increased offering of more and more individually shaped products is the concept of postmodern consumption. The theme of independent postmodern individualists who experience consumption as a way to create their identities as well as to express their individuality is central in this concept. According to this trend, contemporary consumers are described as people who escape the standard templates and thus are more willing to pursue products that fit best to their individuality. They are no more passive consumers of what marketers dictate. Instead these are active individuals who have taken full control over their lives: "I am not going to be squeezed into a mould, I'll choose the brand that suits me"(Moynagh and Worsley, 2001, p. 295). So even if consumers had the right to choose in the past probably in near future they might have the right to get exactly what they want.

Even though it seems that the concept of customization is the logical continuation of the notion/trend of postmodern consumption, some critical questions need to be addressed before putting embracing customization. In this regard an important decision for a company that is going to offer individualized products is how much customization a business can take on? Yet the payoff from this activity is unclear. The contemporary literature is very enthusiastic about employing the concept on a mass basis, i.e., for all products. However, performing customization on a large scale might turn out to be very costly. So, is there another way for implementing it?

Even if the customization concept promises significant benefits it takes a lot of investments as well as technological and organizational expertise. Consequently we need to consider: what kind of products will have a customized appeal to customers and why?; what is the appropriate level of customization for a particular product?; is a company capable of perform it? Finally, it is worth asking if all the enthusiasm regarding customization indicates just a current fad or it is a serious strategic concept, which if implemented right might lead to superior organizational performance (Hart, 1995).

1.2. Customization in the automotive industry

In the automotive industry the concept of customization has been widely discussed for almost a decade. Demanding customers have forced the industry to reflect on its contemporary manufacturing process as well as on its present marketing strategies. To offer models with a set of predefined options that have been configured by manufacturers for their potential customers may not be the best approach any longer. The main reason for this is the fact that car buyers demand a greater degree of individuality.

Alford et al. (2000) differentiate three current strategies for customization in the automotive industry, namely, form, optional and core customization. The type of customization is defined according to the degree of customer involvement in the design, manufacturing and distribution processes in the value chain. *Core* (pure) customization takes place when customers are integrated with the design process of the vehicle. In this case vehicles are created in low volumes in order to meet particular customer requirements for specific applications or environment. Volvo Car Corporation has utilized this kind of customization within its Special Vehicle Department. The company manufactures and markets specially adapted vehicles based on standard Volvo cars, e.g., police cars, taxis, service vehicles and "special edition" variants (www.Volvo.special.vehicles.com). Designers of the company work in close partnership with customers in order to build a car based on a standard Volvo platform, but at the same time with fundamental changes of the vehicle design.

Core customization is carried out also for manufacturing a low-volume luxury cars (Aston Martin) or exclusive versions of some brands (BMW 7 Exclusive). Such manufacturing is performed in separate factories or workshops, and therefore mass production techniques cannot be used for this kind of cars. The long lead-time and premium costs are some of the drawbacks of core customization.

Optional customization according to Alford et al. (2000) is a popular technique used in the automotive industry. It allows a certain (low) degree of customization to be carried out. This might be achieved by mass manufacturing

of standard designed vehicles, which are assembled to customer requirements. The design of the car is retained while the features of customization can be described as adjusting or modularity. Although customers are given an opportunity for individualizing their vehicles by selecting from a predefined list of options, they are not involved in the design process of the vehicle. Optional customization let customers choose a particular model and body style with standard equipment and customize it with options available at a premium price.

Additional customization of the standard vehicles might be performed at the distribution point. New parts are supplemented or standard features changed in order to meet customer personal tastes. This type of customization made at distributors is called *form* customization (Alford et al., 2000). For most vehicles, only a limited number of peripheral options can be modified in the dealerships. Usually, parts of the car are changed in the assembly process before going to the distributors. Besides some modification of the vehicles, distributors offer also service packages in order to differentiate the vehicle and tailor it to suit individual customers' needs (Alford et al. 2000). Free services, financial incentives, insurance and warranty services are examples.

While most of the companies in the automotive industry offer a certain degree of customization on their vehicles, these options for further individualization are usually limited to packages or optional features pre-defined by the manufacturer. For instance, if a customer wants to choose an exterior colour, which is not available in the price list, most of the companies would not be able to satisfy his/her wish. Even though most car makers claim to offer customization, this customization does not mean providing customers with the possibility to design/build the precise option or features they want. In that sense it is, in a way, a misconception of the real meaning of customization. Moreover, even if mass consumers might not be willing to individualize the car and probably will select options that are available in the standard list, there are consumers who do search for more personalization, which most of the car makers cannot offer. The problem for most car makers is to find out what is the appropriate level of customization that they can utilize and that will be appreciated by their customers.

1.3. Problem background

Due to the tough competition in terms of product proliferation, shortened product life cycle and active application of advanced technology, companies in many industries have recognized that a strategy based on traditional mass marketing, which means to mass produce standard products and after that to sell them to unknown customer, is no longer the one that can lead to competitive advantage (Gronroos, 1994). Instead an individual approach that addresses each customer independently, as well as providing tailored product offering, is preferable.

In order to meet this new challenge, companies have been forced to respond to the increased individualized demand. Giants such as Dell, Motorola and IBM, are among the first and most successful customizers. Their success stories have lured other companies to go for customization. However, not every company trying to apply the concept has been so successful. Building individually shaped products turns out to be a very costly activity and sometimes it is not appreciated by customers. So, why has the concept been successful for some companies and problematic for others? Are there any prerequisites before implementing it?

For companies moving towards customized offering, many issues need to be addressed before applying the concept. In that sense it is essential to define how much customization customers favor, i.e., how much customer sensitivity there is in terms of individualized products (Hart, 1995). Furthermore, even if the demand for customized product exists, is the company capable of implementing it? Does it have the right expertise, technology and processes for utilizing the concept? Why is it so important for companies to offer customized products and is this concept a 100% guarantee for success? Do all products require the same level of customization?

The automotive industry has been chosen, as an area for investigation, since it has a great potential for utilizing the concept of customization yet this opportunity has not been fully explored. The increased demand for individualization, the use of advanced manufacturing technology, the

proliferation of various car modifications as well as shorter product lifecycles are among the main reasons for applying the theory of customization in the automotive industry. Saab Automobile AB, the case study of this paper, is a company from the automotive industry that has decided to set out on the road of customization. The view taken in this paper is that the production of customized vehicles is an extremely challenging case for customization, which might not necessarily be embraced as a basic manufacturing strategy.

The growing number of customized options offered by Saab's major competitors, the results of marketing research that indicate increased demand for individualization, as well as the frequency of requests to Saab for unique car features from dealers and customers all over the world, have let Saab Automobile AB to re-think and re-organized its existing product offer. There is a belief among managers in the company and among Saab dealers as well that a more individual offer would be appreciated by their customers and would make business sense. However, the dilemma for the company is to find the right balance between customers' demand level of customization and the company's ability to offer it. The current thesis looks into this problem area and discusses it with regard to Saab Automobile AB.

1.4. Purpose of the study

There are two major objectives that this paper aims to fulfill. The first has a *theoretical character* while the second is *practical oriented*, concerning the case company.

The foremost purpose of the thesis is to develop a model for implementation of a postmodern individual product offer (PIPO) that might be applicable for different companies in various industries, where the target audience could be identified among postmodern individuals. In order to fulfill the first purpose of the study I am going to look into: consumers preferences in terms of customized products; companies capabilities in terms of how and what product attributes to customize; and the organization of the fundamental process for building an individualized product.

The second objective is to investigate how Saab Automobile AB, a company within the automotive industry, could develop a customized product offer as an option to its core product program. In doing so the first area of investigation will be to determine if there is a demand for customized vehicles as well as if it is consistent with Saab customers' preferences. Second, the appropriate level of automobile customization will be discussed. Third, the implementation process of a customized product offer will be analyzed and a potential scenario for how the process of customized Saab case may be organized will be developed.

Most of the contemporary literature concerning customization considers it a mass customization, neglecting the option of offering customized products as an individual case (Alford et al. 2000; Silveira et al. 2001; Pine et al. 1993; Hart, 1995). There has been little research into product customization implemented as a single or distinct case. Furthermore, the concept of customization has been seen by most authors as completely opposite to the traditional mass production (Gilmore and Pine, 1997; Pine et al., 1993). Those authors share the view that mass customization is the principal way to compete in the future. Mass production is considered an obsolete concept that will not lead to the competitive advantage and therefore should be abandoned.

In this paper I have taken a rather critical view of the beliefs of these authors. Therefore, I will try to prove: 1) both customization and mass production concepts can be integrated in a way that would bring more benefits than by just applying them separately; 2) employing customization by no means is offering it on a mass basis. Offering customized products as an individual case to serve a premium demanding segment of customers might turn out to be profitable for a company, which embraces the concept.

1.5. Limitations

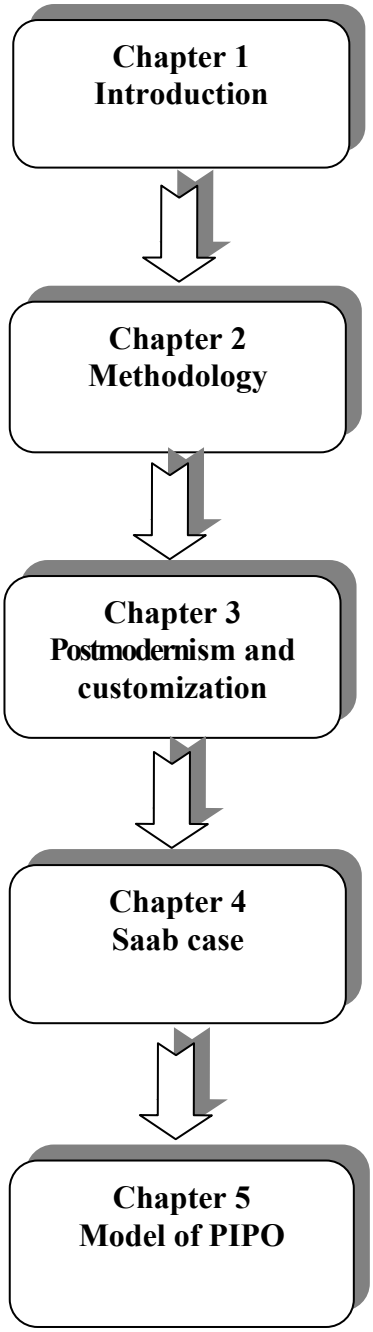
According to Creswell (1994), limitations indicate the potential weaknesses in a particular research design. In this study the following limitations need to be taken into consideration. The potential role of information technology and especially of the Internet for implementing the concept of customization is not been the subject of this thesis. I am aware of the growing power of the Internet

as a mean for offering more customized products. However, I do believe this subject is a very broad issue, which must be tackled independently. Furthermore, I have chosen not to look into different manufacturing strategies related to customization such as agile manufacturing and advanced manufacturing technologies. I would rather analyze the concept from a conceptual point of view than from an operational perspective.

Moreover, supply chain issues and all the other activities that occur outside the company, have been left untouched, with the exception of dealers. The role of suppliers and other parties in the chain, the effective communication in the chain, as well as all the networks and information transfer, have not been discussed. Therefore, the main interest has been on all processes that have taken place inside the company.

Another limitation herein concerns the context of postmodernism. I have used it as a foundation for the main topic of the paper, namely, customization. Therefore, the role of postmodernism is an explanatory because it is used to enlighten the emergence of the individual marketing. For this reason, I did not explore postmodernism as a philosophical and cultural movement widespread in many aspects of humans' life. Instead I have chosen to look into its implications on contemporary consumption, which is in line with my research.

1.6. Chapter disposition



Introduces the main theme of the thesis, applies the key problems to the automotive industry chosen as area of investigation, presents the purpose, limitations and chapter layout of the study.

Describes how the research has been done, presents the research questions and describes all issue concerning research method and design.

Presents postmodern consumption and the implication that it has on companies' product offers. Introduces readers to the concept of customization and addresses the most important issues concerning this theory.

Discusses in detail Saab customers, Saab PIPO and its implication on the business as well as the implementation process of customized Saabs.

Proposes a model applicable for companies targeting postmodern consumers. Develops a conceptual model of customization. Draws theoretical conclusions and summarizes the most important lessons from the study.

Figure 1: Layout of the chapters

Chapter 2 Methodology

The chapter addresses issues concerning the research process in general. It sheds light on how the research has been conducted as well as how the basic findings have been analyzed. The explanation of the research strategy, research design and method, sources of information, as well as validity and reliability of the study, are presented.

2.1. Research Design

Yin (1994) defines the research design as a logical link that connects the empirical findings of the study with the set of conclusions drawn. In other words, it is a rational sequence of getting from the initial set of questions that needs to be answered through analysis of the empirical findings to the logical conclusion concerning these findings.

The research topic of this study has been initiated by Saab Automobile AB. After a few meetings with a Saab contact person, where an overall investigation area was discussed, the main research questions were designed. The initial definition of the purpose and the way the overall empirical research was conducted to a large extent has been influenced by the company's needs. Furthermore, guidance was provided on how to proceed with the collection of primary and secondary data. Therefore, due to these reasons it might be said that this research has a very practical character.

The first intention of the research was to conduct external interviews with potential customers in order to find out if they would appreciate having as an option a customized product offer. However, after discussing the research area with a Saab contact person, the decision was taken to conduct more interviews internally with Saab employees and dealers in order to get a more specific understanding of the problematic area. One of the main reasons for that was the fact that Saab already has detailed research concerning their customers.

Therefore, it was decided to use this research as a secondary source and to put more effort into interviewing dealers and some key Saab employees. In addition, it became clear that in order for a customer research to be representative, it was necessary to use a survey, which was possible, given the time period and the resources of this study.

When developing the theoretical framework it became obvious that within the existing theory about customization the concept has been defined as a mass production paradigm ignoring an individual type of customization, which is exactly the case of Saab Automobile AB. Contemporary theory on customization, even if partially applicable to the Saab case in terms of customer preferences, is mostly unable to provide the rational implication for the implementation of the type of customization needed by the company. Therefore, I applied the existing theory of mass customization when it was appropriate to my research, otherwise, I referred to the existing theory as the initial source and elaborated on it, according to my empirical findings and this particular case of customization.

2.2. The Research strategy and method

The research strategy that has been undertaken for the thesis is a case study. According to Yin (1994, p.13) the case study can be defined as an "*empirical inquiry that investigates a contemporary phenomena within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident*". Furthermore, case study is considered the right research strategy if "how" and "why" questions are asked, the control for investigating events is limited and the focus is on a contemporary phenomenon within real-life situations. In other words, the case study provides a clear description of present events.

The case study research has been criticized for being: 1) biased since it allows a researcher to introduce personal values and judgments that might influence the findings and the conclusions drawn; 2) poor basis for generalizing the findings due to the fact that it involves only one specific case; 3) time-consuming and often resulting in a great number of too boring paper files. Being aware of all these criticisms, however, I am convinced that the advantages of selecting this research strategy cannot be underestimated. In that sense, I believe the case study of Saab Automobile AB gives me a foundation for analyzing my investigation area using many different variables such as personal observation (not only data). It also allows me to verify certain aspects as well as analyze problems identified in theories within their real-life context of the case of Saab Automobile AB.

A case study can be fulfilled using either qualitative and/or quantitative methods. The qualitative approach is applied when it is necessary to gain a deeper and more comprehensive knowledge of the subject examined. Its purpose is to build a complex and holistic picture within which individuals, groups or organizations are situated (Merriam, 1998). On the contrary, the quantitative method is used when the inquiry is already structured and the investigating problems are defined. Quantitative research is based on testing a theory that is composed with measurable variables, in order to prove if the predefined generalization of the theory is true (Creswell, 1994).

In this research, the qualitative method has been used in order to obtain a deeper knowledge and better understanding of the possibility for Saab to create a postmodern individualized product offering. Therefore, the quantitative approach with a numerical focus is not appropriate to the explanatory nature of this study, which could be better described in words than figures. Furthermore, according to Creswell (1994), qualitative research takes place in a natural setting and expresses an explicit view of the informants, which is precisely the case of the practical part of this thesis.

2.3. The case of Saab

This study investigates Saab Automobile AB as one company in the automotive industry in an attempt to understand one company's experience with customization. The choice of the case study fits ideally with the research questions that have been raised in this paper. Saab Automobile AB in is not an example of a company that undertakes customization in the mass production system (as has been well recognized in the literature). Instead, it is considered a carmaker that is going towards increased customization within a very challenging manufacturing environment. Therefore it seems a very interesting case when it comes to customization. The main question is not whether to have an individual product offer or not, but rather how to create it.

