

CHALMERS



A case study: A market analysis and a capability assessment

*Master of Science Thesis
in the Management and Economics of Innovation Programme*

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Abstract

The Focal Business Unit (FBU) is a specific business unit within Acme Group that serves the focal industry with product1s and related products and services. The FBU has identified that product1s for segment1 applications is one of the strategically most important markets for growing future business since the product1 market has been growing notably during the last decade. The FBU has primarily served the product1 market with premium product1 solutions but overtime the product1 market has become increasingly more cost focused, which implies certain challenges for the FBU. For this reason, the FBU has interest of gaining a better understanding of the product1 market attractiveness and how they potentially could become more competitive within this market.

The purpose of the thesis is to investigate the product1 market and explore the FBU's possibilities to expand their business within this increasingly cost driven market. This is done by analyzing the product1 markets' attractiveness and by assessing how the FBU, as a premium supplier, should adapt their internal capabilities in order to increase competitiveness by offering product1s with an adjusted price-performance balance. The research followed a structure containing two separate modules each with its own theoretical framework, empirical part and analysis part. The first module evaluated the product1 market attractiveness in order to identify the focal markets that are most interesting for Acme, while the second module focused on evaluating potential changes of Acme's internal capabilities to become more competitive in the markets identified in the first module.

In the market analysis the Chinese, Indian and Western European product1 markets were identified as the most attractive ones considering the markets' characteristics and the business unit's market presence. The capability analysis resulted in short term and long term recommendations proposing how the FBU should adapt their internal capabilities to become more competitive in these markets. In the short term the FBU is recommended to: increase the production coordination of product1s; improve the production planning; evaluate and reselect suppliers; employ additional application engineers and increase their competence. In the long term the FBU is recommended to focus on: localizing production in India; redesigning product1s to allow for greater coordination between product1 types and application segments; developing product1s with increased maintenance intervals.

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Alexander Eriksson

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1 Introduction

In this initial section the thesis' subject will be introduced and motivated in the background description. This discussion will lead to a presentation of the thesis' purpose and the research questions. In the end a brief description of the thesis' disposition will be given.

1.1 Background

Acme Group is a leading global supplier of the focal product group and related products and services (Anonymous source-2 2011). The company's products fulfill high quality demands and are utilized in a diverse set of applications in various industries (Anonymous source 2010). Thus, consumers worldwide are benefitting from using products and services that utilize the company's product1s.

One of the industries that utilize products from the focal product group is the focal industry. The Focal Business Unit (FBU) is a specific business unit within Acme Group that serves the focal industry with products from the focal product group and related products and services. The focal industry contains several component markets for a wide range of product2 types and the FBU serves many of these markets. In the past, the FBU has mainly focused on supplying focal product group solutions for application segments such as segment4 and segment8 but one application segment that the FBU has identified as one of the most strategically important markets for growing future business is segment1.

Segment1 is the market for product1s used in product2s and related services. This market can be segmented into the market for product1s used in OEMs' production of new product2s and the aftermarket where the segment1 operators need replacement product1s in existing product2s as well as related services. The product1 market has been growing notably during the last decade (Anonymous source 2012). The FBU has traditionally been positioned as a premium component supplier within the product1 market, which partly has its origin in Acme's position as a technologically leading product1 manufacturer (Respondent9 2012a). This has resulted in that the business unit primarily is serving the product1 market with premium product1 solutions (Respondent9 2012a).

Over time the product1 market has become increasingly more cost focused which implies certain challenges for the FBU in order to stay competitive within this market (Respondent9 2012a). Some of the FBU's main competitors have market positions and strategic directions that are more suitable for the changing customer demands within the product1 market. The FBU has expressed an interest to expand their business within the product1 market due to the attractive market growth and the FBU's relatively good product portfolio fit for the market. The FBU is interested in gaining a better understanding of the product1 market and its attractiveness for the organization (Respondent9 2012a). The market attractiveness is influenced by external factors such as competition, market size and growth but also by customer's preferences. The latter is related to the business unit's offerings and the FBU would also like to gain additional knowledge of how their offerings could become more competitive. Here, the capabilities that are formed by the internal resources and competencies of the company become the focal issue. Therefore, it will be relevant to investigate how the FBU could adapt their capabilities in order to be able to deliver more competitive offerings.

1.2 Purpose

The purpose is to explore Acme FBU's possibilities to expand their business within the increasingly cost driven product1 market by analyzing the market attractiveness and assess what strategic changes the FBU, as a premium supplier, should consider in order to increase their competitiveness by offering product1s with an adjusted price-performance balance.

1.3 Research Questions

In order to fulfill the purpose of the thesis the following research questions will be addressed:

1. Which are the most attractive product1 markets for the FBU?
2. What strategic capabilities should be adjusted in order for the FBU to increase their competitiveness within the product1 market by offering product1s with an adjusted price-performance balance?

To answer the research questions two theoretical frameworks will be developed through a rigorous literature study. The frameworks will guide the empirical investigation at the FBU as well as the data analysis.

1.4 Disposition

This part gives the reader an overview of how the thesis is structured and its different chapters see figure 1.

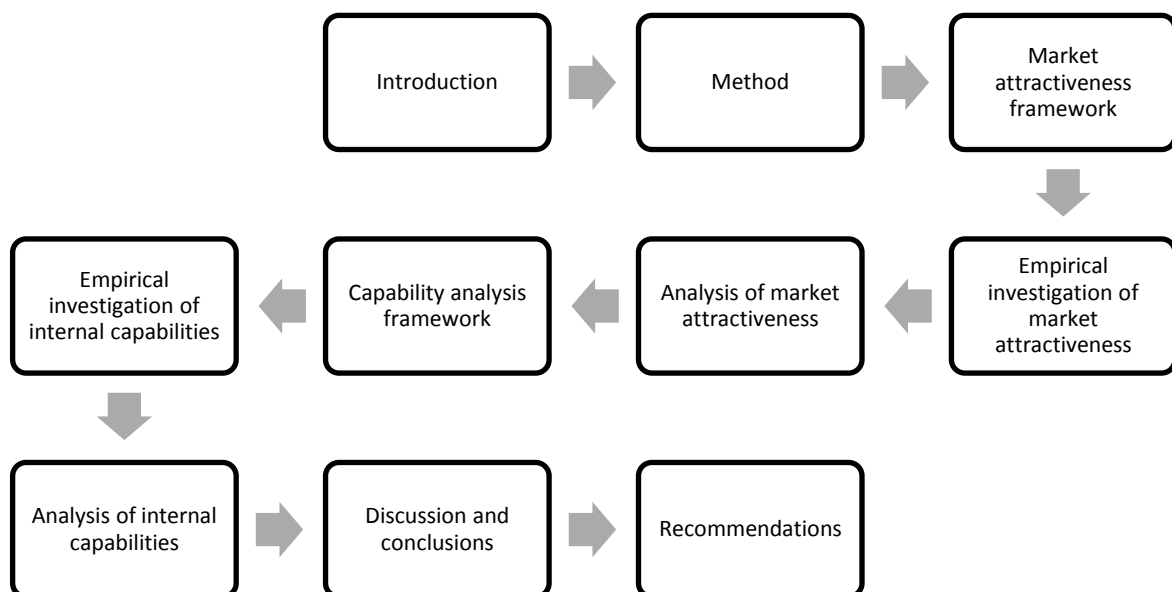


Figure 1 – Description of the report's disposition

After the introduction of the thesis, which provides the background to the topic and the purpose of the thesis, the methodology of how the research was conducted will be explained. In this chapter, the research process, strategy, design and quality will be described. After the methodology chapter

the thesis has two different parts focusing on each of the research questions. The first part focuses on the first research question. Thus, the first part is about the product1 market attractiveness for Acme. This is done by first having a chapter developing a framework for market attractiveness analysis. The two following chapters then describe the empirical investigation of the product1 market attractiveness and the product1 market attractiveness analysis.

The second part instead focuses on the second research question, which is about assessing the FBU's capabilities that need to be adjusted in order for the business unit to achieve increased competitiveness within the product1 market. Structurally this is done in the same way as the first research question. The outcome of the first analysis is used as input for the second part. First a capability analysis framework is developed, based on a literature review. The following chapter then describes the empirical findings from the second empirical investigation. Thereafter, the capability analysis framework is applied in the next chapter to conduct the capability analysis of the empirical findings. A discussion of the findings will be done after this and the thesis will conclude with recommendations on how the company should pursue in the future.