Offering customization for Saab means creating, as an addition to its core program, an individual product offer that targets a separate segment of the market. The offer needs to have customer appeal and make business sense. Moreover, customers of this case study company belong to the postmodern segment of the market, which consists of postmodern individual drivers who reject mainstream trends and conventions (Sensor Study, Sigma 2001). Therefore, they are thought to be ideal consumers of customized commodities.

Within the automotive industry Saab is perceived as a rather small niche premium brand. Thus, whatever changes regarding organizational or manufacturing process occur, they might be achieved faster and more easily by Saab, compared to larger car makers.

2.4. Research questions

The research questions are divided in two parts: **theoretical**, dealing with the academic problem and **pragmatic**, fulfilling the practical purpose of the thesis.

Theoretical Questions
In order to explore the concept of customization I will explore what has caused its emergence. Obviously there was a trend or a change in consumers' behavior that has given rise to the term. From the perspective of postmodern consumers, the roots of the customization concept might be traced. Therefore, the first area of investigation is the perception of postmodernism and postmodern consumers.

What is postmodern consumption and what influence does it have on companies' product offerings?

Having investigated the recent trend of postmodern consumption and its relation to the growing offerings of individually shaped products, I will look into the concept of customization. First, my main purpose is to investigate what is the most appropriate way to apply this concept. More specifically, I am going to explore whether the offering of customized products should be employed on a large scale (as most of the authors on the subject claim) or whether it might be offered only as an option to the mass-produced commodities. The next step of my theoretical overview will be to define what level of customization should companies pursue. Therefore, I will discuss how much customization customers are in favor of. In this regard the research questions are:

How to apply the concept of customization?
How to define the appropriate level of customization?
How much customization do customers appreciate?

Practical Questions
In order to accomplish the practical purpose of the thesis, I will look into Saab customers' preferences and their key motives for choosing the Saab brand as well as Saab's ability to offer customization. First and foremost, my paramount

goal is to find out whether a demand for more individualized cars in terms of aesthetic options exists. Second, the type of customization needed for Saab will be defined. Last, but not least, is to determine what the potential for utilizing the concept of customization is. In other words, how the process of building customized Saabs should be organized in the most efficient way.

How to employ customization in Saab Automobile AB?
What is the potential for implementing customization in the company?
How to organize the implementation process of customized commodities?

All the research questions stated above are going to be the guideline that will finally lead me to the main purpose of this paper: to build *a* ***model for implementation of a postmodern individual product offer (PIPO).***

2.5. Data Collection

In this case study, both primary and secondary data have been collected. Figure 2 visualizes what kind of data has been collected during the different stages of the research, what the key variables were as well as what sources were used. The people involved in the interviews and meetings were chosen since they are very competent in the research area.

There is a difference between the interviews and meetings conducted. In the first instance I have prepared specific questions, usually sent to interviewees in advance, therefore the meetings have had a very formal character. In the second occasion I refer to seminars where the topic has been debated in the form of joint discussion.

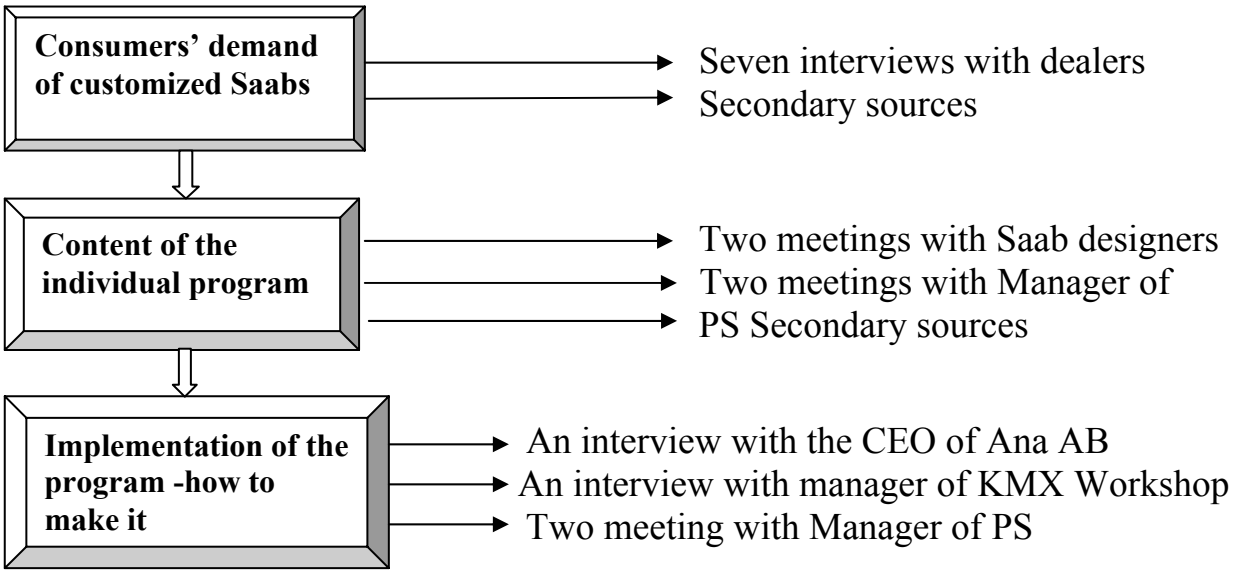


Figure 2: Model of data collection

The first area of investigation was to find out whether a demand for custom Saabs exists (see figure 2). For that purpose, initially dealers were selected from the top three countries in terms of sales (US, Great Britain, Sweden). However, after discussing the market areas selected for research, it became clear that it would have been more useful to interview dealers in the metropolitan cities since the buyers of customized Saabs are more likely to be found in those areas. That is why the selection strategy of the interviews was changed and dealers from other countries, mainly from the urban areas have been included.

In general, all the interviews outside Sweden were made either by the telephone or via Saab Intranet. Interviews in Sweden were carried out face-to-face. Two dealers from the US and three from Great Britain were interviewed by the telephone. Because of the language barrier, one dealer from Germany was contacted via Saab Intranet. A face-to face interview was conducted with one of the major Saab dealers in Sweden. The interviews were of semi-structured, open-ended character, which allowed interviewees to express their own views on the subject. The questions asked were designed in collaboration with a Saab employee who has good knowledge of the problem area. The interview questions were planned carefully and sent to the interviewees before the actual interviews. Thus, the interviewees were able to think about the questions in advance.

The secondary sources of information, used at this stage of the project, are **Global-Sensor** and **NCBS** research. The first is a marketing socio-cultural qualitative and quantitative study, conducted once a year by an independent organization. It divides markets into stable units with similar values in order to identify future trends in consumers' behavior. The target group is the total population, not only car consumers. Markets included are France, Germany, Great Britain, Italy, Spain, Sweden (only qualitative), Japan and the U.S. The methodology is focus groups, mail questionnaires and fully standardized face-to-face interviews with an average length of 70 min. In each of these countries 1 500 cases are randomly selected.

NCBS is a survey, which includes samples of only car-buyers. It shows the major reasons for purchasing case and provides a comprehensive description of a typical car buyer of a particular brand. Moreover, it points out gains and losses for a particular brand from different competitors. It is conducted in terms of postal surveys in almost all European countries as well as the U.S. The data taken from both studies explain in which segment Saab customers are found, what their preferences in terms of consumption are, and what their key motives for purchasing a Saab car are.

The second part of the research defines the content of Saab individual program as well as the required level of customization (see figure 2). Within a period of one month, two meetings with representatives of the Saab design team were performed. During the first meeting, designers were made familiar with the purpose of the present study and their input concerning the study was discussed. On the second meeting designers presented a preliminary proposal for the individual program and some initial prices were considered. Furthermore, at this stage of the research, a detailed screening of BMW and Mercedes web sites and catalogues with their customized offers was carried out as a secondary source of information.

The third stage of the study addresses the implementation process of the Saab individual offer. A meeting with the chief executive officer of Ana Trollhättan AB was held. Within his dealership, there is a flexible workshop that

specialized in making additional customization of vehicles. I was shown how the process had been organized and the potential for utilizing the customized offer in this particular workshop was discussed. The interview was of not-structured character, allowing the interviewee to express explicitly his attitude towards the problem area. Another face-to-face interview was performed with a manager of KMX flexible internal workshop, where Saab pilot cars have been tested. The information gathered from those interviews has been used later when production issues were considered.

Supplementary secondary sources of information used in this study include scientific articles, books and Internet web pages. In addition, a significant amount of secondary information has been obtained from Saab documentation. Industry and market specific information has been gathered from reliable external researches from International Consultancy. Some of this research has been conducted on behalf of Saab Automobile AB in order to collect valuable data for the company. Other research has been conducted by independent organizations in order to deliver valuable information to several competing automotive companies.

Working in close collaboration with Saab Automobile AB during the project provided me with an opportunity to enhance her knowledge about the investigative area through direct observation and informal communication. Comprehensive consultations with the manager of Product Strategy Department have been carried out during the whole period of the project. Furthermore, I have attended presentations concerning different subjects, tangentially related to the theme of this thesis, at the headquarters of Saab in Gothenburg in order to get a better understanding of the business environment in the company. A visit to the Saab manufacturing factory in Trollhāttan helped the researcher learn how the production process is organized. This knowledge has been used in the later stages of this project when the implementation process of this project was addressed.

2.6. Validity, generality and reliability

Validity measures the quality of a case study and research in general. In other words, a particular study can be considered to a large extent valid if the information gathered is exactly the information intended to be received from the beginning of the project. There are three different procedures to measure the validity of a qualitative study (Merriam 1998).

One way to verify a study is through internal validity. The internal validity provides answers to the question whether the findings of the study match the reality of the case. One method to ensure internal validity is to check the accuracy of the data by going back to their primary sources and asking for verification. Another way is to share the research with others, i.e., to use multiple investigators, sources or data (Merriam 1998). In the case of this research, all the data collected was presented repeatedly to the Saab contact person in order to obtain verification. Furthermore, the final paper was also reviewed by supervisors in the company and at the University to secure accuracy.

Another way to measure the verification of a study is through external validity, or in other words, how the case study can be generalized to a wider perspective. According to Creswell (1994), the purpose of the qualitative research is not to generalize but to create a unique interpretation for the case being studied. Yin (1994) suggests two distinct ways for generalizing findings of a qualitative research. The first is the statistical generalization, which is based on a survey. The second way is the analytical generalization on which the case study is built.

As this research is of qualitative character and is based on a single case within the automotive industry it is hard to say that it is representative of the whole industry. Even so, the empirical findings and theoretical implications, coupled with the secondary data gathered, have led the researcher to make generalizations about the contemporary situation and the potential for utilizing

customization in companies from different industries targeting postmodern consumers.

The third method to verify the study addresses the misinterpretations that may occur in terms of the concept applied. The understanding of a conceptual framework might differ according to different context. This means that sometimes the use of one term might be understood differently by different interpreters, within different context (Yin, 1994). In the case of the concept of customization it proves to be a significant concern. For instance, the term customization has been used by many authors who have given it quite different meanings. Besides, there seems to be lack of a common classification for different types of customization. In order to avoid these problems related to the concept of customization I have used multiple sources regarding authors, research direction and theoretical interpretations.

Finally, in order for research to be of a high quality, it has to be reliable. This means that if others re-conduct the study, the results must be almost the same. The basic idea behind reliability is that there is one single reality and any attempts to study this reality again will lead to the same findings (Merriam, 1998). The reliability of this research is believed to be high due to the fact that all the information obtained has been verified by a Saab contact person. Furthermore, the interview questions were planned carefully and sent out to the interviewees before the actual interviews took place. Despite these procedures, since some of the interviews were conducted by telephone, there could be some misunderstandings by the interviewees. However, I strongly believe that if the circumstances did not change significantly for Saab and the market situation retained the same; similar research performed by other researchers would lead to similar results.

2.7. Ethical Considerations

Throughout this project significant efforts have been made to avoid the disclosure of any sensitive information to the general public. In that respect, any confidential numerical figures concerning profits, costs and sales have been omitted of the paper. Before going to the mass public the thesis was submitted

to the company in order to guarantee that no sensitive data was reviled. Saab personnel do not influence the analyzing of the empirical findings, allowing the researcher to drawn conclusions on her own.

Chapter 3 Postmodern consumers and customization

This chapter provides a theoretical foundation for the current case study. With regard to the main purpose of the thesis, the perception of postmodern consumption and the concept of customization are discussed. The use of postmodern consumers' context has been to explain the emergence of the concept of customization in terms of growing individual demand and increased individualized products.

3.1 Postmodernism and postmodern consumers

3.1.1. Market development – from the era of modernity to the postmodern time

There is a misunderstanding among researchers about the exact end of modernity and the beginning of post-modernity time. Firat and Venkatesh (1995) point out that the post-modernity overlaps with the time period of late modernity. Indeed many of the trends related to postmodernism might have been found during modernity, however, as new trends they did not have conceptual acknowledgment. Generally modernity refers to the time period while modernism labeled the cultural and physiological conditions during this period.

In modernity the perception of the world is simplified to some categories such as subjects/objects, producer/consumer, male/female, i.e., the world is seen as either white or black, frequently given a positive meaning to the first categories and putting negative accents to the second (Firat and Venkatesh, 1995). Everything is to the highest degree rationalized, recognizing the existence of the only single truth. In that time, great attention is paid to materialism in terms of scientific and technological progress. All these conditions of modernism had been widespread in many aspects of life.

When it comes to market development, modernism had contributed to the rise of some fundamental movements that have been widely associated with it. During that time the main accent was on production rather than consumption.

Companies from that period were mostly product-oriented. They were manufacturing standard mass-produced commodities and after that, selling them to anonymous customers. The market situation was as follows: companies produced whatever goods they believed would be sellable in standard mode on large scales and after that sold them to customers (Schipper 2002).

In order to persuade thousands of consumers to buy their goods, marketers used the convincing power of advertisements. This period is characterized by the increase of the advertising business and intensive product promotions. The rationale for it is quite obvious: to sell so many standard products to a big gray mass of consumers requires an intensive and effective communication, and advertisements had filled this gap. However, this way of selling in a way forced consumers to buy not what they wanted but what they had been told to buy by advertisement. Marketers were mainly concentrated in making profits, leaving customers' voices unheard. In that sense some authors believe customers were controlled and seduced by marketers because they had no power to choose whatever they wanted (Holt, 2002). This situation in the market has been described by Firat and Venkatesh (1995, p.255) as "totalizing logic of the market". They also argue that customers in modernity were repressed and reluctant to express their identities.

However, with the emergence of postmodernism the misbalance of the market that was completely in favor of marketers was going to be changed. The postmodernism has come to existence not only as a criticism to most of the trends in modernism, but also as a fundamental new cultural, sociological, economical and philosophical movement (Firat and Venkatesh, 1995). Similarly, modernism has spread its influence in all spheres of people's life.

The rise of postmodernism has given a logical explanation to the major changes that have occurred in the market since 1990s. The main themes that were associated with it were the emergence of more and more customer-centric attitudes among marketers, seen as relationship marketing, as well as the growing demand for more individualized goods, the so-called customization. Another trend that has given rationalization with postmodernism is the fragmented and symbolic way of consumption. People do not see themselves as

a part of the mass; instead they have their own individual style and that is why they want to buy individual goods (Thompson et al. 1994). Furthermore, the modernistic description of the market as a particular place where customers and marketers meet sounds quite improper in postmodernism terms. It has been given a rather abstract and symbolic meaning in agreement with the philosophy of postmodernism (Kanter, 1992).

3.1.2. Postmodern consumers and the impact they have on companies' product offerings

Over the last few decades, the concepts of postmodernism and postmodern consumers have gained acceptance among marketing professionals. Most of the postmodernism proponents claim that we have gone into the new era of "individual" marketing in which heterogeneity and individualism are considered essential notions. This concept has been embraced in all aspects of society including the way of living, product consumption and personal relationship for example (Halliburton and Jones 1994).

The central theme in the concept of postmodernism is the idea that there are no universal truths, values and objective knowledge. Instead, various truths, styles and realities coexist. Consumers have the freedom to choose among various styles and fashions in order to build their own personal individuality. They create their own constellation of lifestyles, being less constrained by norms and standards. Another trend, which is strongly related to postmodernism, is the increasing appeal of the aesthetics of everyday life, i.e., the emphasis on the design and appearance of all commodities (Featherstone 1991).

Firat et al. (1993/1994) are among the major proponents of postmodernism. They describe postmodern consumers as liberated individualists who resist the imposed meanings and identities that marketers dictate through their brands and commodities. Since postmodern consumer "live in a world of contradictions of his/her own" (Firat et al. 1993/1994 p.260) they experience consumption as one way of personal development and self-creation. Therefore, postmodern consumers have a fragmented, noncommittal lifestyle in which the creation of self-identity is achieved through self- productive consumption.

Postmodern individuals create their identities by choosing how and what to consume. Purchasing different products provides them with the possibility to develop their interests and express their individuality and uniqueness. They are more likely to listen to their heart while doing their shopping instead of following what have been told by advertisements and brand managers (Schipper 2002). This skepticism of the competence of the marketers to influence their way of living is an increasing trend in the postmodern time.

In this new era, companies that dictate how people should live through their brands are losing their appeal. It does not mean that consumers will refuse to buy branded goods in any case. On the contrary, brands have not lost their important role in people daily life. However, people do not allow themselves to be compelled to live their life according to what companies dictate through their brands. Postmodern individualists independently create images that they want to express through consumption. Brands have become the premise through which people experience and express their own world (Holt, 2002).

Holt (2002) believes that the postmodern branding paradigm is based on the notion that brands will be more appealing if they are expressed as a cultural resource, i.e., as an important means to create "self" in a way that everyone individually chooses. In that sense, brands must be perceived as authentic. For a brand to be authentic, it must be seen as original and not related to any commercial parties that could benefit from its inherent value. To put it shortly, companies must let the consumer choose what he/she wants without being bossy and dictating prescribed tastes.

What is important in this line of thought is that it is not vital how managers perceive their brands or what message they believe is embedded in them. Instead, how consumers use brands in order to add meaning in their way of living is much more significant. Thus, the abstract meaning with which consumers perceive brands does not necessarily overlap with that imposed by brand managers. Since the imaginative reality that consumers create by choosing a particular brand often differs from that assumed by managers who

are in charge of brand management, it is difficult to capture consumers' attention (Fournier 1998).

Another challenge regarding brand management in the era of post modernity is the fragmented and disordered consumption. People are involved in multiple relationships with different brands yet do not commit themselves to any of them. "It is not to brands that consumers will be loyal, but to images and symbols, especially to images and symbols that they produce while they consume" (Firat and Venkatesh 1995, p.251). Since these images change all the time, loyalty to brands might be not easy achieved.

Sharing the same belief that brands' influence may weaken, Moynagh and Worsley (2001) argue that in order to keep customers loyal to their brands, companies should use special personalized product offers. Surely the most appreciated brands will be those that deliver a great number of tailored-made commodities and significant service. In other words, brands that nurture customers by inviting them to "take ownership of the brand", while providing them with an option to customize a product to their own preferences, will win more loyalty. Therefore the traditional approach that requires marketers to dictate how their brand should be perceived will be replaced with a new brand paradigm.

3.1.3. Postmodern way of consumption

The term **tailor-made society** is used by Moynagh and Worsley (2001) to describe a recent trend that characterized how consumers today want to have everything individualized to their own preferences. This kind of individualized offering has spread to many parts of people' lives – from products specially designed to meet individuals' desires to all kind of tailor-made services. As a result, consumers face more and more variety of products. This option of having so much choice allows them to get out of the standardized templates and find themselves by choosing goods that THEY believe are ideal for them. In that sense they do not want to be treated as part of the mass.

In the modern consumption, themes such as individualism, symbolism and self-creativity are undermined. In contrast, in the postmodern time people's daily life is structured around fantasies and dreams about consuming. The emphasis is on pleasure rather than on duties and obligations, and on the freedom of the individualists to build and express their own identities. Postmodern consumers create images of what they wish to be and what they want to experience by purchasing goods that they believe can deliver all these meanings. Thus, consumers are individualists, who follow "their own ends and are uncaring about others"(Keat et al. 1994, p.44).

Bauman (1988) agrees that consumption is the central activity in contemporary life, however, he argues that it is no longer an act of acquiring any material objects and direct by using of them. The postmodern consumption of any commodities no longer aims to satisfy material needs, but instead is a symbolic process of creating particular individual life-styles. Such consumption is based on images and life-styles and the meaning inherent in what consumers consume is build by their own perspective.

In that sense, it is vital for marketers to understand the concept of self-creation as well as how consumers attach symbolic meanings to the goods they purchase. In post modernity the formation of self is not a given; it is a process that people develop by themselves, mainly through consumption. Dittmar (1992) argues that material commodities, which people purchase, have a significant symbolic meaning for their identities. They are a basic means for expressing ourselves and perceiving the identity of others. Every individual, when experiencing consumption, either consciously or unconsciously, attaches symbolic meanings to his/her material possessions. These symbolic meanings are considered as extended selves since they have developed from the self. They can articulate part of one's individuality and show the desirable position that one wants to have in society as well as express a desired kind of relationship with the others. It might also be used as a way for self-completion (Elliott et al. 1995).

As already mentioned, contemporary consumption is basically about meanings and symbols, where marketers try to exert control over them. The relationship

between producers and consumers no longer concerns only prices and productions, but also stresses the commodification of different meanings. For instance, marketers try to incorporate various meanings and images in their goods and then try to sell them to the customers. On the other hand, consumers are likely to give their own meanings to the commodities they purchase (Holt, 2002). In this conflict between marketers and consumers, consumers are getting more and more power within the relationship. They are not passive in a way that allows marketers to force them to attach particular meanings to the consummated objects (Keat et al. 1994).

It is believed that specific meanings can be attached to particular goods by active manipulations through advertising. However, contemporary consumers are fully aware that they are subjects of all these marketing tools and are more likely to resist them. Even more, they have become more skillful readers of different advertising, recognizing different commercials as a mean for imposing various meanings no commodities. They do not want to be told how their lives should be organized.

In this new environment, the dominant role of the marketers is starting to weaken (Holt, 2002). The increasing choice and diverse styles of consumption will allow postmodern individualists to threaten the marketer dominance. Today people are more demanding and much harder to satisfy. Even though they have never been completely powerless, the balance of power is shifting in their favor, allowing them eventually to liberate themselves from the dominance of the market institution (Firat and Venkatesh 1995).

Even if the postmodernism is the future, the traditional or modern consumer values are not extinguished. There is no doubt that symbols and images are becoming more important in the act of consumption. However conventional values still have their competence. In that sense, what still is unclear in the postmodern consumption theory is the social process by which commodities are given particular meanings. It is almost impossible for the same group of products to bear the same meanings. On the contrary, normally, different brands within the same industry incorporate various meanings in their products. For instance, both Mercedes and Saab are automobile brands; however, they

communicate entirely different meanings to the consumers. The first follows a traditional outlook, while the second pursues a postmodern outlook.

Furthermore, it cannot be said that everybody who consumes the same product bought them for the identical symbolic meaning. People might capture just a particular part of the message communicated by marketers and interpret it differently from the others. In addition, since the process of self-creation is complex, consumers may experience many different identities. So, the obvious questions are how do these various identities co-exist and how does each of them develop?

Another aspect related to the contemporary development of consumption that has not been brought into the discussion yet but which I see as a growing concern, is the power consumers are getting over marketers. Even if Firat and Venkatesh (1995) define it as liberated and emancipate consumption I believe it might have quite negative implications for companies. Today's customers are over-demanding, calculating and to a higher degree, capricious. They also are aware of their growing power over marketers and by all means are going to take advantage of this situation. On the other hand, marketers are struggling to satisfy their wishes even if it might cost them a lot. So roles have been changed with consumers dictating and marketers cautiously listening and after that performing. *I wonder how far this will go.* I see the threat of so many companies going out of business just because they have tried cautiously to follow consumers' dreams.

3.1. Customization Concept

All the changes in consumers' behavior with regard to postmodern values have forced marketers to rethink the way commodities are brought to customers. Certainty this could lead later to different ways of performing their marketing business.

3.2.1 Mass customization versus individual customization

More recently there has been a move to greater product individualization in a wide variety of industries. To become customer driven, many companies have

recognized the need for customization of their goods or services in order to meet the diverse customer needs. They have invested in sophisticated facilities, flexible processes and IT technology to provide unique value to their customers individually. While this way of offering products is resource-intensive and costly, the value-added is usually high enough to allow a premium price to be charged.

The essence of the customization theory is a customer-centered orientation in developing, manufacturing and marketing of products. Therefore customer interaction is considered the most essential part of the whole process. It is related to the one-to-one marketing, which means treating each customer individually and building products based on what customers tell you. An active collaboration with customers provides companies with an opportunity to know them better and to learn more about their preferences and needs. Thus, they are more able to adequately answer to their desires and provide exactly what they need (Peppers et al. 1999).

I believe there are two different perspectives from which the concept of customization could be described. These two perceptions are: 1) employing the concept on a mass basis, the so-called "mass customization" and 2) performing customization as an individual (particular) case, i.e., utilizing the concept on a small scale. These two perspectives, even if deriving from the same notion of providing customers with individually shaped products, have completely different implications for organization trying to implement them. Therefore I believe they have to be looked at independently. Contemporary literature concerning the concept, however, has analyzed the concept without explicit differentiation between these two perspectives, giving much more emphasis to the mass customization, neglecting the possibility of performing the concept as a separate case. There has been significantly little research into individual product customization.

Mass customization has become a buzzword among researchers and practitioners. According to Pine (1993) one of the experts on the subject, mass customization means to develop, manufacture and distribute such a wide range of product assortment that almost everyone can find whatever they want, at

quite affordable prices. Pine's definition sounds a little bit illusionary and more theoretical rather than practical. It could be seen as a goal that companies might follow, even if barely achievable. Other authors, such as Hart (1995) however, give a much more realistic definition. Hart defines mass customization as the ability of a company to use flexible processes and advanced information technology in order to produce and deliver a great variety of individually designed products at prices similar to the standard goods, manufacturing on a mass basis. Hart (1995) explains further that he refers to a particular class of products and these products are defined by a number of possible alternatives. So it is neither for all products that the mass customization might be employed nor for each product attribute.

In the center of the theory of mass customization is the idea of combining the advantages of mass production, that, is the economies of scale, together with customization. To put it shortly, mass customization allows individual consumers to get goods or services that fit their personal tastes, as fast as mass-produced commodities and at reasonably low prices. To achieve it, flexible manufacturing processes and new information technology should be implemented. While in mass production the purpose is to deliver standardized products that will fit all consumers' preferences in a long run mode, mass customization is organized in a way that provides goods customized to individual needs in a short manufacturing cycle (Anderson-Cornnell et al. 2002). Customers' wishes are taken as a basis for product development and subsequent on manufacturing.

There have been a lot of examples coming from different companies employing customization on a mass basis. Motorola and Dell Company are among the proven successes of mass customization. Dell's customers, over the phone or via Internet, customize computers to their personal choices by selecting from a hundreds of components. Providing that the money for the computer is in hand the company begins to configure it. Thus, inventory of finished-goods is kept to a minimum, while the amount of different components is increased. By establishing flexible and agile manufacturing as well as optimization of activities across the value chain Dell Company has become leader in the market (Special Report, Economist, 2001).

However, the history of mass customization remembers not so positive examples of companies employing the concept on a large scale. Toyota Motor Company became the benchmark for excellent quality and low cost in the automotive industry. The same cannot be said for its experience with mass customization. Even if at the beginning, the payoffs seemed to be very promising, but after more than a year the company had to abandon the idea of being mass customizer. What happened was that by expanding the degree of customization, model variants increased and production expenses increased significantly. As the result of increased variety, dealers were forced to keep more inventories. After a detailed analysis it was estimated that 20% of the current product of Toyota's assortment accounted for 80% of the sales; hence this strategy was rethought and the customization options reduced (Pine et al. 1993). Marketing analysts point out different reasons for Toyota's failure with mass customization, but whatever happened it should be a warning light for each company intending to adopt mass customization.

While the emphasis of the literature regarding customization has been on performing mass customization almost no attention have been paid to companies, which have gone toward increasing customization. In other words cases in which customized products have been offered to a few customers have not been covered from the contemporary concept development. These situations, however, are not rare for many companies. For instance, due to the increased demand for individual goods many enterprises have moved towards offering more customization but they have considered that it is not good business to implement the concept on the large scale. To have an option for product customization is beneficial, but is it necessary to provide the mass market with individually shaped products if there is no proved mass interest?

Obviously, there is a significant difference that needs to be considered between the mass customization and customization implemented for special (individual) occasions. In the table 1 I have made a comparison between both ways for implementing the concept. The data about mass customization have been a result of literature review. However, due to the scarce literature about

individual cases of customization, the data presented in the table are based on my own understanding and elaboration of the concept.

	Mass Customization (MC)	**Individual Customization (IC)**
Potential audience	Mass market	Special segment of the market
Price	Similar to standard produced products	Premium - from low to high premium, depending on the level of customization
Product variety	Wide range of variety	Depending on what is required
Volumes	High	Low
Time to delivery	Fast, in few days	Slow, it may take months
Manufacturing	Assemble-to-order	Build-to-order or Engineer-to-order
Manufacturing mode	Mass basis	Only if there is an order
Type of customization	▪ Products assembled to customer requirements ▪ Options selected from a predefined list of options	▪ Unique options or optional options ▪ Design-involved changes

Table 1: Comparison of mass customization and individual customization

Opposed to many authors, e.g. Silveira et al. 2001; Alford et al. 2000; Pine et al. 1993; Hart, 1995, who are enthusiastic about mass customization, I do not believe it is a concept suitable for all companies in all industries. As Zapkin (2001) argues, mass customization has its limitation when it comes to putting it into practice. The objections to the universal application of the concept of mass customization are the following:

1. There is no proved mass interest in customized products. If there is a demand from a certain segment of the market it does not show enough potential for offering individual goods on a large scale.
2. Not all products have the same customization appeal. Consider the need for salt, sugar, paper or water. These kinds of products do not require

customization and most importantly customers are not inclined to individualize them. It is a misconception to believe that all products are going to be sold in bigger quantities just because they are customized.

3. Not all industries and manufacturing processes are flexible enough to provide mass customization (Zapkin, 2001).
4. Frequently offering wide ranges of product variety complicates customers' decision for purchasing (Huffman and Kahn, 1998). Customers might feel frustration and even buy nothing if they have to screen a great number of products in order to get what they want.
5. The contemporary level of technology development is possible to provide customized products on a mass basis, at significantly low prices just for a few attributes of only a few particular commodities (Zapkin, 2001).
6. To employ mass customization requires a lot of investment in technology and flexible manufacturing, which might turn out to be very costly.

In order to place emphasis on a significant difference between mass and individual customization I have made the following definition of individual customization implemented on a small scale:

Individual customization provides a demanding segment of individual consumers with products or options of products tailored/created to their particular requirements, manufacturing on a build-to-order or engineer-to-order approach and sold at a premium price.

This definition identifies and differentiates individual customization as a different concept within customization theory. It emphasizes a different approach used in both conceptions. While mass customization requires a significant investment in flexible production, implementing customization as an individual case might not need so much investment. Due to the fact that it is performed on a small scale, some parts of the manufacturing might be accommodated on the present production systems and the rest might be fixed in a separate workshop.

To produce this kind of products on a large scale is inefficient and unreasonable. Depending on how much customization has been performed, the

price of the product might vary. One reason for price increase to occur is the manufacturing process has not evolved into mass customized. Therefore the production costs might increase without it being possible to compensate them with flexible manufacturing on a large scale. However, the practice has proved that customers are willing to pay a premium as long as they get whatever they want. Moreover, the higher the prices, the bigger the association the customers are likely to put on quality.

In addition most of the literature regarding customization considers it a new paradigm that will definitely replace the "obsolete" mass production strategy (Pine, 1993). Mass customization has been seen as the inevitable successor over the traditional mass manufacturing. Furthermore, mass production is characterized as completely inconsistent with customization in terms of manufacturing process, customer relationships and organizational capabilities. Organizations that have performed customized manufacturing are described as flexible, reactive, fully responsive to customer needs as well as having an undisputable advantage over the companies with standard mass production.

Indeed, these two concepts can be combined and utilized together while benefiting one another. In his case study of the National Industrial Bicycle Company of Japan, Kotha (1996) illustrates how the company successfully accommodates these two different approaches. In this case the firm targets simultaneously two distinct groups of customers, a mass-market segment by mass production and a smaller segment through customized manufacturing. He concludes that it is not an either/or proposition, but a matter of efficient integration of both strategies.

No doubt the increasing demand for individualized products as well as the recent changes in the economic environment favor the expansion of the customization concept. However, is it the best strategy companies should follow? Although the enthusiasm for promoting customization among both researchers and practitioners is increasing, some authors are cautious in their views about the concept. Huffman and Kahn (1998) argue that customization strategy does not always lead to competitive advantage. By providing customers with a large variety, customization might bring complexity and

dissatisfy potential customers in their purchasing process. Zapkin (2001) warns that customization has its limits and before implementation it is important that a careful analysis of the business potential and market demand be made. Even though the concept might be applicable to some industries and products such as apparel, it does not mean that it will work for everybody. The main prerequisite that would secure efficient concept application is to define the appropriate level of product customization in terms of consumer preferences and company's ability to offer it.