2 Method

In this part of the thesis the methodology used in this project will be presented. The chapter covers the research process of the thesis, the research strategy, the research design and finishes with a discussion about the quality of the study.

2.1 Research Process

In order to give a more complete overview of how the study was conducted a description of the research process and all of its different stages will be provided in this part. The research process was set up in order to provide guidance and a good overview of the progression of the project. Considering the timeframe of 21 weeks, during which the research was conducted, the research process made it possible to more easily plan what needed to be done each week in the time period. The research process consisted of nine steps that are shown in figure 2. Even though the process is illustrated as being linear it is important to realize that the process contained a lot of iterations.

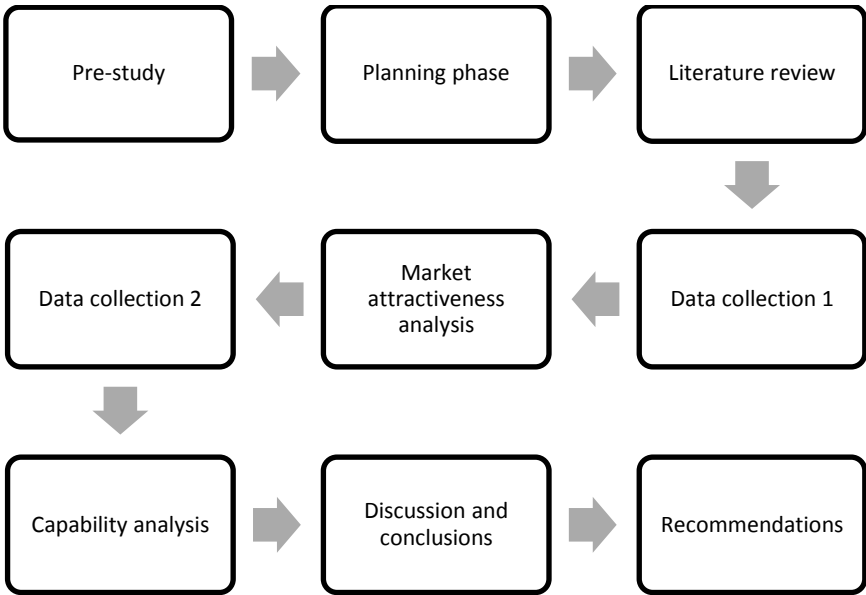


Figure 2 - Illustration of the research process applied in the report

The research began with a pre-study where the main objectives were to get a basic understanding of the problems facing the company and to select the focal issue of the thesis. In this part of the research process we had meetings with both our tutor at Acme, person Respondent9, and our tutor at Chalmers, Christian Sandström, in order to select and narrow down the purpose of the thesis. A meeting was also held where all parties were present (the researchers, the tutor at Acme and the tutor at Chalmers) in order to align the interests and better be able to agree on the focal issue and scope of the thesis.

The second step in the research process was the planning phase. Here a planning report was written containing the preliminary methodology on how to conduct the research and what needed to be done in different periods of time during the time period of the thesis.

In order to guide data collection as well as data analysis, a literature review was conducted to identify relevant theoretical areas related to the research questions. The literature review resulted in two frameworks, one for each data collection and data analysis phase. It was considered early on that the research process would consist of two phases or what we would like to call “modules”. The

reason for this is that data collection and data analysis was done in two different sets, as can be seen in the list above. The first module was connected to the first research question and the second module to the second research question. Thus, the first module was about assessing the market attractiveness of the product1 market while the other module was about assessing what capabilities Acme need to change in order to expand within the product1 market. Data collection was done through semi-structured interviews as well as through documentation from the company. In total 15 employees within the company were interviewed during the empirical investigations.

After the two data collection and data analysis modules had been completed it was necessary to have a discussion to arrive at the conclusions of the thesis. The research process ended with recommendations on how Acme could adapt their capabilities in order to expand within the product1 market.

2.2 Research Strategy

According to Bryman & Bell (2011) it is useful to distinguish between research strategies that are quantitative and qualitative, as they are associated with quite distinctive ways of doing business research. A quantitative research strategy is very much focused on measuring a certain phenomenon by collecting and analyzing data while a qualitative research strategy is more focused on interpreting the reality an object of study faces. The research strategy of the thesis was mostly qualitative in nature as data was collected and interpreted in relation to a specific case. However, some elements of quantitative research were also applied as measurements were used to interpret some of the issues in relation to the research questions. The research strategy of the thesis was thus two faceted. Accordingly, inferences were done mostly following the logic of inductive reasoning. Thus, the focus was on explaining the reality that the company faces. Yet, the research strategy was also characterized by an abductive approach for doing inferences. The reason for this is that the knowledge about the company cannot be regarded as complete and during the project it was essential to do some guess working by constantly constructing explanatory hypotheses in order to move on in the research process. As the research is practically oriented the objective of the research strategy was to contribute to the knowledge within the company.

2.3 Research Design

Here the type of research design that was used and why it was selected will be explained. Furthermore, how we arrived at the research questions of the study, what guided the collection of that data, how data was collected and the type of research methods used will be explained. The part ends with a description of how the data analysis was conducted.

2.3.1 Selection of Research Design

The function of a research design is to ensure that the evidence obtained makes it possible to answer the initial research questions as unambiguously as possible (De Vaus 2001). According to Philliber et al. (1980) a research design can be considered as a "blueprint" for research and should cover at least four problems: which questions to study, which data that is relevant, what data to collect, and how to analyze the results. A research design can be defined as a framework for how to collect and analyze data (Bryman & Bell 2011).

In order to be able to execute the research and to convincingly be able to answer the research questions a specific research design was chosen. The design chosen was a case study design because an in-depth empirical investigation of a single unit of analysis, Acme, was made in order to answer

the research questions and thus the purpose of the thesis. According to Yin (1981) a case study design can provide a more complete understanding of an event or situation in its real life context and it is suitable in situations where the boundaries of a phenomenon and its context is unclear. Furthermore, Yin (2003) states that the most important application of a case study is to explain the presumed casual links in real-life interventions that are too complex for the survey or experimental strategies. A case study is appropriate when something unknown is to be explored and when there is a need to probe deeper to look for explanations and comparing them against each other (Holmén 2011). Case studies are also a good choice for investigating how something really is like within a reasonable time frame (Holmén 2011).

2.3.2 Research Questions and Guidance for Data Collection

In order for us to know what data to collect, frameworks for supporting our own thinking and reasoning were developed. These frameworks guided our data collection phase as well as our analysis phase and provided a certain structure for the whole process. The two frameworks that guided our data collection were developed based partly on gaining a good understanding of the problem facing the company and partly on a rigorous literature study. Therefore, initial interviews were conducted to get a basic understanding of what the knowledge need was within the company and what potential areas that were interesting to investigate in connection to the problem at hand. From these interviews, we gained the understanding that in order to investigate the problem two different perspectives needed to be considered, which made us arrive at two different research questions. As stated in our research questions and purpose, an evaluation of the market attractiveness of the product1 market was needed as well as an assessment of the capability fit of Acme and what potential capabilities that can and need to be changed in order for Acme to expand within the product1 market.

When we had gained the insight that the problem was two folded and had one rather externally oriented question and one rather internally oriented, we focused on the strategic management literature in order to guide our research. In order to identify the most relevant and actual literature within the area, we asked our tutor as well as previous teachers at our master's program for help. We also screened the literature of previous courses we have had during our education to identify articles or books that could be of interest for our study. Our third way of identifying relevant literature was to search the Internet by using key words related to our research questions. Here, we mostly used Google Scholar to find relevant articles and books, as it is possible to see how many times that they had been referenced by others. This gave us a fairly good understanding of their credibility and reliability within the academia. After a sufficient amount of literature related to our research questions had been found, an extensive review of the literature was done. Each article and book was given a rating in terms of how closely they matched the research subject in order for us to focus on the most relevant literature for creating our frameworks. For example, Michael Porter's five forces framework and Robert M. Grant's resource based view perspective were important theoretical viewpoints that were integrated into our frameworks. These two theories and their respective authors/creators have very high credibility within the strategic management literature based on the amount of references.

The first framework that was created was in line with our first research question. Thus, this framework is rather externally oriented and focused more on areas that were externally affecting the

strategic direction of the company. Focus areas for guiding our research were therefore those factors that were identified as affecting market attractiveness, see table 1.

Focus areas for evaluating market attractiveness	Description
Competition	- Market shares & Concentration - Behavior
Customers	- Key Purchasing Criteria
Market	- Characteristics (regionally & globally) - Size & Growth
New Entrants	- Entry barriers
Acme's Performance	- Performance on customers key purchasing criteria
Suppliers	- Concentration
Trends	- Trends generated on micro-level - Trends generated through more external factors such as e.g. economical aspects

Table 1: Focus areas for research, market attractiveness evaluation

Accordingly, the second framework instead focused on investigating our second research question, see table 2. The focus here is more internally oriented in order to generate findings about how the company could adapt internally for increasing its competitiveness within the product1 market. Still, the framework uses external input from the first framework in order to compare the competitor's performance and Acme's performance with the customer's key purchasing criteria in order to identify potential performance gaps.

Focus areas of the capability analysis	Description
Competitors' Performance on Key Purchasing Criteria	- Market shares & Concentration - Behavior
Customers' Key Purchasing Criteria	- Characteristics (regionally & globally) - Size & Growth
Performance Gap	- Performance on customers' key purchasing criteria
Acme's Performance	- Key purchasing criteria

Table 2: Focus areas for research, the capability analysis

Because the research questions were highly dependent in the sense that you cannot answer the second research question without answering the first one, the project was divided into two different modules. The first module was concerned with evaluating market attractiveness of the product1 market. In this phase, data was collected and then analyzed with the help of the first framework. The output from this module was the attractiveness of the product1 market globally as well as the regional product1 markets that were most interesting for Acme. This provided us with input to the second framework and guided us in the data collection for the second module. By knowing the most attractive regional markets we could dig deeper into those markets and evaluate specific customers' key purchasing criteria and compare Acme's performance as well as the competitors' performance, on these criteria. Thus, it was possible to identify performance gaps on which were Acme had to improve in order to strengthen its competitiveness within these markets.

2.3.3 Research Methods

To collect relevant data for the study both primary data, in the form of semi-structured interviews, as well as secondary data, in the form of various documents from the company, were used. By

collecting data with two different research methods it was possible to triangulate information for establishing greater reliability of the data. Through triangulation, thick descriptions of certain phenomena could be created.

2.3.3.1 Semi-structured Interviews

The interviews that were conducted were semi-structured. The reason for this is that semi-structured interviews allow a certain level of structure while still making it possible to probe deeper and ask follow up questions if something interesting is said during the interview. The interviews loosely followed a certain structure with regard to our frameworks that guided us in the data collection. Thus, structured questions on a fairly general level could be asked while still allowing us to probe deeper if something interesting was mentioned. Semi-structured interviews were therefore very suitable for the study.

The semi-structured interviews were conducted following a four-step process in order to establish a consistent way of working. This made it easier to trace where we were in the data collection phase and it also reduced the risk that the process itself would affect the outcome of our interviews. Therefore, the risk that the variation in the process would affect the validity and reliability of our results was mitigated. The four phases that every interview followed were the following: investigation of potential interviewees’ areas of knowledge, selection of interviewee and writing questions; initial contact; execution of the interview; transcription. These phases are explained more in detail in the table 3.

Interview phase	Description	Activities
Phase 1: Knowledge assessment, selection of interviewees and writing questions	<ul style="list-style-type: none"> - Investigating the interviewee’s area of knowledge - Selection of interviewee - Writing questions in line with interviewee’s knowledge 	<ul style="list-style-type: none"> - Looking up potential interviewee’s position within the company - Elaborating on potential areas of knowledge - Write questions and develop interview guide
Phase 2: Initial contact	<ul style="list-style-type: none"> - Contacting interview object to inform about the project and its purpose and scheduling the interview 	<ul style="list-style-type: none"> - Contact interviewee either by mail or by phone
Phase 3: Execution of interview	<ul style="list-style-type: none"> - Performing the interview 	<ul style="list-style-type: none"> - Asking questions loosely following the structure according to the interview guide - Probing when needed - Recording of interviews
Phase 4: Transcription	<ul style="list-style-type: none"> - Writing down the interviewee’s answers 	<ul style="list-style-type: none"> - Listen to the recordings and writing down the answers - Storing the documentation

Table 3 - The four phases of the interview process

As seen in the table, the first phase of the interview process consisted of getting a good overview of the potential interviewees’ areas of knowledge, selecting the interviewee as well as designing and writing an interview guide from where to ask questions in line with the interviewee’s area of knowledge. In order to assess a potential interviewee’s area of knowledge, we used organizational charts to see an interviewee’s position within the company and we also questioned our tutor at

Acme to get deeper insights about a person’s knowledge area. The study focused on interviewing people with the best insights into particular markets or particular business problems within the client’s organization to the greatest extent possible. For example, when investigating the Chinese and Indian markets in the market analysis, people working within the local branches of the company in these markets were interviewed. Snowballing was a way for us to know which people within the company to talk to. In other words, during interviews we either got referred to people who knew more about a certain issue or we asked about it. When designing the interview guide for each of the semi-structured interviews, the topics from our frameworks that to the greatest extent corresponded to the interviewee’s area of knowledge were selected.

Interviewee	Business function	Market span	Title
Respondent1	Business development	India	Key account manager
Respondent2	Business development	Global	Business manager product1 type1
Respondent3	Business development	Global	Business development manager
Respondent4	Business development	East Europe, Middle East & Africa, Latin America, Asia Pacific	Manager competence center
Respondent5	Business development	India	General manager
Respondent6	Demand chain	Global	Demand chain manager
Respondent7	Global account management team	Global	Global account manager
Respondent8	Global account management team	Global	Global account manager
Respondent9	Product, process and development	Global	Product, process and development manager
Respondent10	Product, process and development	Global	Production manager
Respondent11	Product, process and development	Europe	Six sigma black belt
Respondent12	Product, process and development	Global	Project manager
Respondent13	Manager China	China	General manager
Respondent14	Sales	North America	Managing director
Respondent15	Sales	Western Europe	Key account manager

Table 4 - The interviewees

The next step of the interview processes was to establish an initial contact with the interview object. Here, the interview object was contacted either by phone or by mail to inform about the project and to see if the person had any time for an interview. If the person was available for an interview an important part was to more thoroughly explain the purpose of the project as well as informing about what type of questions that were to be asked. This was most often done by mail. By doing this, the interviewee had time to prepare and could thus give us more reliable answers.

The third step of the interview process was all about performing the actual interview. The interviews were either done face-to-face or by phone or Skype, depending on the interviewee’s localization and availability. Many of the interviewees were stationed in other places of the world than Sweden,

which made it necessary to conduct telephone interviews. During the interviews, questions were asked loosely following the interview guide and follow up questions were asked when something interesting was found. Every interview was recorded in order to allow for transcription in the last phase of the interview process. The interviewees and their respective positions within the company are shown in table 4. By interviewing people from all of the different functions within the firm, answers could be compared, thus allowing for triangulation of the answers. Even though most of the information gained from the interviews was qualitative in nature some of the qualitative data could be quantified. In some interviews the interviewees were given excel sheets where they were supposed to express and qualitatively rank Acme's and the competitors' performance on customers' key purchasing criteria in different regional markets on a numerical scale. These qualitative assessments and rankings were then used to make quantitative assessments in the data analysis.

In the last part of the interview process the recorded interview material was transcribed. This was done by listening to the recordings and writing down the answers to the interview questions. The documentation was then stored in a data collection folder to easily be found.

2.3.3.2 Documentation

Secondary data from the company was also collected. This documentation from the company was an important source of information in order to get a better overview of the overall business strategy of the FBU, the organizational structure of the FBU as well as the general product1 market situation facing the focal industry. Organizational charts, business strategy documentation for the FBU as well as market research documentation about the focal industry and product1 market were collected and analyzed carefully. Thus, data from all of the documentation were collected and categorized according to the different parts of the frameworks.