3.2.2 Levels of customization

The basic idea behind customization is to provide customers with a choice to modify or create a product according to their individual preferences. The extent to which customers can be involved in the process of customization differs. Some companies offer part customization, i.e., retaining standard production and only changing different modules later in the manufacturing process. In doing so they have made some trade-offs on the degree of uniqueness they are prepared to offer, preferring to provide individualized products instead of truly unique ones. Whereas others let customers extensively modify a product's core design, thus creating their completely unique products.

Lampel and Mintzberg (1996) identify five distinct types of manufacturing strategies that include different degrees of customization along the process from design to delivery (see figure 3). These are pure standardization, segmented standardization, customized standardization, tailored customization and pure customization. In addition they link these strategies to products that also vary in their degree of customization.

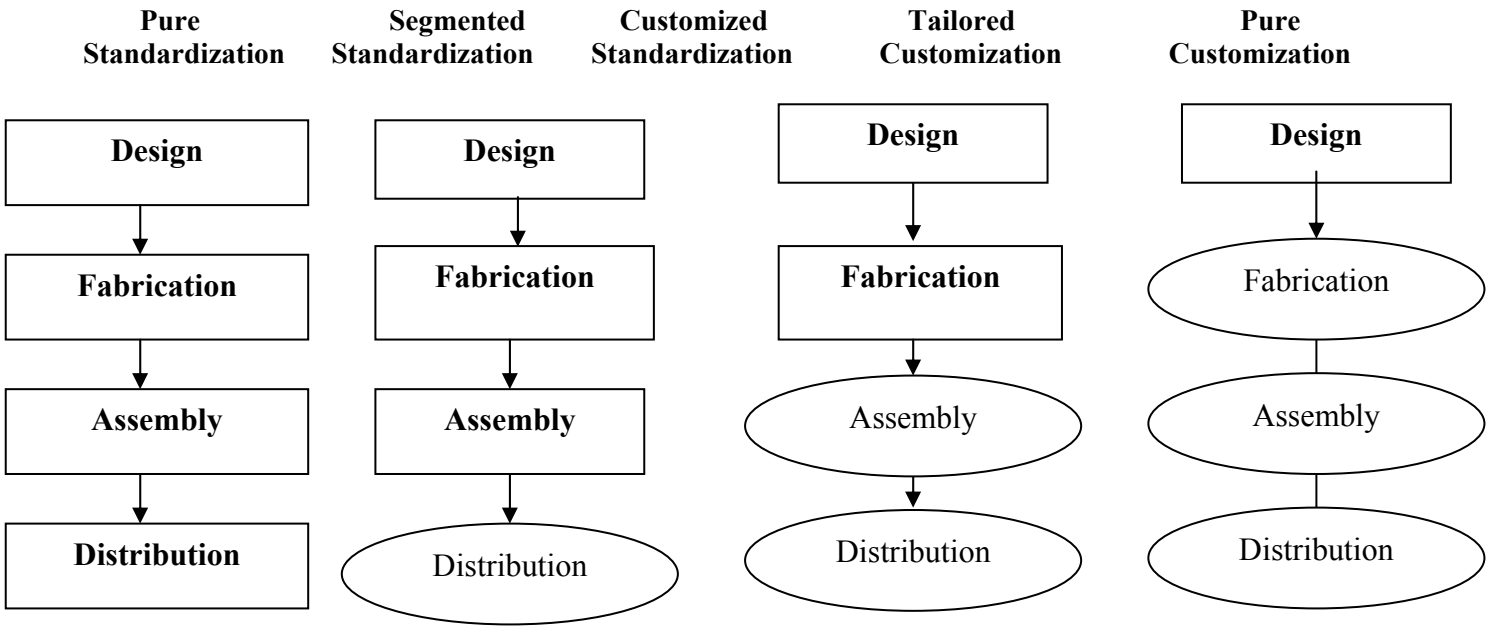


Figure 3: A Continuum of Strategies (Lampel and Mintzberg, 1996, p.24)

Pure standardization is based on a dominant design offered to a large group of customers. In that sense buyers have no options to choose; either they have to adapt to the offered product or switch to another. Under this strategy customers are treated as a homogeneous group with similar preferences. This strategy known also as mass production was a dominant paradigm and still is in some industries.

Segmented standardization takes place when companies target different segments of the market but within each segment the goods offered remain the same. Thus the production is standardized within a small range of attributes. The core design is modified in order to meet the needs of different segments; however this modification is not due to the request of individual consumers. As a result the individual preferences are forecasted but not directly investigated. Many companies in the telecommunication business, for instance, offer distinct mobiles with various options such as digital camera, radio set and dictophone in order to target different segments of the market. However, all the proliferation of these models is not initiated because of customer demand. Thus, individual tastes and needs are predicted but not investigated.

Customized standardization allows customers to individualize a product by ordering from a list of predefined standardized components. In other words, fabrication of the products is standardized while assemble process is customized. Following these strategies, companies let their customers choose their own configuration out of the available number of options whereas the core design of the product is still standardized. Customized standardization is a preferable approach for customization in the automotive industry. Automobile companies often structure their product offer in a way that gives freedom to buyers to select their own set of desired components yet customers are not overwhelmed by a vast array of options.

Under **Tailored customization** a product prototype is displayed to potential customers and then adjusted to their needs. In that case customization is implemented backward in the fabrication process but not in the design phase. Here customers are not restricted in terms of available options or components. Providing that the design is kept the same, any other modifications are possible. Tailors usually use this kind of customization on a daily basis. They present a standard model of apparel to a customer and later on tailor it to fit to their client.

The last strategy proposed by Lampel and Mintzberg is **pure customization**. Companies that have embraced pure customization involve customer interaction deeply in the design stage. Customers can change completely the basic design of the product in order to customize it according to their preferences and make it truly individual. During the process, buyers and customers are involved in active interaction in order to fulfill their mutual needs. An architect, who designs a building following individual specification, might be considered pure customization.

There seems to be a lack of mutual agreement among researchers about the general classification of levels of customization. Different authors propose different categories. However, after a closer look at them, I have come to the conclusion that all these different types of customization are alike. Regardless of the fact that these different authors have used distinct names to give a comprehensive classification of customization categories, common patterns

regarding their classifications might be identified. In table 2 I have summarized the work of some of the most prominent authors in this area.

Lampel & Mintzberg, 1996	Gilmore & Pine, 1997	Fisher et al. 1995	Spring & Dalrymple, 2000
Pure standardization	Adaptive customization	Standard, no options	Catalogue
Segmented standardization	Cosmetic Customization		Catalogue
Customized standardization	Transparent customization	Package options	Custom-build
Tailored customization		Stand-alone options	Custom-build
Pure customization	Collaborative Customization		Custom-designed

Table 2. Customization classifications

Even though most of the authors state that these different types of customization are not compatible with one another, practice has proved them wrong. In most of the cases, companies utilize a combination of these different categories of individualization when designing or redesigning their production or processes. In doing so, they can target different groups of consumers and get benefits from that.

In order to decide what degree of customization to fulfill, managers, have to know what kind of customization their customers want. This issue is of a great concern because marketers should define not only the required level of customization but also if it is possible. People might not be willing to customize everything. Even though their preferences for certain features of the product might be strongly individually, there are other product attributes that can be standardized and still keep customer interest in them (Zapkin 2001).

Customer sensitivity in terms of customization depends on the nature of their needs and on the sacrifices they are ready to make in order to get a product matched to their individual requirements (Hart 1995). Not all commodities put up with the same level of customization. Consider for instance the customer needs for water and mobiles. Although there are some different kinds of water

we can presume that just one kind fulfills the basic demand for water. In that case, customers are not interested in having more customization. By contrast each customer has individual needs when it comes to mobile phones or personal computers and therefore most of them will be pleased to personalize them precisely to their needs.

Another factor that defines the customization sensitivity is the sacrifice customers are willing to make. In most cases, customization is accomplished at the expense of premium prices, long lead time and other inconveniences. In other words before adapting customization it is essential to define how much sacrifice customers of particular type of products will make. For example, most of the customers, when asked if they want to individualize their vehicles, showed interest in this option at just, but later on, when they heard what is the price for it, were more likely to reject the offer (Saab dealers' interviews).

Providing customers with a great variety of options for product customization might not always be the right decision. Sometimes this strategy may turn to be extremely expensive and most importantly not appreciated by customers. While a customer want to have the freedom of choice, they also might feel confused when variety is big. One example comes from Nissan, Japanese automobile producer, that tried to offer pure customization for its vehicles by saying that it could produce "any volume, anywhere, anytime, of anything for anybody" (Pine et al. 1993). However, it turned out that customers were not in favor of having eighty-seven different types of steering wheels. Thus the company had to abandon this strategy (Pine et al. 1993).

Exploring the subject of customization, Spring and Dalrymple (2000) have identified four potential roles of customization, which are:

1. In a very concentrated market, customization does not allow competitors to acquire certain customers. In that sense customization is used as an **entry barrier**. Even if the individualized product or service might be considered unprofitable it can prevent some customers for switching to other suppliers.

2. Furthermore, customization may be seen as a **symbol** of the business. This implies customization as means to enhance brand identity and its communication to the target audience. In that case customization might have a long-term positive impact on the business.
3. Applying customization as a **vehicle of learning** means that an organization may be involved in new activities that will develop new technological capabilities.
4. Finally, individualization of the products is fulfilled just because it has a potential to provide **higher profit** by charging considerably higher prices per custom product compared to the standard production or service.

In summary, there is no one ideal way to define the appropriate level of customization. It is a comprehensive problem that involves many other additional issues such as customer tolerance for individualization, a company's readiness to implement it and the market situation. So it is difficult to set up a certain type of customization for all products. Besides each organization has its unique way of fulfilling business and thus any prescribed recipe of applying the concept just because many other companies have already done it might be misleading and lead to a damage.

3.2.3 Process and Production issues

Companies that have implemented the concept of customization organize their manufacturing process in many different ways. However, the literature regarding customized manufacturing classifies them into three major categories (Bertrand et al., 1990, New and Szwejczewski, 1994). In the first group are those manufacturers who assemble-to-order (ATO) their final products. Standard parts and various modules of the product are assembled in different variants in order to meet as much as possible individual customer needs. The essential manufacturing process is kept pretty standard while the assembly of the final product is personalized. Usually the placement of an order initiates the assembly of a particular product. When pursuing this manufacturing strategy, the degree of customization is considerably low, i.e., it is a standardized customization.

The second category includes companies that make-to-order their products (MTO). Basically the whole manufacturing process starts as soon as the order for a custom product is placed. It may initiate even procurement of particular components that are not usually kept in store. The tailored customization is performed with this manufacturing strategy. The modification of the existing design is in terms of size, capacity and some small adjustments in order to meet different specifications. The third group consists of engineer-to-order (ETO) manufacturers. These are companies that pursue the greatest degree of personalization, e.g., pure customization. Thus, the production of these products requires a unique engineering process or distinctive design that has not been performed before. The way the purely customized products are produced alters the entire supply chain from engineering to delivery.

This classification of the customized manufacturing companies covers the major production strategies when it comes to custom products but is not detailed enough to include all possible manufacturing variants. There might be companies that do not belong to any of these categories and others that can be classified as make-to-order producers, even though they deliver standard but expensive products, therefore not manufacturing them in the make-to-stock approach. Furthermore, many companies might be recognized as using more than one of those manufacturing strategies. For instance, the majority of the contemporary enterprises together with standard make-to-stock commodities also offer make-to-order customized products.

Indeed, the concept of customization requires a sufficient investment in technology and flexible operational processes. Furthermore, the availability of different options for customizations, even though customer driven must be compatible with manufacturing capabilities. The most essential question concerning customization, according to Spring and Dalrymple (2000), is whether it involves a custom-design change. If so, then, it reorganizes the manufacturing procedure fundamentally.

Furthermore, it is very important to explore how much design and special production activities are needed. In the case of custom-assembling

individualization, the process can be much more easily accomplished. However, there is still a need for analyzing the options, if they can be substituted with others, and whether the products can be customized, i.e., separate units that may be assembled into various forms (Silveira et al. 2001). All these issues are essential, not only for process implications, but also for production planning and materials procurement.

In any discussion of customization it is vital to stress the importance of the process technology needed for its implementation. In this respect it is necessary to find out if the existing processes and capabilities may incorporate these new activities. What will be the impact of the customization on the whole business? What investments are needed? What will be the costs? Besides, it is vital to define at what stage of the manufacturing the customization will be fulfilled. As a general rule, the earlier it is done, the more flexible the system must be to accommodate it. Does the time for implementation require more inventories or it is a build-to-order product? How has the distribution been affected by the customization (Hart, 1995)?

In general, the process of customization needs to include other parties outside the organization. However usually, the more parties involved in the process, the greater the possibility for obstacles. For instance, if an automotive company decides to expand its product offer by providing its customer with more choice of interior trims it will certainly need to alter not only the assembly process in the factory but also to redefine the interaction with the supplier of the interior trims. In case of the inability of the current suppliers to provide the necessary fabrics or materials, the automobile manufacturer has to switch to another one (Gordon 1998).

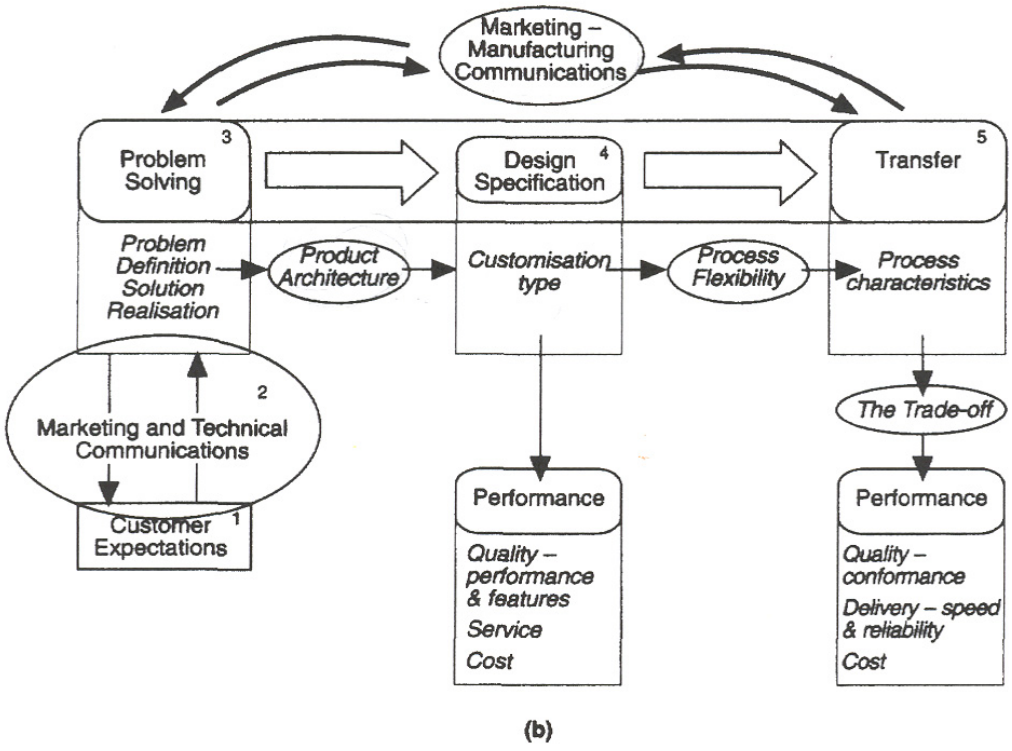


Figure 4: The extended model of product customization, (Spring and Dalrymple, 2000, p.449)

In figure 4 a model of product customization is proposed by Spring and Dalrymple (2000) as a framework that shows the relationship between customization and implementation procedures. The process starts with an order placed by a customer. The initial interaction between customer and sales personnel is fundamental for the forthcoming project. It would define what kind of expertise might be needed for the further problem-definition stage. Depending on how much custom work is required, different professionals will be involved in that phase.

As long as customer requirements have been identified the process moves to the second stage, where the intended type of customization is analyzed. The course of action is considered and the possible costs of manufacturing discussed. In the third stage the process characteristics are addressed. The trade-offs concerning performance, quality, delivery time and reliability are finally considered. During the entire process there is an intensive flow of information among people in the production, designers, marketers and customers.

The customization framework in figure 4 is one that will not work in every case of customization. I believe it is mainly applicable for companies that take their first steps in the customization area and thus the fundamental process is not in place. It is also for those that aim to a harder degree of customization and hence the problem solving requires active participation of the potential customer. In other cases when customization is achieved without changing the core design some of the steps of this model might be unnecessary. I consider this model to be more suitable for companies aiming to fulfill individual type of customization.

Lastly, it is reasonable to take into consideration whether the manufacturing of custom products is initiated by individual order or if it is based on a temporary mutual agreement between producer and customer (a kind of contract). These two alternatives bring different implications for defining the type of customization as well as for the manufacturing process. In the first type of ordering, the manufacturer takes each case as unique and entirely independent from the others. This means that every order initiates a completely distinct procedure no matter its nature. The second kind of ordering is conducted on a regular basis, i.e., as a repeated mode. Even if at the initial customer decision, the manufacturing process might have been customized; with the repetition of identical orders it turns into more or less standard manufacturing.

In order to find out how to create a postmodern individual product offer I have examined both the context of postmodern consumers and customization concept. I argue that these two have a rational connection. Probably it is worth asking which of them has emerged earlier. As I see it from my theoretical review, first was the emergence of the increased demand for individually shaped products as a central theme in consumption. This has been logically explained later on within the context of postmodern consumers. To respond to this trend, marketers started to offer more options for product customization. As a result this trend sets up the beginning of the theory of product customization as a major movement from marketers' side. Therefore it was the perspective of postmodern consumers that has called for the emergence of the customization concept.

Postmodern consumers belong to the segment of the market, which requires unique treatment and consideration. Such consumers want to be set apart from others, and that is why they want to consume products especially created for them. To assume that each contemporary customer demands unique or distinctive products might sound exaggerated. A mass customer, even if willing to customize, is quite satisfied to tailor a product from a defined list of alternatives. However, the same cannot be said for postmodern consumers. And that is what makes them ideal consumers of products created in an individually customization approach. Even if the supporters of the postmodernism describe the appeal of customization as having a mass interest, I do believe that this trend has not gain mass recognition. Therefore, postmodern consumers must be differentiated from the other consumers and be treated differently. They are those who require a higher level of customization.

On the other side of the relationship are the marketers who are trying to satisfy customer wishes. They have recognized the new movement in consumption and in order to be consistent with it, they have reorganized their product offerings to meet customer expectations. Probably the most common mistake recently has been to neglect the postmodern segment of the market, i.e., those customers who want a higher level of customization. However, one thing must be borne in mind, is that, postmodern consumers, even if a small segment of the market compared to the mass consumers, are always ready to pay premium, so why should ignore them?

Finally, even though I support the notion of delivering to customers more individual commodities, looking to the near future I argue that this trend may have a negative influence on marketers. What I mean is that in the contemporary situation consumers dictate and marketers perform. However, although it works today, in the future things might take different direction. Customers are becoming very over-demanding, are much more capricious and have higher expectations. On the other hand, marketers will try to meet their expectations and yet the development of technology might not allow them to deliver everything customers want. So marketers would be in a losing situation, struggling to find out efficient ways for customer satisfaction. Therefore the

challenge is to nurture your customers in a way that provides them with what they demand yet not promise impossible things.

In the next chapter I will direct the course of the study to the practical side of the problem areas in order to find out what implications the problems and questions existing in theories might have in the real case of Saab Automobile AB.

Chapter 4 Saab case

This chapter presents the basic findings of the case study. It starts with a detailed overview of the automotive industry. Afterwards a comprehensive profile of Saab customers and their preferences is provided. Then the potential scenario of customization process is presented. The chapter ends with reflections on Saab Individual Product Offer and recommendation regarding its implementation.

4.1. Industry overview

This section of the thesis is used to makes the reader familiar with some characteristics of the automotive industry. More specifically, it explains how companies in the industry have structured their product offers. Readers will have a better understanding of the problem area, which is the subject of the paper, as well as have a smooth transfer from the theoretical discussion to the case study of Saab Automobile AB.

Figure 5 presents the way the automobile companies have structured their product offer. Usually a common platform is shared to manufacture various models, for instance Saab 9-3 or Saab 9-5, and different body styles (sedan, wagon, coupe, convertible). Using the same platform allows auto manufacturers to maximize the number of common parts in various models, while still keeping different styling features that are attractive to customers. One popular approach for car offerings in the automotive industry is to deliver the car in different trim levels in terms of aesthetics or equipment options. Furthermore, all car makers offer single and package options such as cruise control, special seats or sport, luxury packages which may be selected from an option list and added to the standard equipment of the car.

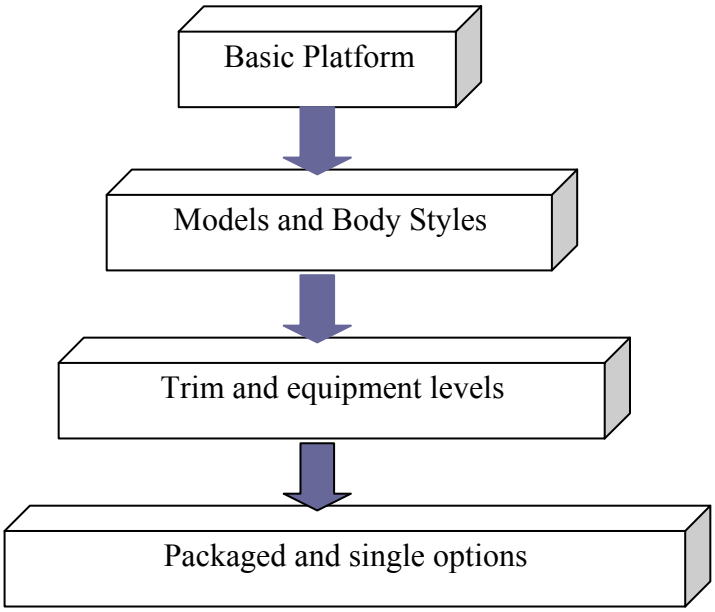


Figure 5: Product offer in the automotive business

Product assortment in the automotive industry may also be categorized as **fundamental,** which includes different body styles or models and **peripheral** which includes different equipment options (Fisher et al. 1995).

One approach that has gained recognition for structuring the automobile product offer is to offer one model in different trim levels. In this case, each trim level consists of predetermined, mainly aesthetic, options that express a specific element of the car design. The main accent is on interior upholstery, decor insert and exterior colour. The names and numbers of these trim levels vary among car makers, but the logic behind them is almost the same. Some companies such as Mercedes-Benz and Saab, designate the trim levels on a visible place in the car, while others do not designate them explicitly. Other automobile manufacturers, such as Volvo Cars use equipment trim levels that contain not only aesthetic options and other various equipments in order to differentiate their vehicles. (Comfort and *Premium* Volvo equipment trims)

Offering one model in different trim levels provides opportunities for targeting customers with distinct preferences while simultaneously reducing the variables. This product offer facilitates the process of purchasing a car since customers do not spend a lot of time in selecting among a great variety of options since the company has already configured them. However, with this offer, sometimes customers might feel limited in selecting exactly the

equipment they want because the availability of options is strongly restricted to the selected trim levels.

Another way for differentiating the automobile product offer according to the optional equipment is by using an engine as a base for equipment selection. BMW and Audi car makers have implemented this approach. Basically, there is almost a free flow of options and their availability depends on the engine the customer chooses. In general, the more powerful engine, the great variety of options. This kind of offering contains a high level of option content, with customers being given wide latitude in custom-ordering combinations among various equipments, although customer stress and confusion may result, due to the great variety of options.

In addition to the standard equipment, all automobile manufacturers offer different option packages – sport pack, security pack, luxury pack for example. They are combinations of several related options that stress a special character of a car. A sport pack may include alloy wheels, lowered chassis and advance suspension that give a car a dynamic and sporty look. The same car with luxury pack might have elegant and extravagant appeal.

Japanese, European and U.S. auto manufacturers have embraced different strategies to organize their product offering. The Japanese companies usually provide customers with more a fundamental variety, offering various models and body styles. On the other hand, American auto producers typically compete on a peripheral level with an enormous amount of single options (Fisher et al. 1995). At the same time, European car makers use different models to target the U.S. and European markets. They offer a number of peripheral options in Europe while providing a very limited optional choice in U.S. The reason for this is the long lead-time, up to three months, for an ordered car to get to the dealership in the U.S.

All these various types of product offerings allow customers in general to customize their vehicles by selecting from a predetermined number of options, which if not existing on stock cars are available in the catalogue. For example,

most auto manufacturers allow customers to select whatever colour they want, providing that it matches the palette of colours presented by their designers.

However, recently some premium automobile brands manufacturers have recognized the wisdom of providing more choice for customers to personalize cars according to their individual preferences. These manufacturers have concentrated their efforts on providing more aesthetics for automobiles in terms of colours, fabrics, décor and alloy wheels. Their customers can order aesthetic options that are not available under the regular options list. Generally these kinds of offers are run as separate programs, attached to the core company product structure. The goal of these custom-designed VIP offers are to target a few premium customers who want to have something special and are willing to pay extra for it. Car makers that have already benefited from this kind of customized offer are Mercedes-Benz with its "Designo" program and BMW with its "BMW Individual", which are described below.

The "Designo" program of Mercedes-Benz targets customers who want to give their Mercedes an individual look that suits their personal wishes. It offers a selection of four different types of paint finishes, exclusive fabrics for upholstery and unique trim parts. The motto of the program is: "Create your dream Mercedes; individuality straight from the factory" (www.mercedes-benz.com).

"BMW Individual" is a similar program that allows customers to define their own style with trims. It offers an opportunity for further vehicle customization. The content of the program consists of 16 exclusive exterior colours, special wood décor, 19 types of exclusive leather and 8 types of exquisite alcantara all of them unavailable in the core offer of the company. The title of the program is "A car as unique as the owner". The prices for all these options are significantly higher compared to the standard options in the core programs of the carmakers. For instance, BMW customers who are not satisfied with the variety of the core product offer may switch to the "BMW Individual". In doing so they will be charged three times more for exclusive paint finish or three and a half times more for the unique upholstery (www.BMW.com).

4.2. Saab core product offer

Saab product core offering consists of four different models: Saab 9-3 Sport Sedan, Saab 9-3 Convertible, Saab 9-5 Sedan and Saab 9-5 Wagon. All models are offered with four designated trim levels: Linear, Arc, Vector and Aero.

Figure 6: Saab models

Generally these four trims are available for all engines. The basic idea behind this product strategy is to express, with each form, a specific element of Saab design and interiors that are representative of the Saab brand. The primary intention is to create more individual choice for customers and allow them to choose the Saab model they wish. In addition, there are a few option packages that allow some degree of personalization. At the same time they are also a hindrance to car customization because if customers want to add a particular option to the standard Saab, for instance, leather upholstery, customer has to buy the entire higher priced trim level that has leather upholstery, instead of just adding that particular option.

The Saab variety of the peripheral (single) options is also limited, according to the particular trim level. When it comes, for example, to colours, customers can choose only among ten exterior colours, compared to 15 offered by Mercedes and 16 by Audi. Besides, customers are limited in the selections of interior upholstery and décor.

Saab Automobile AB employs different strategies for Europe and the U.S. In Europe Saab customers have more freedom to specify options on their cars compared to customers in the U.S. The main reason is the long lead-time to get a car from the factory in Europe to the U.S. Therefore U.S. dealers prefer to keep a certain amount of cars specified by them in store and offer a limited

selection of options to the customers. Another difference is that in the U.S. the four trim levels are linked to the engines.

4.3. Saab Individual Product Offer – Saab Exclusive

The preliminary content of the Saab Individual program consists of:

- More unique exterior colours and also different types of paints.
- Interior upholstery of exclusive leather and other extraordinary fabrics. For instance, crafted exquisite anniline leather seats or upholstery that matches the exterior mouldings
- For décor inserts various unique materials, such as satin metal or wood trims that suit Saab style are included.
- The roof of the convertible will be offered in more colours as well as the option to have the roof matched to the body of the car is being considered.

To facilitate the process of purchasing, Saab designers have proposed several pre-defined combinations of different colours and material matched packages. The preliminary proposal of Saab individual program is based on Saab 9-3 Convertible although, if approved, it would be rolled out on the entire Saab range. The program is implemented only for customer ordered cars. The main accent of the program is more individualization in terms of aesthetic interior and exterior options, i.e., customization regarding trim levels.

All of the options in the Saab Individual are not offered under the core Saab offer. At the initial stage of the program, the variety of options may be limited. The intention is to expand the range of options later on and even to offer unique aesthetic options that might be built exactly to customer requirements. In other words, the program will be built step by step. The target audience is Saab customers as well as all premium buyers. These will be the most affluent customers (premium of the premium). The preliminary analysis shows that customized Saabs will account for one or two per cent of total Saab sales. The prices for the options offered under the Saab individual program are

considerably higher than the prices for the same but standard options in the core program.

4.4. Saab customers

The European market can be grouped into 12 socio-cultural clusters regarding the transnational consumer culture. The objective of this market segmentation is to map and group similar consumers' behavior. In doing so, common purchasing patterns can be identified and potential buyers of a particular brand recognized. According to this classification the Saab target audience is identified in a **postmodern** segment (Sensor Study, Sigma 2001). The main focus of the company is on individual drivers who reject mainstream trends, conventions and status symbols.

Saab can be considered a niche and low volume premium brand. Together with BMW, Audi, Mercedes and Volvo, Saab brand belongs to a luxury segment that they have defined as Premium 5 (P5). Customers in this premium automobile market can be sub-divided into three groups based on life style and affluence: **conservative luxury** (Mercedes customers), **modern luxury** (BMW customers) and **post-modern exclusively**, where Saab customers are positioned (see figure 7). Generally, there is a significant difference among the target audiences of the premium car-manufacturers. For example, Mercedes customers who belong to the conservative luxury segment are traditionalists, well respected in the society and to a high extent conservative people. They follow rather conventional trends and lead a traditional way of life, conforming to the established rules. Their leadership role in society and prosperity are taken for granted. On the other hand, BMW buyers who belong to the modern luxury segments emphasize status and success in life as key values. They use a car to show off their prosperity and social status. Both BMW and Mercedes follow mainstream trends. While Mercedes can be considered a rather traditional brand, BMW is a modern mainstream brand.

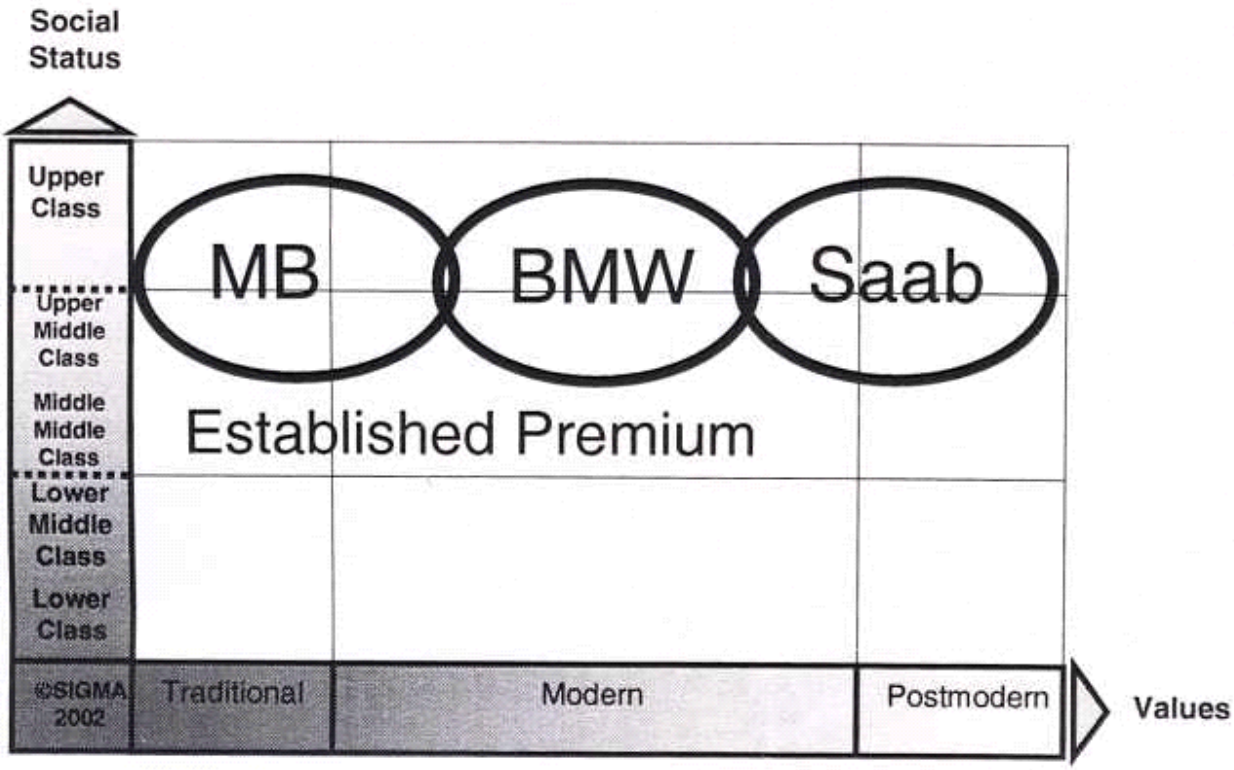


Figure 7: Saab positioning model, (Saab internal documentary)

Completely different is the profile of Saab target audience, which is identified in a postmodern segment. Saab customers are rather trends setters instead of followers. They completely reject mainstream fads, and thus they are described as postmodern individualists who do not use a car as status symbol. Originality, uniqueness and aesthetic competence are the most important stimuli that customers value in choosing the Saab brand. The main motive for buying Saab is to set themselves apart from others (NCBS, Report).