2.3.4 Data Analysis

As the study was done in two modules, analysis of data was done in two different parts. The first one was a market attractiveness analysis and the other one a capability analysis. The market attractiveness analysis was done by first structuring the data from the interviews by using the categories within the framework. Thus, information was grouped into the categories: market, customers, competition, suppliers, new entrants, trends and Acme's performance on key purchasing criteria on a market basis. When information had been grouped it was possible to get a better overview of the characteristics and trends of the global product1 market as well as of each regional market. The product1 market was then analyzed both qualitatively and quantitatively. In order to understand the product1 market a qualitative analysis of the empirical data under each category within the market attractiveness framework was done. After this the interrelationships between categories and how they were expected to change due to market trends were analyzed. Quantitatively, a number of measures were used in order to assess the attractiveness of each of the regional markets. For example, the growth of each regional market was used as an indicator of their respective attractiveness.

When the most attractive markets had been identified, phase two of the research process began. After internal data regarding the FBU was collected this data could be analyzed with our second framework of analysis. Here the FBU's performance on customer's key purchasing criteria was assessed and then compared to competitors' performance on the same criteria. Thus, it was possible to evaluate the FBU and the competitors' relative performance on customers' key purchasing

criteria. Performance gaps in relation to competitors could be identified which then could be linked to functional capabilities within the firm. Therefore it was possible to identify areas of improvement within functional capabilities. By assessing the impact on the cost structure of the product it was possible to estimate which capability improvements that would result in the greatest cost reduction. By doing this it was possible to identify which capability improvements the company were recommended to improve and how the FBU should pursue strategically.

2.4 Research Quality

In this part the quality of the study will be discussed. According to Yin (2003) the quality of a case study can be assessed with the following criteria: construct validity, internal validity, external validity and reliability.

2.4.1 Construct Validity

Construct validity is concerned with whether the measure devised for a concept reflects that concept (Cepeda & Martin, 2005). In other words, construct validity is to the extent what was supposed to be measured actually was measured. Yin (2003) states that using multiple sources of evidence, establishing a chain of evidence and having informants review the report are all strategies for increasing construct validity in a case study. All of these strategies were employed to increase the construct validity of the thesis.

By interviewing a diverse set of people within the company, measures for concepts could be linked from multiple sources, thus increasing the construct validity. By using the two different research methods semi-structured interviews and documentation, greater construct validity could also be established as data collected with respective method could be compared against each other. Our tutors from both Acme and Chalmers reviewed the report, which generated constructive feedback that positively affected the study's construct validity.

2.4.2 Internal Validity

Internal validity is concerned with the causality of inferences in a study (Bryman & Bell 2011). Thus, it is concerned with whether if A causes B and is not only a spurious correlation. Typically, internal validity is one of the strengths with qualitative research (Bryman & Bell 2011). Triangulating data with both the use of multiple methods and by comparing interview answers with each other positively affected the thickness of the descriptions of the phenomena. The thickness of the descriptions was also assured by noticing that answers on questions about different concepts became more and more saturated as more people were interviewed in the interview process. Hence, the internal validity was strengthened. However, it is important to mention that a rather few number of interviews were conducted at the company which could affect the internal reliability negatively. Identifying true reasons for a particular problem, i.e. casual links, could thus be seen as quite problematic. Another issue that negatively could affect the internal validity of the study is the fact that the interviews only were conducted with internal managers at the company. From one point of view it would have been beneficial to talk to customers in order to assess e.g. their key purchasing criteria as they are the ones making the buying decision. However, the same problem would arise by interviewing people in the customers' organizations as these organizations are very big and people within them are not likely to share the same opinion on certain matters. In order to deal with sampling related internal validity problems, the study focused on interviewing people with the best insights into certain matters, as mentioned in the section about semi-structured interviews. As the

interviewers let the interviewees quantify market shares and estimate performance on key purchasing criteria through the use of excel sheets during the interviews, this reduced problems with interpreting qualitative information which also strengthened the internal validity.

The scope of the thesis is also something that was quite problematic to deal with in terms of internal validity, as it is quite broad. By having a more specific scope and purpose it would have been easier to be more specific and precise in measuring different variables as well as being able to be more specific in the findings. It is also likely that it would have allowed for being more creative in the analysis and conclusions. On the other hand, this is an obvious trade-off and it is very hard to be all-embracing while still providing great detail. Therefore, this perspective was considered from the beginning of the research process and was a matter of pure choice.

2.4.3 External Validity

External validity is instead concerned with to the extent the findings of a study can be generalized (Bryman & Bell, 2011). The external validity of the study is very low. However, as the purpose of this thesis was not to generalize the findings, the external validity quality criterion was irrelevant. The reason for this is that the study is practical in nature and about solving a specific business case and not about generating theories or hypotheses that could be applied to other business cases.

2.4.4 Reliability

Reliability is concerned with how consistent a study is. According to Bryman & Bell (2011) there are two measures of reliability in qualitative research. These two measures are denoted internal and external reliability.

Internal reliability is concerned with whether two observers agree on the content of the data that has been gathered (Bryman & Bell 2011). The internal reliability of the study is considered to be fairly good. Both interviewers were present at every interview and information was therefore conveyed in the same manner to each researcher. After each interview a discussion was held to make sure that information had been perceived in a consistent way. The fact that all interviews were recorded and transcribed did also contribute to increase the internal reliability of the study.

External reliability is instead concerned with the degree to which a study can be replicated (Bryman & Bell 2011). The external reliability of the study is considered to be quite low. The main reason for this is the sampling of interviewees as well as the settings for the interviews, which all are hard to replicate. As brought up in the text about internal validity, the empirical results could be largely influenced in terms of who you talk to and the width of the thesis' scope and this also affects the external reliability of the findings. If another sample would have been chosen it is likely other results would have emerged. Consequently, it would be hard to replicate the results of this particular study. It is also likely that if the purpose and scope of the thesis would have been more specific the concepts and variables used could have been more specifically defined and possibly easier to be able to replicate in another study. However, the methodology of the study has been explained in greatest detail possible in this chapter, which mitigates the problem with external reliability to some extent.

3 Market Attractiveness: Theoretical Framework

This section is the first under the market attractiveness part of the report. It will present the theoretical perspectives taken into consideration during the market investigation. The presented theories will be recombined in a way that will allow for the market related question to be answered. Therefore a market analysis framework will be presented in the final section of this chapter.

3.1 Formulating Strategies

In strategy formulation there are two basic views, the external view and the internal view. From the external view, it is argued that external factors are what matters most in successful strategy formulation (Johnson et al 2008). From the internal view instead, it is argued that an organization's resources and capabilities are what matters most in strategy formulation (Johnson et al 2008). According to Johnson et al. (2008) it is important to not take a too unified view and that both of these perspectives matter in creating successful strategies. In combination with simple consistent long-term goals and the appropriate structure and systems in the firm for implementing the strategy, Grant (2008) also emphasize that both of these perspectives are important in defining successful strategies. Both of the views are considered important to strategy formulation because the performance of a company depends not only on its environment but also on its position within that environment, which largely depends on the company's resources and capabilities. The following section only covers the external perspective while the internal perspective will be brought up later in the thesis.

3.2 Market Analysis

A major field within strategic management is to understand sources of sustained competitive advantages (Porter 1985). Porter (1985) stresses that the core of formulating competitive strategies is to relate a firm to its surrounding business environment, which relates to the external perspective of strategy formulation. The business environment is a broad term and can be defined as the different kinds of external influences that affect a firm's decisions and performance (Grant 2008). The business environment can be viewed from different levels of detail depending on the purpose and thoroughness of the analysis.

According to Grant (2008) the business environment can be viewed from either a macro-level or micro-level point of view. From a macro-level point of view, analyzing the business environment is about scanning wider external influences. These wider influences can be classified by using the PESTEL framework, which considers political, economic, social, technological, environmental and legal factors that can influence a business. These external influences affect almost all organizations independent of what industry they belong to (Johnson et al 2008). By using the PESTEL framework it is possible to identify key drivers of change in the business environment. These drivers are interesting to consider as they might affect how strategies in a certain company needs to be changed in order for the company to stay competitive (Johnson et al 2008).

On the micro-level on the other hand, analyzing the business environment is about analyzing the closest related variables that affect an industry's profitability and thus the attractiveness of a particular industry for a firm. To assess an industry's profitability an industry analysis can be done by using the famous Five Forces framework by Porter (1980). The Five Forces framework focuses on determining industry profitability by analyzing the rivalry between competitors, the bargaining power of suppliers and buyers, as well as the threat of new entrants and substitute products to an

industry (Grant, 2008). According to Grant (2008) another force that could be important to take into consideration is also complements. All of these factors will now be explained more in detail.

Rivalry between competitors is usually the major factor determining industry profitability. How intense the rivalry is depends on the concentration of competitors, the diversity of competitors, product differentiation, excess capacity and exit barriers as well as the cost conditions in the industry (Grant 2008). Concentration of competitors refers to how many competitors that are competing within an industry and their respective market share, which will affect pricing decisions and thus the profitability. In a monopoly situation pricing is likely to be restrained while in a situation with fierce competition prices would be lower. The most common way of measuring competitive concentration is by the concentration ratio which is calculated by simply adding the leading producers' market shares (Grant 2008). It is also important to consider the diversity of competitors, which is about the similarity of competitors in terms of e.g. strategy and objectives. If competitors are similar they are less likely to be in strong price competition. Product differentiation instead refers to the offerings among the competitors. The more similar the offerings are, the more likely customers are to buy competitors' offerings and the more important it is for firms to have low prices.

Excess capacity and exit barriers explain that industry profitability can be affected by the economic cycles because there could be a misbalance between capacity and demand. During recessions there might be an overcapacity, forcing companies to cut their prices to increase profitability. Cost conditions also affect the level of competition as e.g. cost structures of firms determine how low prices will go in a recession. Bargaining power of buyers and suppliers refers to the economic power of actors and depends on two factors according to Grant (2008): buyer's price sensitivity and relative bargaining power. Complements also affect bargaining power and refers to that the value of many products depends on other complementary products. For example, the value of a printer by itself is little without having ink cartridges. Price sensitivity can be affected by e.g. the level of product differentiation. If products are commoditized the more likely it is that buyers will switch to another supplier's offer.

Relative bargaining power is about how the balance of power between the sellers and the buyers is distributed. To illustrate, if there are few buyers, the more important the potential business with a buyer is for a supplier; or if buyers are well aware of the costs and prices of suppliers they are in a better position to negotiate. Furthermore, the threat of new entrants refers to how likely it is that new firms will enter the industry. A profitable industry will attract new potential competitors. However, there might be barriers for entering an industry. Potential entry barriers could e.g. be high capital requirements, strongly differentiated products through branding and legal barriers. Lastly, the threat of substitutes is important for understanding industry profitability. If there exist many products in other markets that fulfill customer needs in the same way, sellers would have to reduce their prices in order not to lose business.

However, an industry perspective might be of a too high level in order to provide a good understanding of the particular competition and customer situation facing a firm (Johnson et al 2008). This is because different competitors might be positioned differently in an industry and thus facing forces of varying magnitude of strength in the Porter's Five Forces framework. Porter (1980) emphasize that industries can be divided into different groups of competitors roughly following the same strategies. These so called strategic groups face forces of equal strength and have the same

customers. For this reason, Johnson et al (2008) goes one step further and divides the business environment into a third layer, competitors and markets, which is the closest layer surrounding organizations. The third layer considers the fact that industries may have many different kinds of organizations competing on different bases as well as in different market segments. This type of analysis is about identifying the market the firm wishes to serve, the firm's direct competitors and gaining understanding of the customers' needs (Johnson et al 2010). In essence, it can be referred to as a market analysis (Johnson et al 2008; Aaker 2010).

Analyzing the business environment on a market basis is about assessing the market attractiveness of a particular market for a firm in an industry (Aaker 2010). Aaker (2010) provides a way for assessing market analysis and highlight the following dimensions to be of importance: market size and growth rate, market profitability, industry cost structure, distribution channels, market trends and key success factors in the market. The market size can be estimated by using present sales as well as potential sales while the market growth rate instead can be estimated by extrapolating historical growth data into the future. Assessing market profitability can be done by using the Five Forces framework on a market basis instead of looking at it from the perspective of an entire industry supplying an aggregated market (Aaker 2010). According to Aaker (2010) cost structure in an industry is important for understanding where value is added. Distribution channels are also important in a market analysis as it gives information about the current existing distribution channels that are used and their characteristics. The market trends are also important for a market analysis as they give information about potential opportunities and threats that arise when changes in the market occur. Lastly, the key success factors are the customers' needs that need to be fulfilled in order for a company to be successful in the market place (Johnson et al 2008).

3.3 A Framework for Market Analysis

In this part the market analysis framework that will be used for analyzing Acme's external environment and thus the market attractiveness of the product1 market is presented. The framework is focused on analyzing the factors affecting market attractiveness and it is built on the perspectives brought up in the previous section about market analysis. The dimensions of doing a market analysis from Aaker (2010) are used in combination with the perspectives on market analysis brought up by Johnson et al. (2008). The foundation of the framework is built upon Porter's Five Forces discussed earlier. The market analysis framework is shown in figure 3.

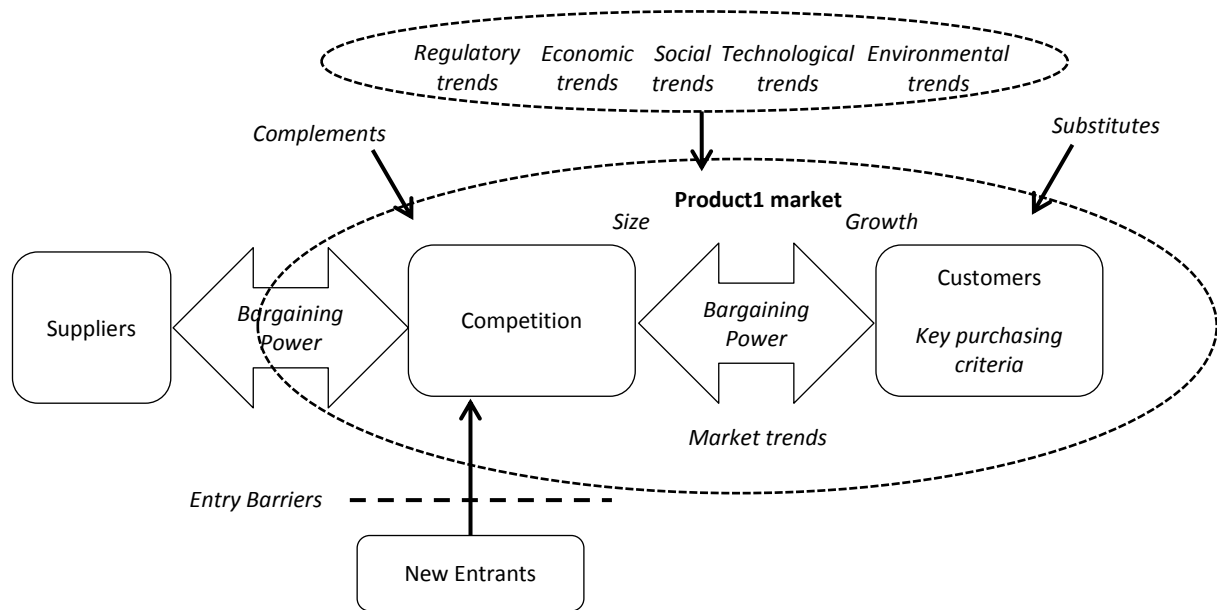


Figure 3 - Market analysis framework

As seen in figure 3, the focus on the framework is on a particular market, the product1 market. The market has certain characteristics in terms of size and growth, which is illustrated in figure 3. To bring in a dynamic perspective in the framework, market trends as well as more general external trends from the PESTEL framework are taken into account.

The market profitability is assessed in the model through the use of the Five Forces plus the extra sixth force, complements. In the market, exchanges occur between competitors in the product1 industry and the customers. The power balance between these two actors is illustrated by the bargaining power-arrow in the middle of figure 3. As discussed earlier, this power balance could be affected by e.g. the relative size and number of sellers and customers as well as how informed they are about each others' prices or costs. The bargaining power of suppliers is also taken into consideration in the framework. The suppliers are placed outside the product1 market as they belong to another market. Complements as well as substitutes are seen as products belonging to other markets. Both complements and substitutes influence the bargaining power and thus the market profitability. New entrants are standing outside the market and are affected by barriers for entering the industry.

As Aaker (2010), Johnson et al. (2008 as well as Grant (2008) stresses that key purchasing criteria, or key success factors, are important in order to assess market attractiveness these are incorporated into the framework. These criteria are specific market needs that need to be fulfilled by competitors in order to be successful in the market.