Consumers in the postmodern segment of the market are characterized as highly educated, urban, avant-garde individualists. They experience multiple identities and contradictory ways of life. Postmodernists are creators of their own personal world. Some of postmodernists' important values are creativity, self-determination and autonomy (Sensor Study, Sigma 2001).

Saab customers are generally found among designers, architects and doctors. They are affluent and well-educated people who value independence and creativity. Performance, design and safety are believed to be key motivators in car purchase. Saab customers rate convertible and new car concepts highly.

Consumers belonging to this group are described as career oriented youths who like to experience new concepts and individualized consumption. They have a very positive attitude towards automobiles as an essential part of their lifestyle (Sensor Study, Sigma 2001).

One might see the paradox in Saab customers' preferences for being unique and not using the car as a status symbol and their significant interest in individual cars, customized to their own requirements. This, however, is something very typical for postmodern consumers who have very contradictory and sometimes even illogical consumption. The inconsistency of what postmodernists think and what they really do has been well described by Firat and Venkatesh (1995).

Having examined Saab customers, their preferences and key motives for choosing Saab brand, I have found a significant match between their customer profile and the individual product offer the company is launching. The data gathered from Saab Research is completely consistent with the theoretical characteristics and preferences of postmodern consumers. To believe that all Saab customers will buy cars under Saab individual program might be unrealistic. However, if there were perfect audiences among car-buyers for this individual offer, that surely would be the Saab consumer segment.

4.5. The implementation process – how to make it happen

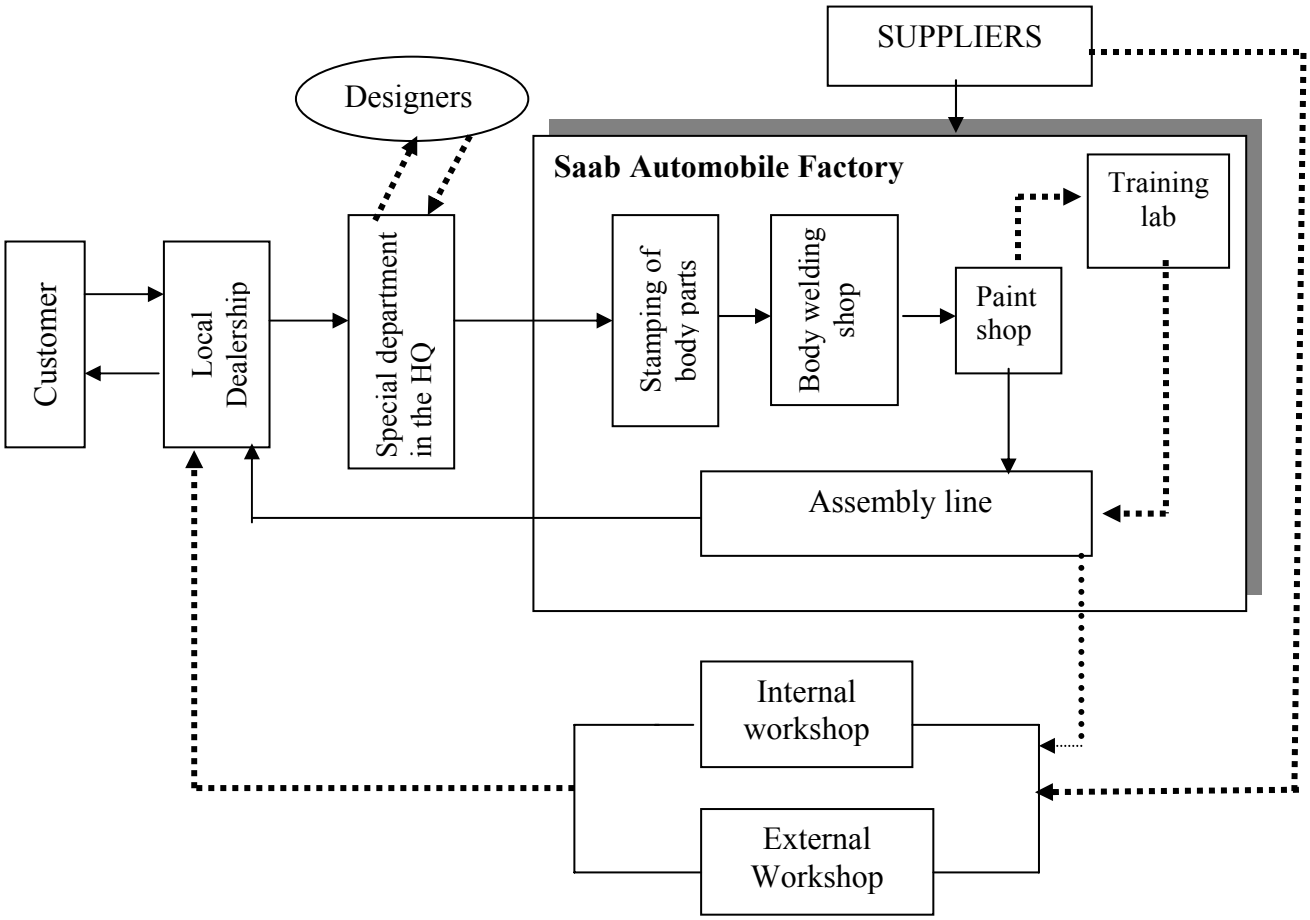


Figure: 8 Process of creating an individual Saab (based on data from interviews with Ivansson, Ejbyfeldt and Leopold)

The information of the implementation process is based on the three interviews mentioned below. The process starts with an order for an individualized Saab placed by a customer at a particular dealership. The interaction between sales personnel and a customer is very crucial at this initial stage. It determines what type of customization is required in the forthcoming project as well as at what extent different parties will be involved. For example, it determines whether and what designers' input is needed. At least at the beginning of the program, the role of designers will be sufficient. Furthermore, it is vital that the information received from customers be understood correctly. Given the fact that these custom cars are fabricated to specifications of special customers, any

mistakes in processing the order and in the manufacturing of the car might be extremely costly because such an individualized car is unlikely to be sold to another customer.

The production process begins after the approval of the customer's specification. The essence of the production of custom cars is to have standard pre-assembly of these cars, which are configured at a late stage. In the factory the manufacturing process is almost the same as for the standardized cars, with an exception of the painting. First, the body parts of the car are stamped out of sheet metal. Then, these parts are welded together in order to form the body of the vehicle. The next step is to paint the body of the car. At this stage the change in the standard manufacturing process is going to occur in order to provide a custom Saab in specially required paint finishes. Afterwards the body is moved to the assembly line to install the engine, transmission, seats, wheels and other parts.

Customized work would not be accommodated on the assembly line. At the appropriate point in the process, cars will be removed from the plant and taken to the custom workshop. According to Richard Leopold, Manager Product Strategy, there are two possible ways to execute the customized work. The first implementation option is to customize the cars in an external workshop, which is specified for doing additional customization of vehicles. There are several advantages for utilizing the customized work in this workshop. First, it has already been running common procedures and therefore the process is well known and fast to execute. Second, it has a flexible set-up to deal with custom vehicles are hence less additional investment will be needed. Third, this workshop is located within the Saab dealership in Trollhāten, very close to the customers, which allows further adjustments to be made.

The alternative for implementing the customized work is to set up internally a new flexible workshop to deal with the individual program. In that case, the existing labor resources will be utilized fully and Saab Automobile AB profit potential will maximize. Since this workshop will be owned by Saab Automobile AB, there will be a close interaction with internal parties, which will facilitate the process. Furthermore, if located close to the factory and all

production facilities, it will allow, if necessary, some modifications to be fulfilled (Leopold's interview).

The biggest problem seems to be the paint job, which is traditionally the expensive bottleneck in the car factory. To do the paint work outside of the production factory is not appropriate. According to Jan Ivansson, chief executive officer of ANA Trollhāten, replacement of one colour by another is a very expensive operation which causes a lot of inconvenience. Besides, to replace the colour of the car means to lower the exterior paint finish quality, which is unacceptable especially, when it comes to special premium cars that are significantly more expensive.

Therefore, Gōran Ejbyfeldt, manager in KMX Saab workshop believes that in order to secure best quality of the paint finish, the process of producing standard Saabs must be modified. Instead of painting the body of the car in the paint shop, that accommodates the ordinary painting work, these cars must be removed from the production and moved to a training lab within the factory in which usually different paint tests are fulfilled (see figure 8). After painting the car then goes to the assembly line where the standard process continues. To indicate that special work, is required, a car that must be customized needs to be given a special code. This code warns all people in the factory that this is a special car. Since some of the equipment must be replaced out of the factory for the purpose of customization, it is better that a basic version of Saab car with cheaper fabrics and materials be used in order to minimize waste.

As soon as the order is placed in the dealership it is essential that all parties involved in the forthcoming project be informed. In other words, people at the production as well as suppliers must be informed that a customized Saab is going to be manufactured in order to be prepared. The whole process must be organized in a flexible and proactive manner. This means that the changes should not be waiting to occur instead; they must be anticipated and behavior adjusted according to them.

4.6. The potential for implementing the individual offer

Based on the interviews done with dealers and key Saab employees, I found out that there seems to be a great potential for implementing this program. First, most of the car basic manufacturing process is going to be the same, with some small exceptions. Therefore, many additional investments in technology will be minimal since the core design remains unchanged. Second, the customized work might be fulfilled out of production in flexible workshops, which have been dealing with customized vehicles.

After meetings with the managers of those dealerships where the potential for the implementation process was discussed, it became clear that with the predicted capacity of cars sold per year, just a little additional investment in technology might be needed (Ivansson's and Ejbyfeldt's interviews). In other words, it is possible to do the customized job with the current technology but with some small modifications. The most expensive part of the program is the paint job and providing it is done inside the factory, where the necessary facilities exist, the costs would be reasonable. The higher costs might come from suppliers delivering a few and not standard components.

	Sales Price *	Expected number of cars to be sold	Revenues *
Paint Finish	1.400	2760	3,864,000
Decors	850	2760	2,346,000
Leather	2.800	2760	7,728,000
		Total Revenues	**13,938,000**

* All the prices and revenues are in EURO, VAT incl.

Table 3: Saab revenue potential regarding individual program

Table 3 indicates revenues potentials that the individual program might bring to companies. Since the prices for the customized offer have not been discussed yet in the table 3, 80% of BMW prices for BMW Individual Program are used. It is believed that the real prices would be around these numbers (Leopold's interview). The expected sales predicted by Saab dealers as well as by some of

Saab employees interviewed vary. However in table 3, 2% are used, because most of the interviews believe this to be a very real percentage. The column with units shows how many customized cars would be sold per year based on 2% penetration of the individual program over total Saab 2003 sales. Generally speaking if costs are not changed significantly and prices for the options offered under Saab PIPO are doubled the company, will double its revenues.

4.7. Reflection on Saab Postmodern Individual Offer

4.7.1 Will consumers buy it?

As mentioned before, Saab customers belong to the postmodern segment of the market and their profile match to the theoretical description of the postmodern consumers, i.e., independent individualists who experience consumption as a way to express their unique identities (Holt, 2002). Therefore, Saab car buyers might be the perfect audience for individualized Saabs since one of the basic trends in the theory of postmodern consumers is the increased interest in customized commodities. By purchasing Saabs that are built to their precise preferences, Saab customers will be able to express their individuality and uniqueness, qualities that are believed to be highly valued by postmodern consumers. In this regard they will be able to get out of the standard templates and express themselves by individualizing Saab car to fit their needs.

Furthermore, the increased aesthetics of every day life is according to Keat et al. (1994) an essential notion in postmodern consumption. Nowadays, people pay a lot of attention to how things look, and thus they are quite likely to place emphasis on individualization regarding the appearance and facade of the products they purchase. Taking into consideration the arguments of Keat et al. (1994), to provide Saab customers with more individualization in terms of aesthetic options seems to be completely in line with Saab postmodern consumers' preferences.

Taking a much more practical perspective I would rather discuss what the reality is on the car market right now. Luxury car buyers seem willing to

individualize their cars and yet it might not be appropriate to offer these vehicles to mainstream customers. Probably not all Saab customers will want the option to individualize their cars. They might prefer to take what they can get rather than wait for the car of their dreams. Furthermore, the great variety sometimes might hinder the purchasing process and create customer confusion. Some professionals in the field do not believe that building truly personalized cars will attract mass interest. They argue that buyers do not need the options to completely customize their vehicles. The only options that they really care about are colours, interior upholstery and few other options but not full customization (Welch, 2000).

One issue that obviously needs attention is how long it will take to get an individualized Saab to the customer. There is no doubt that in order to have that kind of car, customers need to be very patient, especially at the beginning of the program when the process will not be in place. The question that needs to be asked is: even if customers want to individualize their cars, are they willing to wait four months in order to have their truly individual Saab? This question might have two different responses in Europe and the U.S.

There is a big difference between the European and the American automobile markets when it comes to custom-made vehicles. Customized vehicles are much more appealing to European premium car buyers. According to the research, 19% of the cars ordered in Europe are custom-made compared to only 7 % in the U.S. However, this percentage varies from country to country. For instance, 60% of the cars in Germany are built in response to customer orders although not all of them individually customized. The same study indicates that in Britain the trend towards customized car sales is getting higher, from 10% of the total in 1990 to 32% in 1999 (Economist, 2001). One possible explanation might be the fact that Europeans are considered more willing to wait in order to get an individual car compared to U.S. buyers, who are believed to be more impulsive in their purchasing habits.

The data of the research above has been proven by the Saab case. The way the orders have been handled by American and European dealers differs. The main reason is due to the long lead period that makes U.S. customers wait up to 3

months in order to get the exact car exactly as they want. In general, 95 % of all Saabs sold in US are cars on stock. US dealers order cars that they believe would be sellable and then try to convince customers to buy these cars. With a greater degree of customization offered under the new individual program, the delivery period will be extremely long. The only possible way to make this period shorter is to deal with the customization work locally. In other words, when an order for a custom Saab is placed, the dealer picks up a car with basic equipment from the stock and moves it to a flexible workshop. This means setting up a flexible workshop that could fix the car according to the preferences of a particular customer. The process is possible because it does not involve a basic change in the design of the car. In other words, all these changes can be done in the factory without any special technology. Yet the challenge is to secure good quality of cars modified outside the factory.

However, to wait longer for customized Saabs might not necessarily be negative. Sometimes consumers identify the long delivery period as a guarantee of good performance and high quality. So waiting longer than usual to get the car of their dreams could have a positive implication. As one of the sales managers of the NBIC says: "We could have made the delivery time shorter, but we wanted people to feel excited about waiting for something special". (Kotha, 1996, p 449)

4.7.2. Dealers' comments about the Saab Individual Program

Saab dealers have been asked about the potential of having an Individual Program in addition to the core product offer. Due to the fact that they are in permanent contact with customers they should have the best knowledge of customer demands and preferences. In order to have their voices heard, several a couple of telephone conversations have been conducted with dealers from Great Britain, U.S., Sweden and an interview via Saab intranet with a dealer from Germany.

The dealers were in general agreement that they have experienced a situation in which a customer wanted to customize Saabs with options that were not available under the core product offer. Since these wishes could not be satisfied

customers were more or less willing to compromise and to conform to the available list of features. One of the dealers in England said that frequently customers complain by saying: *"Is that all I have to choose from?"(David Alexander, Great Britain)*

In general, Saab dealers are very enthusiastic about the potential of the Saab Individual Program. All of them express the need to have more variety in terms of exterior colours and interior upholstery. They indicated that especially the exterior colour is the most commonly requested customized feature and usually customers are not willing to compromise on colour. Dealers' answers depend widely on the area where their dealerships are located. Dealers in the metropolitan cities are very enthusiastic about the program. They see a big demand for more custom Saabs: "*There are a lot of customers willing to spend a huge amount of money and make their cars individual*"(Reeves, General Sales Manager, London). The same dealer believed that 30 per cent of Saab customers would be interested in the program.