4 Market Attractiveness: Empirical Findings

In this part of the thesis, findings regarding the product1 industry and related actors from interviews with various interview objects at the FBU will be presented. First, the structure of the OEM product1 market and the aftermarket and the markets' dependence will be discussed. Thereafter, the geographical markets' characteristics with focus on turnover and growth will be explained. The competitive environment within the market and the barriers that is restricting actors to enter the product1 market will be discussed. Finally, the key purchasing criteria emphasized by the OEMs on some geographical markets will be presented.

4.1 Product1 market Structure

The market for product1s can be segmented into an OEM market and an aftermarket for product1s (Acme Complement product1 strategy 2011). The product1s sold on the markets are the same but the customers' preferences differ widely (Respondent9 2012d). The OEM market for product1s is the market for product1s used in the production of new product2s by OEMs, while the aftermarket is the market for replacement product1s where the operators of the segment1 systems are the customers (Respondent8 2012a). The segment1 OEMs are primarily the product1 suppliers' customers for other application segments as well but the segment1 operators are often only operating the product2s and no other segment applications (Respondent4 2012b). There exist two drivers of product1s for new product2s: new product2s that operate new segment1 lines when a segment1 system expands and product2s operating existing lines that are being replaced by new product2s (Respondent9 2012j). The aftermarket consists of the product1s that are being replaced in the operating product2s, the installed base of product2s, after in approximately 12 years (Respondent9 2012j).

The two product1 markets are part of the same value system: the product1 manufacturers supply the OEMs with product1s which constitute a strategic component in their product2s that are sold to the segment1 operators (Respondent8 2012a; Respondent15 2012). However, the product1 value system can be setup in two different ways (Respondent15 2012). In the traditional design of a segment1 system, the segment1 OEMs manufacture the product2s and deliver these to the segment1 operators, which operate the product2s and conduct the maintenance, see figure 4 (Respondent8 2012a). In the alternative setup, OEM integrated flow, the product2s are both manufactured and operated by the OEM, see figure 4 (Respondent15 2012).

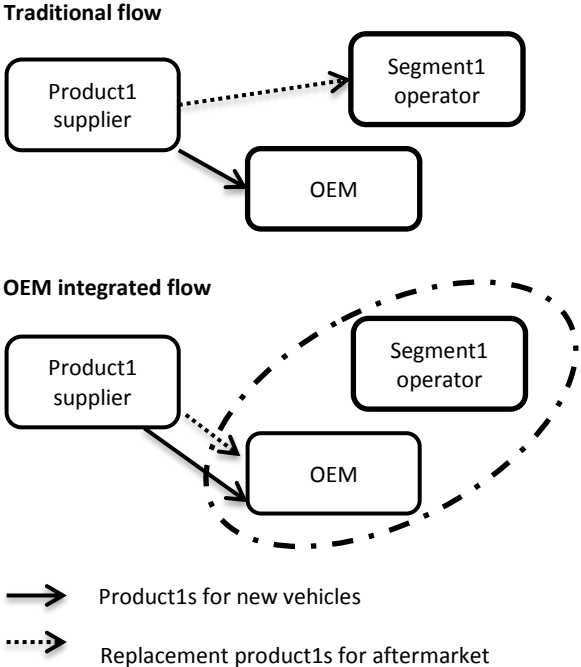


Figure 4 - Two types of product1 value system (created based on discussions with Respondent15 2012)

The customers' purchasing characteristics differs on the OEM product1 market and the aftermarket for product1s, where for example the aftermarket customers value delivery speed since their demand is instant but these customers are not as price sensitive as the OEMs (Respondent8 2012a; Respondent9 2012d). Furthermore, the technical product1 solutions are customer unique and they must be adapted to the local circumstances of the segment1 system which the product2s will operate in, such as the condition of the segment1 system's tracks and climate conditions (Respondent9 2012f). However, the product1 suppliers strive to utilize homologated product1 solutions to the highest possible extent because changing the product1 design is costly (Respondent9 2012f). A cheap way of changing the product1 characteristics and thereby the specification is to use a different component5. Component5s utilized in product1 solutions is the exception regarding unique customer solutions. Segment1 operators most often would like to use the same type of component5 in their depots due to standardization (Respondent9 2012f). Delivering product1 solutions aimed to be used in segment1 systems that already utilize certain component5 can be challenging due to that the combination of component5 and component3 is critical and component5 leakages can arise (Respondent9 2012d).

The product1 market customers' focus on standardization of the product1s implies that the nature of the product1 demand for a specific segment1 system is exponential up to some level (Respondent9 2012c). Segment1 systems are often expanded by the operators who establish a few segment1 lines which later on are expanded, hereof a growth in the segment1 system size (Respondent9 2012c). The first deal the OEM announces for a segment1 system is important since the choice of product1s affects the OEMs' future choice of a product1 supplier when new segment1 lines are established (Respondent9 2012a). The OEMs procure their product1s by using tender offerings and the product1 suppliers have an opportunity to present offers which later on are evaluated by the specific OEM's key purchasing criteria (Respondent8 2012a; Respondent9 2012a). Once product1 suppliers have been awarded the delivery of product1s for the construction of product2s for a segment1 line, competitors are unable to sell product1s to the project in case the complement product1s have been uniquely designed (Respondent9 2012a).

The OEMs' key purchasing criteria are of two types; technical requirements and commercial criteria (Respondent8 2012a). The technical requirements are very much regulated and product1 suppliers must fulfill a certain level of the demands in order to be considered as a product1 supplier (Respondent8 2012a). The minimum requirements the product1 suppliers must fulfill are the technical requirements of certain standards (Respondent8 2012a). Another reason to the frequent usage of the technical requirements is that the segment1 operators favor these since they allow the operators to functionally specify their demands, which lowers their overall product responsibility and risk (Respondent9 2012c). The technical standards require extensive product tests where the product1s must be operated in test rigs for between 600 000 to 800 000 km for new solutions and between 100 000 to 200 000 km for any minor changes in the design (Respondent9 2012d). Technically, beyond fulfilling the technical standards the product1 suppliers are being evaluated on similar product1s' track-record in other systems (Respondent8 2012a).

Similar standards do also apply for the product1 related component, the complement product1 (Respondent9 2012d). This component is a strategic component since it can be designed in a way that competitors' product1s do not fit the complement product1 dimensionally (Rosengen 2012c). Product1 suppliers that wins the complement product1 tender can therefore charge a high margin

for their product1s from the OEM and segment1 operators since these actors are forced to use the supplier's product1s specifically (Respondent8 2012a). However, strong engineering capabilities are needed in order to develop complement product1s and the market for complement product1s has historically been dominated by a few technologically leading product1s suppliers (Respondent8 2012a). Since five years ago the most prominent OEMs have begun developing their own complement product1s due to the components strategic importance (Respondent8 2012a; Respondent15 2012).

The segment1 operators have also taken action in order to homologate additional suppliers' product1s in excess to the product1s already approved by the OEMs in order to gain better bargaining power (Respondent9 2012b). This process is done by that a segment1 operator force the current product1 suppliers to have so called design alignment meetings with potential product1 suppliers in order to exchange dimensional information that can serve as a restriction to deliver (Respondent9 2012b). This is related to the trend that the customers to an increasingly degree are procuring product1s using dual and multiple sourcing strategies (Respondent9 2012c). The segment1 operators are especially interested in using multiple sourcing strategies such as dual sourcing since single sourcing strategies gives the product1 supplier substantial purchasing power and possibility to charge high prices (Respondent9 2012b). However, the segment1 operators usually purchase product1 according to how the initial OEM product1 order was distributed between the product1 suppliers (Respondent9 2012b). Product1 suppliers are therefore often given a certain share of the aftermarket business despite that multiple actors have the possibility to deliver product1s, as long as the product1 suppliers delivers according to the segment1 operators instant needs and have no quality problems (Respondent9 2012b).

4.2 Geographical Market Characteristics

The focal industry and investments in segment1 systems and related subcomponents like product1s are long-term investments and the industry is conservative (Respondent12 2012). The two markets that have been leading the product1 market historically are North America and Western Europe (Respondent4 2012b). The two markets have substantial installed base demands for replacement product1s, which is a long-term and very stable need since product1s continuously have to be replaced as long as the system is in operation (Respondent9 2012j). The market growth estimations for North America and Western Europe are lower than the Asian where the OEM product1 market growth is expected to be high continuously due to China's and India's authorities' investments and positive attitudes towards segment1 systems, see table 5 (Respondent9 2012j). The managing director of the most influential segment1 organization in India stresses that it will be mandatory to establish segment1 systems in all cities with more than 3 million inhabitants (Anonymous source-2 2011). Based on institutional promises the Indian segment1 systems are expected to be expanded widely within the upcoming years (Respondent3 2011-03-23). However, an expansion is not only expected in India but also in other Asian countries such as South Korea, which has very high utilization of their current segment1 systems (Respondent4 2012a).