Moreover, the potential benefits and existing customer demand had forced some of the dealers in London to take the initiative to offer customized Saab cars using local workshops. These dealers were used to performing further customization of the car every time there was an order for that. They change exterior colours, add some more options or re-arrange some of the existing ones. For this customization they charge a high premium and customers are quite happy.

Rather understandable is the fact that dealers in the small cities are not so eager for offering customized Saabs. Although they are positive about the program they doubt there are customers in their areas who will be willing to pay a premium for having an option to individualize their cars. These dealers share the view that more variety under the core program, instead of building premium custom cars, would be preferable. However, running this program as a separate option from the core offer would be of interest to a certain amount of special customers.

Contrary to my preliminary expectations, dealers in the U.S. were enthusiastic about the potential of the individual program. In general they are strongly against expansion of options variety under the core Saab program because that means a longer delivery period, and hence fewer sales. However, offering a customized option just for build-to-order Saabs sounds interesting to them. They believe the demand for custom Saabs exists and there is a potential for offering premium prices. One of the US dealers predicts: *"The target audience would be about five percent but around 1-2 % would purchase these cars" (Kurt Schrim, Washington DC and Baltimore)*

Len Schrader, US dealer in New York believes: *"For customized Saab about $4.000 - $5.000 could be charged in addition to the standard vehicles"*. He said that customer' preferences in terms of colours and fabrics are different in Europe and the U.S. Therefore, the option for car customization is, in a way, a means for meeting different customers' preferences.

In most cases dealers stress that it is very important to establish reasonable prices for the customization alternatives. Even if customers are likely to pay a premium for exclusive interior upholstery or unique exterior colours they might be just a few ready to pay a higher premium. Therefore, finding the right balance between the offered level of customization and the prices for it is crucial for customer satisfaction.

4.7.3. Customization

I would consider the PIPO presented in the study in according with Lampel and Mintzberg's classification (1996) as tailored customization due to the following reasons. The core design of the cars will remain standardized. However, even if the core manufacturing process is going to be nearly the same, a small change regarding the standard manufacturing proceeding will be done. While the main customization work will be fulfilled at the assembly stage, mostly out of the assembly line, the painting part of the customization is going to be completed during the fabrication stage. The car that needs to be customized at a certain stage in the standard process is going to be removed from production and painted in a separate workshop. Then it will go back to the production in

order to continue further with fabrication. Furthermore, matching Lampel and Mitzberg's definition of tailored customization, is the fact that customers will be able to choose aesthetic options that are available under the PIPO' list of options and they will be also able to ask for truly aesthetic optional extras. Therefore, customers will have a selected range of options to choose from.

The Saab individual program is not the first of the kind in the automotive business. At first glance it resembles the customized standardization that many car makers offer. The difference, however, comes from the fact that while most of the car makers provide customers with the freedom to select from a predefined set of options, under the Saab PIPO they will have a greater opportunity for choice. In that sense, the options available in this program might be seen as "**truly optional extras**". However, to believe that Saab Automobile AB is capable of offering a Saab car with fabrics upholstery that anyone could dream of is completely unrealistic. In other words customers with PIPO will be given a chance to express what they really want and if the company is able to fulfill their wishes, as well. Mostly, at the initial phases of the program customers will be limited in a way, but with development of the program, the opportunities for more choice will increase.

I have reached the conclusion that the customized offer should be organized in a make-to-order approach. When an order for a Saab under the individual program has been placed, it will initiate all the operations necessary to manufacture it. This means that even materials and different components might need to be procured due to the receipt of the order. Consequently, initially each order will be considered unique, i.e., a distinctive car from those that have been built before. The reason for that is because the process will not be in place. However, repeating the process of building Saabs under the postmodern individualized product offer will definitely lead to a higher efficiency, lower costs and probably better profits. The potential problems that might occur at the beginning would become later on well-known and that is why it will turn out to be a rather familiar procedure. An active designer collaboration will be needed in the initial stages of the program.

Therefore, the study of Saab Automobile AB is a case of individual customization. The company is moving towards a higher degree of customization, but it would not be utilized on a mass basis. The company is going to expand its current product offer with a separate program under which customers interested in individual Saabs would be able to customize the car in terms of aesthetic options. The customized Saabs will meet the needs for a demanding premium segment, while the mass produced cars will be for those Saab customers who are not so demanding in their preferences and are likely to select a car with options available under the core offer of the company.

Even if the data from the interviews show interest in customized Saabs, probably not all Saab customers would be likely to individualize their cars. Rather they would choose from the standard list of options. Besides, in order to perform customization on a mass basis, it would require completely changing the existing processes and expertise as well as investing sufficiently in new technology. The pay-offs for these activities are still unpredictable and, as the experience of some car makers with mass customization have shown, the negative outcomes are more likely to occur.

In the present study Saab customized offering is not envisioned as replacing the core product offer, i.e., mass produced cars. Replacing the contemporary manufacturing process of building standard cars is unnecessary because of the lack of enough mass interest to support this idea. Instead, customized manufacturing will be running together with the mass car production. Contrary to some authors (Pine et al., 1993) who argue that mass production facilities cannot accommodate a customized manufacturing, both production approaches will be integrated providing mutual benefits for both the company and its customers. In doing so, some expertise would be obtained from the current running mass production, while, on the other hand the essence of customized manufacturing in terms of process flexibility would facilitate the traditional manufacturing process.

Probably the most important decision when it comes to customization is to define what level of customization is to be offered and how the concept to be performed, i.e., as an individual or mass customization. It is believed that

customers in the automotive industry are demanding a purely cosmetic customization, i.e., change in the aesthetic options; performance features have not been of great concern (Welch, 2000).

It seems that the level of customization offered under the PIPO of Saab Automobile AB is compatible with the existing demand for more individualization in terms of aesthetics among postmodern car buyers. To offer customization just for aesthetics options is much easier to achieve compared to the other alternatives since most of the customization work is carried out outside the production. Consequently, the right balance between the level of customization and the potential for performing it in a most efficient way seems achievable in the Saab case.

Even if the study of Saab is a single case, and it is difficult to generalize the results for other companies, I believe that the Saab case might have significant implications for other enterprises. The idea of building a fully customized vehicle on a large scale is more a dream than a real goal. Usually automobile manufacturing is organized in a way that allows producing during a particular manufacturing run a large numbers of similar models. Manufacturing in large volumes of identical automobiles allows car makers to accomplish economies of scale. Therefore, to implement full customization separately for all Saabs, would break this manufacturing into batches, requiring running the manufacturing system for each Saab individual car.

Moreover, at the contemporary level of technology development in the automotive industry, even with the availability of IT, fully customized vehicles cannot be provided at a reasonable price. Another problem related to this kind of customization in the automotive industry is that the manufacturing processes are considered inflexible. Compared to other products in different industries, for instance, mobile phones, automobiles are assembled from an enormous number of components. Therefore, even if a full customization on a mass basis might be accomplished for mobiles or computers, it is impossible for automobiles. So car manufacturers can either offer hard degree of vehicle design changes or unique options as an individual customization, or they can

offer low product reconfiguration with customized standardization. Up to now it seems that they are more likely to offer the latter choice.

Based on my theory overview and empirical data gathered through interviews, I believe that PIPO would bring the following benefits to Saab Automobile AB. First PIPO promises potentials for **high profit**. Therefore it might be seen as a mean to recoup royalty income. Due to the fact that the relationship with the customers will be much closer, they will be more likely to tolerate higher prices in the expense of having a car perfectly fitted to their needs. Second, having an individualized offer in addition to the core product offer will be a "**strategic weapon**" protecting the company from other premium competitors that have already offered customized automobiles. In other words, as one of the dealers said, by offering this program not only can we keep some of our special customers but also we can acquire some of BMW and Mercedes customers (Len Schrader, Saab Dealer in U.S.).

Third the PIPO is a **promotional vehicle** and/or **brand enabler** to Saab Automobile AB. This might have a long-term positive impact on Saab business. In order to strengthen the brand image, a company needs to communicate it into every single interaction with customers, i.e., the brand and its promise should be integrated in each activity the organization performs (Knapp 2000). Since the Saab brand stands for progressive and modern cars for the individualist, an individualized product offer must enhance the brand image for the target audience.

Forth important contribution of this individual program is the information gathered directly from Saab customers. Considering that, under this offer, it is the customer who chooses the potential combinations, he/she is more or less involved in the process. With this data on hand, Saab designers can recognize some **customer trends** such as preferable colour combinations, popular fabrics and unique materials that are likely to appeal to customers on a broader basis.

Fifth, the offering of customized Saabs could open **new technological** and **organizational capabilities** that might be applicable to the mass-produced vehicles. For example by trying to find and organize the process in a more

effective and flexible way, a new manufacturing and organizational technique might be identified that can improve the entire production process.

Finally, even though the Saab individual offer is not the first of its kind in the industry, and thus it will have no advantage of being a first-mover or trendsetter, it is almost a must to have it as an option to the core product offer. The main argument to support this view is that two of Saab premium competitors have already offered a similar kind of customization. To present some of Saab customers, pursuing more customization, from switching to other automobile brands, I believe that the company needs to develop and implement the customization offer.

4.7.4. Problems and recommendations

Since the process of building customized Saabs is not in place at the initial stages, some problems might occur. In the following section I will look into some of the problems of the process, from order to delivery. In doing so I will propose possible solutions.

Because customized Saab will be built to match to the individual requirements of a particular customer, it would be difficult to sell that individualized car to another customer. In case the consumer who has ordered a custom car, at the time of delivery refuses to purchase it, it might not be easy for the local dealer to find another customer. To guarantee the purchase of the ordered customized Saabs, an advance payment of a certain percent of the car price is necessary. Furthermore, in order to avoid that kind of situation, the clear understanding of customers' needs and proper processing of the customer orders are essential.

Another issue that needs to be considered is the opportunity for offering samples of different fabrics and materials. Most of the exterior colours look completely different on paper and on the car. The same is true for upholstery and décor inserts that cannot be expressed on paper as vividly as they are in reality. Therefore, a car simulator may let customer see how the paint finish that they have chosen or a décor insert will look on the car.

As one of the dealers from England pointed out, there would be a need for recommended combinations for some options. This will facilitate the process of selecting aesthetic options and guide customers in the great variety of options. Some customers, even if, they aim for more customization, might not feel confident acting as designers themselves. Thus they would rather look into designers' suggestions and select something from them. Furthermore, this will protect the image of Saab cars since the combination proposed by Saab designers are very Saab-ish.

A great concern turns out to be the warranty on the car. If custom work is done out of the factory, it is going to be difficult to offer a warranty for it. On the other hand, customers are going to be charged a premium for additional customization. Therefore it is unacceptable to sell such an expensive car without guarantying good quality. In addition all customization work needs to conform to Swedish and other national laws for car specifications.

There might be the resistance from some local dealers who are not so keen on the idea of providing customers with freedom to individualize their cars. In general dealers, are likely to offer cars that are in stock even though these cars might not be the version that the customer is looking for. "The last thing they want to do is tell customer to wait for a newly built car when there is a car on the lot to push"(Welch, 2000 p. 191). So instead of delivering customized cars that need at least three months to get to the dealership dealers are more willing to close a deal as soon as possible. This might lead to tension in a car showroom between the salesman and customer who want to buy what he/she has in mind.

Even if my interviews with Saab dealers have not shown that kind of concern I believe that this situation might occur with some of Saab dealers, especially those in US. In general, dealers order cars depending on past performance in terms of sales as well as making some guesses what will be the top new car in terms of sales. Choosing the wrong car can result in having cars that cannot be sold. Since 90% of the sales in the U.S. are stock

cars because of the long lead times, dealers prefer to handle customized orders locally rather than make customers wait. To swap cars with other dealers in order to deliver to customers the car exactly they want is a frequent practice among U.S. dealers in the U.S.

In order to deal with dealers' resistance special educational programs have to be conducted whether purpose is to make dealers understand that by selling these cars they will get benefits as well. Probably these benefits will not have an immediate effect on the sales, but they will create higher brand awareness and develop the Saab image further. It will be a fundamental brand building project, which would benefit everyone over the long-term. Additional bonuses to dealers who have sold customized might be an ideal motive to offer more customized Saabs to customers

To conclude, probably there might be not so positive opinions about the Saab Individual program from some of Saab employees. These people might argue that Saab needs to provide vehicles that are affordable, or that there is insufficient demand for building these kind of automobiles; or that it is extremely expensive to produce these kinds of cars. However, as long as there is a belief, passion and excitement among those who support the idea of offering customized Saabs, all these arguments must not be a hindrance. Moreover "without a willingness among managers to reflect on the business, rather than functional, rationale for making customized products, ′specials′ will continue to be a drain on scarce organizational resources, rather than a carefully considered strategic weapon" (Spring and Dalrymple, 2000, p.465).

Chapter 5 Postmodern Individual Product Offer

This chapter presents the conclusions of the thesis. The main purpose is to propose a model for implementing a postmodern individual product offer suitable for companies that target postmodern consumers. In addition a conceptual model of product customization created by the author of this thesis to highlights the most important implications of the study.

5.1. Conceptualization of customization

In order to build a model for PIPO, which was set as a main purpose of the research, I explored the idea of postmodern consumers and the theory of customization, which I believed to be applicable to my study. It turned out that not all of my empirical questions had a rational explanation within the theory. In this respect my criticism towards the existing theory of customization might be summarized as following:

- Lack of conceptual model that may be used as a strategy guiding companies aiming towards customization
- Lack of explicit differentiation between individual and mass customization (see chapter 3)
- Almost no research regarding individual customization
- Customization manufacturing seen inconsistent with traditional manufacturing (see Chapter 3)

In my literature review about customization I have referred to many authors who write about the concept. What I have missed in most of their articles, however, is a conceptual model that might be used as a framework guiding companies aiming towards customization. Therefore, in figure 9, based on my study, I have proposed a kind of model, even though its creation was not set as a preliminary goal of this thesis. Its purpose is to propose toward customization but it is by no means a comprehensive model that solves all potential problems that might occur with customization.

The Saab case has shown that to employ customization is not a smooth and easy process. It requires many activities to be done and many decisions. Therefore, the conceptual model might be seen as a customization strategy that summarizes the most important undertakings necessary for embracing the concept. It must be considered a guide, which sets out put the priorities for concept realization.

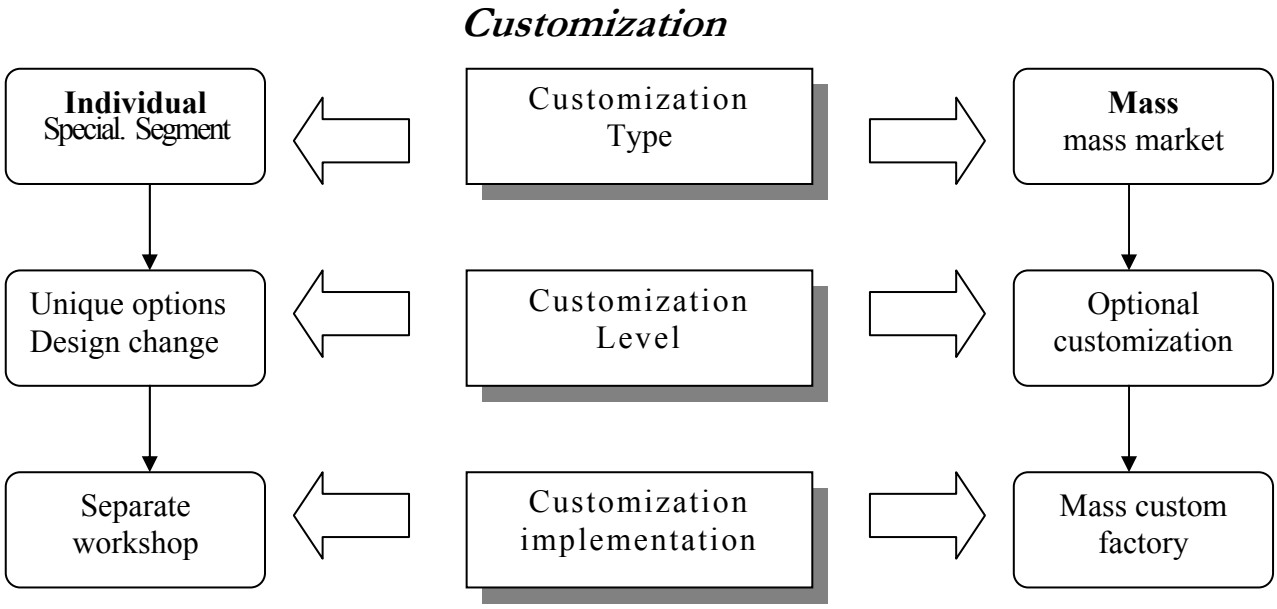


Figure 9: Conceptual model of customization

The conceptual model of customization addresses the three critical issues, which turned out to be of a great importance regarding the case study of Saab. These are: type of customization; level of customization; and its implementation. They are strongly consistent with one another. For instance, if a company pursues individual customization, this will define what level of customization to offer and how to implement it.

The first stage of the conceptual model is to define whether the concept will be used on a mass or individual scale. This concept has not been covered from the authors' writing on customization; however, I believe it to be of a paramount concern. Agreeing on what scale to perform customization will define many of the required steps in the project. This decision is closely related to what segment of the market the company is going to target. In general, if it is an

individual segment then the company should adopt individual customization. In the case of targeting mass markets, a mass customization may be performed. Probably there might be some exceptions, for instance, a company that utilizes both approaches and targets separately a special segment through individual customization and mass consumers through mass customization.

The second phase of the model deals with level of customization. Usually the decision on what level of customization to offer is closely related to the type of customization that is going to be utilized, i.e., the first step of the conceptual model. The most important issue is to determine if a unique product will be the result of the customization in terms of changing the core design and/or adding unique options, or if the product will be customized in an assemble-to-order approach, keeping the basic design unchanged. At this stage the following questions need to be answered: how much customization customers are in favor of, i.e., customer sensitiveness in terms of product individualization? What kinds of products have customized appeal to customers? Which product attributes can be customized? What sacrifices are required of customers in order to get an individually customized product?

The third phase of the model brings us to the discussion the implementation of the agreed type of customization. At this final stage, the decision is related to the two previously steps. It might turn out that a company, which has decided to follow a mass customization, will decide to switch to the individual customization because of lack of resources, technology, expertise, or vice versa. The problems that need to be addressed are: the companies' potential for utilizing the concept, the required level of technology and expertise as well as the organization of the manufacturing process.

The problem background and the theory analysis have been developed with respect to the third customization phase presented in the conceptual model of customization. Thus, I will present my conclusions referring to the three phases of the model.

The area of paramount concern is the type of customization. In this respect, the question presented in the problem background was: how to employ the

concept? In the present study I have divided the concept into two perspectives, namely mass and individual. Based on my research I have found a significant gap in the contemporary literature about the concept when it comes to implementing customized products on a small scale. Authors have been in favor of performing customization on a large scale in all industries and for all products, neglecting the option for individual customization (Alford et al. 2000; Silveira et al. 2001; Pine et al. 1993; Hart, 1995).

Contrary to their beliefs, my research in Saab Automobile AB has shown more customer interest and business potential for individualization on a small scale. All of the dealers, asked if they see **mass** appeal to customized Saabs, were very pessimistic. Even if they predict a demand for customized Saabs, it is by no means a mass interest. In that sense only a special segment of car buyers will be willing to customize. Not to mention the greater Saab's business potential for implementing the individual customization compared to mass customization. According to the interview with Ivansson, CEO of Saab dealership, with a planned capacity of 2000 customized Saabs sold per year, the company might not need much additional investment. However, in order to deliver this kind of car to the mass consumer it would require completely reorganization of the whole process as well as investment in technology and know-how. Yet I doubt this is a plausible scenario and most importantly I do not believe it to be a reasonable undertaking due to the lack of mass customers' interest.

I also have discovered that the best way to run individual customization might be to run it as a separate program attached to the core company's offer. However, customization has been seen as entirely different concept that replaces traditional mass production and I believe that the two manufacturing approaches can be integrated in a way, which provides mutual benefits. This conclusion is supported by the case study of Saab, where customized Saabs could be manufactured in a traditional way with subsequent customization.

The biggest dilemma seems to be to define what level of customization needs to be offered. As my literature review shows, there is no general agreement among authors on the subject. Even if the literature suggests a numerous

classifications I have identified two basic levels of customization: "**unique options or design-involved changes**" customization and "**optional or modular**" customization. This classification, even if not detailed, provides an answer to the most important question when it comes to defining the appropriate level of customization: *"Does the customization require building of something unique in terms of options and product design?"* The answer to this question defines how the process will be implemented.

The "unique options or design involved changes" refers to the individual customization since it requires a real change either in the process or/and in the design. Its purpose is to build-to-order products or product features that are distinctive or unique. Most importantly, those options are not available in the core product offers of companies. The second level of customization might be implemented on a mass scale because it does not involve hard product change. In other words, the products or options offered are not unique and the process for building them is familiar. It must be remembered that this customization is implemented only for modular-made products. Customization in that case means assembling product components to customer requirements. With this level, customers are offered a greater variety of products or product options, at low prices and short delivery times so. Yet the product individualization is accomplished by selecting products or options from a defined list of alternatives. (no matter if it consists of 20 or 100 options). To put it differently, customers cannot choose alternatives that are outside the company offer.

Another essential issue that concerns the level of customization is the structure of the product. Nevertheless, Pine et al. (1993) argue that mass customization can be fulfilled for all products. I am more likely to agree with Zapkin (2001) who argues that there is still no technology that might offer mass customization for all products. For instance, should a product composition is mainly modular-made (computer), then it is going to be easy to change one component with another in order to individualize it to customer requirements. Additionally, with the recent lead manufacturing it could be done faster and at prices similar to the standard products. However, not all commodities might be mass customized. Consider for instance, cars, where the manufacturing is far complicated. Car

manufacturing involves technology that cannot be modified for each item since each run is for a batch of vehicles.

The third and final element of the conceptual model of customization is the implementation, or how to make it happen. Depending on the level of customization it might have two different implications. The first refers to the "unique or design involved changes" and the second concerns the "modular" level of customization. Building unique options might be done in a separate workshop because this work does not need a design change, so it is much more achievable. Moreover, since the basic process is not changed, this kind of product might be produced in a standard way using standard technology with the customization completed afterwards. It is much more complicated to perform customization that requires a change in design. In this case, a flexible workshop to deal with the increased customization needs to be set up. According to the required customization, some part of the manufacturing might be done on the standard facilities but the major part is performed separately.

Even if optional or modular customization calls for a lower level of product change, they both require flexible manufacturing in order to provide fast delivery, low costs, and reasonable prices. Therefore, new processes, technology and expertise are needed. Such customization cannot be performed with the same facilities, with which the standard products are produced, because those facilities cannot provide the required level of flexibility. So a fundamental change in the whole supply chain is required.

5.2. Model of PIPO

The main purpose of this research has been to build a model for PIPO. This model is presented on figure 10. The model is the result of a literature review and the knowledge the researcher gained during her empirical research at Saab Automobile AB. The case study has helped the researcher to model the most important problems discovered during the research. All the phases presented in the model have been actual concerns in the real case of Saab Automobile AB. So the model must be considered to have a practical character. It might be

appropriate for different companies in various industries that employ individual customization for a special segment of the market, the so-called postmodern consumers. In general, the model can be used as an additional option to companies' mass-manufactured core product offer.

I believe this model fills the gap in the customization literature regarding the individual customization. Indeed, it gives a more detailed picture about the individual way of customization presented at the conceptual model of customization on figure 9. The model provides guidelines in terms of what the major steps are and what issues need to be considered in order to pursue individual customization. When it comes to its practical application, we need to remember that it is not a one-size fits all model, i.e., it might need some modification to fit to different organizations. It might be useful for managers who have already decided to pursue individual customization and therefore they need to prioritize and structure the process. In that sense, it is a strategy that highlights the most important issues that need to be considered.

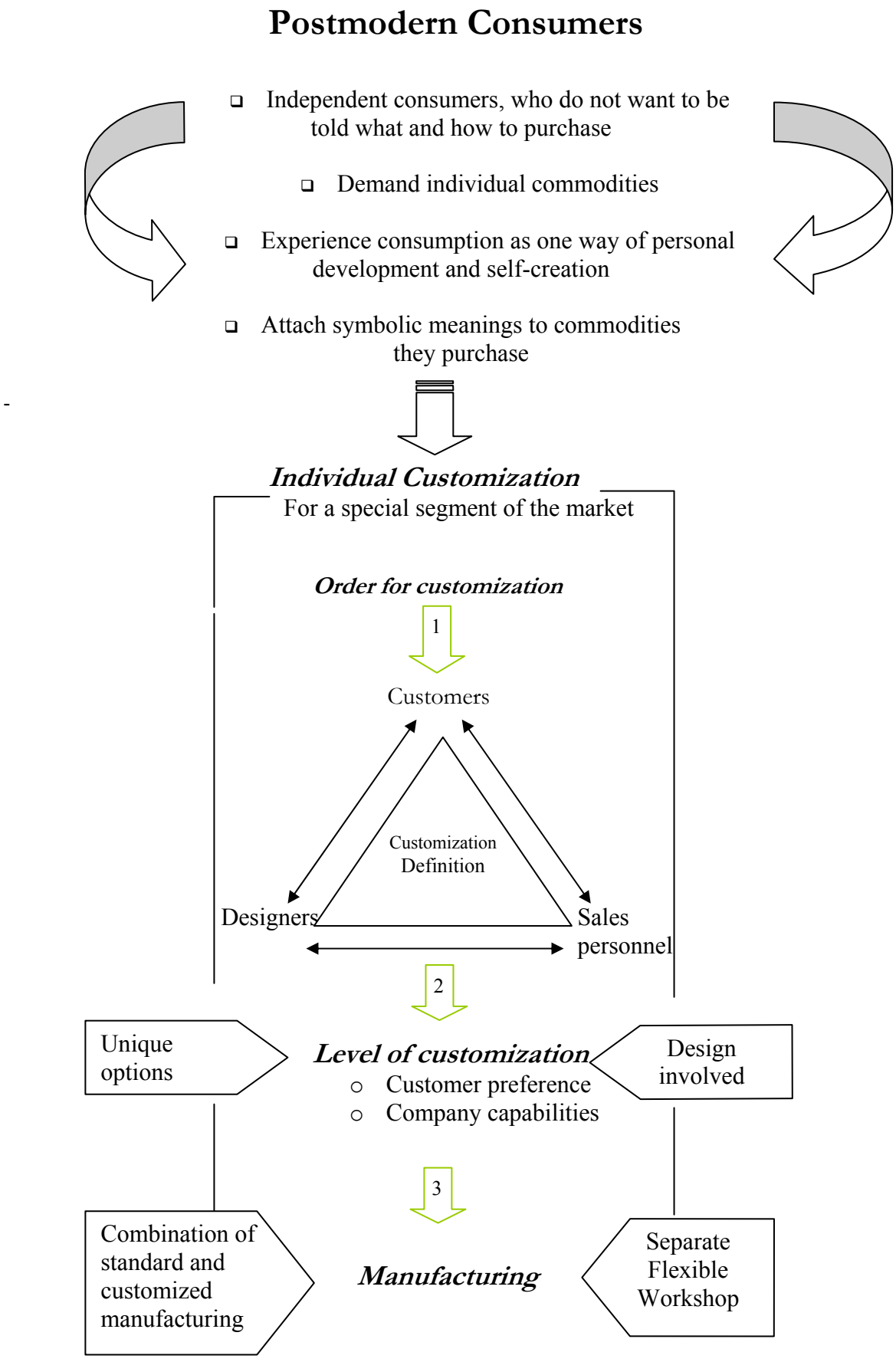


Figure 10: Model of Postmodern Individual Product Offer

The target audience of the individual customized product offer is defined as postmodern consumers since there is an ideal match between postmodern consumers' profile and the basic requirements for implementing an individual customization. The reasons that make postmodern consumers a perfect audience for individual customization are the following:

1) Even if there is a global trend for increased customized products, postmodernists are among those consumers who demand a higher degree of individualization. In this regard they will feel limited by the number of options available under mass customization. They would rather individualize a product as they exactly see it in their dreams and require an active interaction with sales personal and designers;
2) Postmodernists are not likely to listen what companies and their managers decide as the perfectly match for their preferences. They want to be independent in their choice and therefore they will not be satisfied with a mass customization offer, which even, with a great variety, is defined according to the company preferences;
3) There is an increased preference for aesthetic customization. In order to fulfill this kind of customization, the product needs to be strongly individualistic since people's preferences for aesthetic options are very distinctive. Therefore, it is difficult to offer customization on a mass basis to suits everyone wishes.

In general, products manufactured in this way are going to be build-to-order since they involve a higher degree of individualization and the chance to sell it to various consumers is low. As soon as an order is placed, the process starts. The first step is to define what customers want. Customer interaction with designers is a very critical part of the entire process (the triangle presented within the model, figure 10). I would consider it the key cost driver. The most difficult part is to understand what customers really want. Usually, they cannot easily articulate their wishes. Therefore, the sales personnel's input is very important in defining customer preferences and correctly transferring them to the designer team. Designer interaction might be required furthermore to create

a preliminary proposal in terms of colour co-ordination since people usually look for professional advice.

After identifying what the customer wants, it must be “translated” to the company’s language. In other words, the second step defines the “what” and “how” of customization, whether it involves a change in the design or whether unique options are needed. At this stage of the project it is vital to consider if the company is able to perform demanded customization, if there is available technology to perform it, or if the company needs to reorganize its standard processes or whether the product would put on with the required level of customization. All these questions must be answered in order to determine the appropriate level of customization.

As soon as the level of customization is decided, then the third step is the manufacturing process. The implementation of the individual customization depends on what is going to be done in terms of unique options or changes in the design of the product. In the first case customization work is done mainly in a flexible workshop, set up especially for this purpose, while the main manufacturing process is standard. At this particular stage of the process the finished or semi-finished product is moved from the production to this workshop, where the rest of the job is completed. The benefit of this way of manufacturing is that the basic manufacturing process is accommodated on a standard technology and hence investment costs are kept at minimum level but at the same time individual products are built. In this regard, both standard manufacturing and customization are integrated providing the advantage of having a customized product at reasonably low costs.

In the second case of individual customization almost the whole process is done in a separate workshop because the required level of customization is high. It involves major changes in the core design of the product. It also requires a significant investment in technology, expertise and know-how. A comprehensive model of hard individual customization developed by Spring and Dalrymple (2000) has been presented in the study (figure 4).

The time period for manufacturing products under the postmodern individual product offer may vary depending on the required customization and the specification of process implementation but it is by no means a fast process. Usually a premium price is going to be charged for building those commodities due to the higher costs for customized work and individual manufacturing.

My empirical research at Saab Automobile AB has shown consumer interest in product customization. It has been supported also by theories in terms of changing views of consumer and consumer behavior in society. The rise of the postmodern consumption has been an ideal prerequisite for developing the concept of customization. However, despite all the enthusiasm among marketing theorists regarding this concept, it cannot negate the importance and benefits of the traditional mass production. Just offering customization is not enough; the offer has to make sense to the customer as well. Most importantly, customization is not the right strategy for each company since not all products would have the same customized appeal to consumers.

Furthermore, in this study, customization has been considered to be much more than a short-lived fad. Its emergence was predicated by a cultural-historical phenomenon in contemporary society. Mostly during the last decade, there has been an increased emphasis on the individual consumer. The main trend was the change from the traditional mass marketing towards a new paradigm of individualized marketing. (Schipper, 2002). Consumers were seen not as a part of a mass but as independent individuals with different preferences. Some of those changes in the society have called for the appearance of the concept of customization.

In conclusion, there is no one ideal way for pursuing the concept of customization. Each organization has to find its unique way of doing it. Some companies might implement a higher degree of product customization while others could put it at practice at the end of the value chain. Thus, any prescribed recipe of applying the concept of customization might be misleading. Even for companies in the same industries, the required degree of customization as well as the processes for doing it might be quite different. Just because others are implementing the concept does not mean that it would work

the same at another business. Additional issues such as customer tolerance for individualization, the company's readiness to implement it, and the market situation must be considered carefully as well.

5.3. Suggestions for future research

The suggestions for future research are made with the respect to my criticism towards customization theory. The area that calls for significant investigation is the implementation of both cases of individual customization, i.e., unique options and design involved customization. More specifically it would be interesting to explore more deeply manufacturing capabilities required to perform these two ways of building customized products.

Moreover, investigation concerning supply chain management for individually customized products is of great interest. The role of IT, even if addressed in the contemporary literature, also needs development. Finally, there is a need for more customer research in terms of what product attributes consumers want to customize as well as what implication postmodern consumption might have on marketers in the future.

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Michael Berkefeld – Germany

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