The segment1 OEM market has traditionally been dominated by the three larger focal industry competitors: OEM1, OEM2 and OEM3 (Respondent8 2012a). However, the market trend is that the Chinese OEMs OEM6 and OEM7-1, OEM7-2 and OEM7-3 are increasing their market shares, see figure 5 (Respondent8 2012a). These actors have a willingness to become more technology advanced

in their market offerings and are therefore creating collaborations with OEM1, OEM2 and OEM3 on the Chinese product2 market (Respondent8 2012a).

Another upcoming OEM related trend is that the actors to an increasingly extent manufacture the product2s locally at the market where these will be operated (Respondent3 2012). OEM1, OEM2, OEM5 and OEM3 have traditionally manufactured product2s within the Western European market that have been exported to other geographical markets (Respondent3 2012). The export of product2s to China has already been reduced and this is currently occurring for India as well where the OEMs are locating manufacturing capacity (Respondent3 2012). However, the OEMs are still exporting product2s to the South and North American product2 markets (Respondent3 2012). Domestically, some markets are solely supplied by product2s through exporting such as the South Korean market. Another factor that differs between the OEM product1 markets is the driver of the demand whereas well established markets are driven by replacement of product2s and expanding product1 markets by the product2s that expand the installed base (Respondent9 2012j). For example, the Korean OEM product1 market mainly is driven by the replacements of product2s whereas the Indian by the expansion of the installed base (Respondent9 2012j).

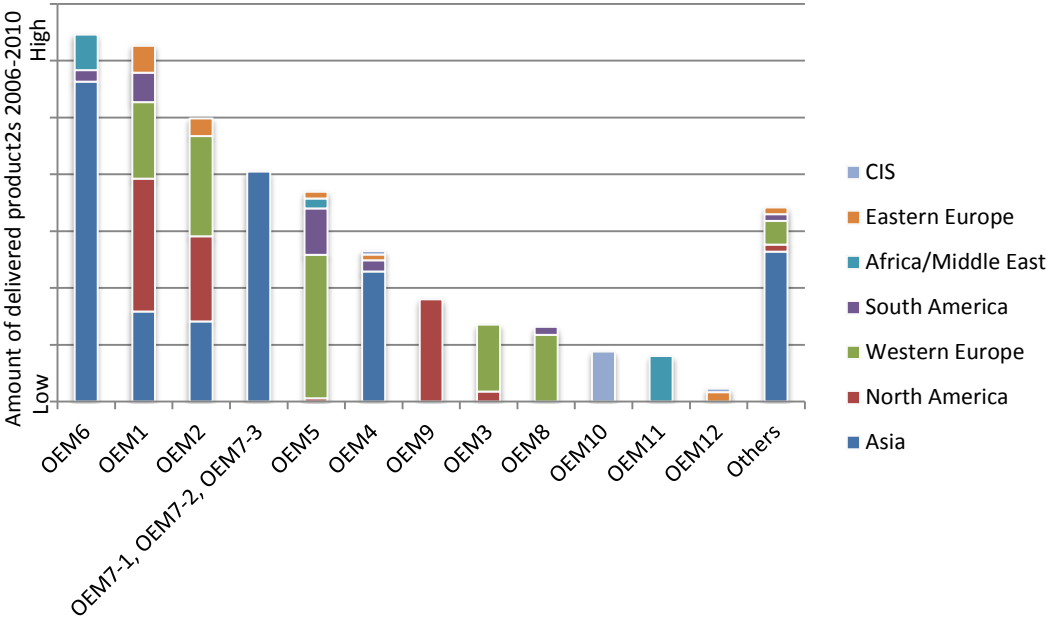


Figure 5 - Ranking of the segment1 OEMs based on delivered product2s 2006-2010 (Respondent9 2012j)

	Africa/ Middle East	Asia	CIS	Eastern Europe	North America	South America	Western Europe
OEM product1 market 2010	5.4	64.7	3.3	4.1	15.3	9.4	21.8
Product1 aftermarket 2010	3.7	51.9	16.0	5.9	36.5	7.4	39.5
New product2 growth for 2010-2015	7.5%	6.2%	0.0%	-1.6%	-3.8%	8.1%	-3.7%
Installed base growth for 2010-2015	9.0%	7.4%	0.2%	2.8%	1.0%	7.6%	1.6%

Table 5- Product1 market sizes for the various geographical markets and new product2 and installed base growths for each geographical market (Respondent9 2012j)

Product1 Markets	China	India	Japan	Malaysia	North Korea	Philippines	Singapore	South Korea	Taiwan	Thailand
OEM product1 market 2010	32.8	4.6	7.7	0.5	0.7	0.2	1.4	9.0	3.6	0.4
Product1 aftermarket 2010	17.5	2.3	13.7	0.3	1.9	0.2	1.8	11.8	2.2	0.5

Table 6 - Product1 market sizes for the Asian OEM product1 market and the aftermarket for product1s (Respondent9 2012j)

	China	India	Japan	Malaysia	North Korea	Philippines	Singapore	South Korea	Taiwan	Thailand
Amount of cities with > 3 million inhabitants	19	11	3	0	1	1	1	2	1	1
Amount of segment1 systems	15	5	11	1	1	1	1	6	2	1

Table 7 - Amount of cities with more than 3 million inhabitants (UN Population Division 2008) and the number of existing segment1 systems per country in Asia (Anonymous source 2004)

4.3 Competitive Environment

The product1 suppliers that are active within the product1 markets have presence on several geographical product1 markets, see table 8 (Respondent9 2012f; Respondent4 2012a). As for the OEM market, the product1 suppliers perform differently on the different markets based on their local market presence and technical resources that can be assigned to orders on different local markets (Respondent9 2012f). Competitor4 delivers very advanced product1 solutions within the Asian market but the firm has less technical resources in Western Europe where less technically advanced solutions are offered (Respondent9 2012f). However, Acme's most challenging competitor is Competitor1: a comparable firm that has strong engineering capability but also a very competitive cost structure (Respondent8 2012a).

Acme is facing particularly fierce competition at Competitor1's home market in Western Europe where the competitor has a strong market presence due to a large amount of application engineers (Respondent15 2012). Furthermore, Competitor1's sales organization has a larger degree of centralization than Acme's which implies that Acme is facing intense competition from Competitor1 in Western Europe but have higher presence on other local markets (Respondent3 2012). Acme has still a strong market share in Western Europe but Competitor1's extensive presence on the market implies that the firm can deliver the most profitable projects (Respondent15 2012).

At markets where Acme is not that strong the firm often encounters competition from Competitor2, which sells lower priced product1s with a lower technical advancement (Respondent8 2012a). Competitor2 has naturally a strong position at its domestic market, the United States (Respondent8 2012a). However, the firm has also market leading positions at the South Korean and Indian market where it has a close relationship with OEM4.

Product1 suppliers	Africa/ Middle East	Asia	CIS	Eastern Europe	North America	South America	Western Europe
Acme	10%	11%	0%	8%	7%	15%	30%
Competitor1	8%	10%	0%	5%	6%	10%	25%
Competitor2	35%	15%	0%	3%	40%	10%	10%
Competitor4	20%	20%	0%	3%	10%	10%	8%
Competitor3	15%	20%	0%	2%	10%	10%	5%
Competitor5	2%	1%	1%	35%	1%	2%	2%
Others	10%	23%	99%	44%	26%	43%	20%
Total	100%	100%	100%	100%	100%	100%	100%

Table 8 - Product1 manufacturers' market shares per geographical product1 market for both the OEM and the aftermarket (Respondent4 2012a)

Product1 suppliers	China	India	Japan	South Korea
Acme	30%	9%	A few percent	10%
Competitor1	30%	47%	A few percent	40%
Competitor2	-	44%	A few percent	-
Competitor3	30%	-		10-15%
Competitor6	-	-	Relatively consolidated	10-15%
Other	10%	-		15-30%
Total	100%	100%	100%	100%

Table 9 - Market leading product1 manufacturers' market shares for the Chinese, Indian, Japanese and South Korean product1 markets based on order-in-take (Respondent5 2012 ; Respondent4 2012a; Respondent9 2012c; Respondent13 2012a; Respondent4 2012c)

4.4 Entry Barriers

The requirement a product1 supplier must fulfill in order to deliver product1s to potential customers is the technical standards (Respondent9 2012c). The technical standards differ between markets but some standards like the European Standard (EN) is applicable for several markets (ibid). There is no existence of any legal requirement that force product1 suppliers to comply with the standards such as the EN standard since the segment1 velocities are relatively low compared to other application segments (Respondent9 2012d). However, the segment1 operators utilize the standards in almost all product2 procurements since it is a convenient way for the operator to ensure that product2s are manufactured in a technically reliable way (Respondent9 2012d).

Despite that the technical standards ensure a certain technical advancement the emphasis on safety differs between the geographical markets (Respondent8 2012a). In Asia, specifically in China and India, safety and reliability are some of the most important purchasing criteria (Respondent5 2012; Respondent13 2012a). On these markets, the safety and reliability is evaluated by investigating similar product1 solutions' track-record (ibid). As in Asia product1 solutions with a high reliability is demanded in the South American market, where product quality is one of the key criteria in the segment1 OEMs' product1 purchases (Respondent4 2012a). However, in the North American market the segment1 operators have high request for safe product1s solutions, despite that product1s are considered a commodity (Respondent8 2012a). The reason for this is that North American operators have a relatively higher product responsibility (Respondent8 2012a).

The focus on product1 safety in Western Europe is very high due to the level of technical advancement in the product1s solutions, which is considered as a sub-system not a pure product (Respondent8 2012a). In contrast, the emphasis within the CIS market is much on price and technical

advancements are not the main focus, which is illustrated by that product1s are considered as a commodity here (Respondent8 2012a). Safety is not the main priority at the Eastern Europe product1 market despite there is an understanding of the criterion's importance (Respondent4 2012b). This is in contrast to Africa/Middle East where safety is formally expressed as a demand due that the hired European consultancies stress the criterion (Respondent4 2012b).

The possibility to establish relationships with the customers within a geographical market can also serve as an entry barrier where it for example almost is impossible in Japan to win an OEM product1 order for a foreign product1 supplier like Acme (Respondent9 2012c; Respondent4 2012b). The Japanese customers are very nationalistic and relationship between the main Japanese product1 suppliers and the customers are strong (Respondent4 2012b). In the second largest Asian product1 market, China, relationship is highly emphasized since it is a way for the OEM to ensure that they deliver reliable and proven products (Respondent13 2012a). The situation is the same in the Indian market where established relationships with OEMs is important to be considered a credible product1 supplier (Respondent5 2012). Furthermore, the Indian and Chinese product1 market is populated by a number of OEMs (Respondent5 2012; Respondent13 2012a) in comparison to the South Korean product1 market which is mainly dominated by OEM4 and Operator1 (Respondent4 2012a).

Similar situations appear at the CIS and North American markets, which also are very concentrated and dominated by a few powerful OEMs (Respondent9 2012j). Additionally, the relationships on the North American OEM market are relatively strong where for example Competitor2 has a close relationship with among others' OEM2 (Respondent8 2012a). In Eastern Europe the relationship between the OEMs and product1s suppliers are also quite strong due to that the OEMs serve both as supplier of the product2s and operator of the segment1 systems (ibid). Furthermore, the Eastern European OEM market is relatively consolidated (Anonymous source-1 2012). In South America several OEMs are present and the market is characterized by many small segment1 systems (Respondent4 2012a; Respondent9 2012j). Moreover, the South American market is possible to access without having strong relationships with the local customers since some of the product2s are procured through other geographical markets (Respondent9 2012c). However, the market is becoming increasingly localized (Respondent4 2012a).

The Western European OEM market is quite fragmented but the relationships between product1s suppliers and OEMs are growing stronger since product1 suppliers become increasingly involved during the conception phase in the OEMs' design of their product2s (Respondent8 2012a; Respondent9 2012j). Furthermore, Western Europe is the home market for some of the world leading product1 suppliers, which have well-developed relationships with the largest customers especially in this market (Respondent7 2012b). Despite that there are very few OEMs' that have production in Africa/Middle East and the vast majority of the product2s are exported to the market, relationships are very important because of cultural reasons (Respondent4 2012b)

Another barrier to enter a certain domestic product1 market is the need for established local production (Respondent8 2012b) and this barrier can be both strictly formal but also implicit by being informal (Respondent7 2012b). In India, there are no governmental regulations requiring localized manufacturing but the high import tariffs in combination with the local OEMs' preference for local actors imply that this become an implicit demand (Respondent7 2012b). Furthermore, establishment of local production is conditional to be able to produce products positioned within the

required cost range in India (Respondent5 2012). The Chinese market has similar characteristics but the development has been rather opposite where global product1s producers have been able to export initially but the government increasingly stresses the demand for local production over time (Respondent4 2012b). In Japan, which has the largest installed base of product1s in Asia (Respondent9 2012j), there is no formal requirement of local manufacturing (Respondent4 2012b). However, the competitive situation is very challenging due to that local actors compete intensively (Respondent4 2012b). In contrast, none of the product1 suppliers in South Korea have local manufacturing (Respondent4 2012a).

In the Eastern European region the situation is similar where the existence of cost-competitive production, due to commercial reasons, motivates a local production (Respondent4 2012b). Additionally, local customers have a tendency to favor the local producers (Respondent4 2012b). In the CIS region, localization of production is a formal governmental demand in order to be able to establish market presence (Respondent7 2012b). The situation in the North American market is similar where the “buy American act” demands that a certain percent of public funded segment1 systems should be sourced with domestically produced products for the product1 market in the US, which has the largest installed base in the world (Respondent8 2012a). In contrast, the product2s delivered to the markets in Africa/Middle East and South America are often produced in other regions and then exported to these regions (Respondent3 2012). However, relationship with local actors in Africa/Middle East is very important since the business relationships are long-term (Respondent4 2012b).

Despite that all of the market leading OEMs in South America, OEM5, OEM1 and OEM6, have established local manufacturing, the purchasing criteria for product1s are still similar to the ones in the Western European market (Respondent4 2012a; Respondent9 2012j). There is an absence of any local manufacturing demand on the Western Europe product1 market and the market trend is rather the opposite, to manufacture in best-cost countries (Respondent4 2012b). However, the trend to manufacture in best-cost countries is more prominent for other OEM suppliers that deliver other components than product1s (Respondent4 2012b). The possibility to establish relationships with local suppliers is related to the demand of local manufacturing and in general product1 suppliers prefer to establish local sourcing within a couple of years for the market where they localize their manufacturing (Respondent9 2012d). The local sourcing options are often not present when Acme chooses to establish manufacturing within a local market, but this is a solvable activity since it is possible to establish a local supplier base in one to two years (Respondent9 2012d).

4.5 Key Purchasing Criteria

Overall the average product2 manufacturers’ focus is to produce a “good enough” product but there are differences between customers within different regions (Respondent8 2012a). The typical Western European customer has a relative high technological focus but is also commercially demanding. The commercial focus is not on the product1 price but the lifetime cost of usage (ibid). The trend that OEMs evaluate product1 suppliers using specific tools reduces the emphasis on price (Respondent15 2012). The key purchasing criteria the Western European customers emphasize are design, price, references and experience, reliability and safety, risk as well as quality performance, see table 10 (Respondent8 2012a). However, the trend that the OEMs become more involved during the conception phase affects how a supplier is perceived on the key purchasing parameters since the product1 supplier affects the OEM’s technical demands (Respondent15 2012).

Key purchasing criteria – Western Europe	Explanation
Design	- The extent to which the product1 fulfills the technical requirements (Respondent8 2012a) - The innovativeness in the solution (Respondent8 2012a)
Price	- The product1 unit price (Respondent15 2012)
References and experience	- Existence of reference for segment1 application (Respondent8 2012a) - Feedback from customers and service teams (Respondent8 2012a) - Reference from project in the specific country of the order (Respondent8 2012a)
Reliability and safety	- Claim record for similar product1s produced by the product1 supplier in the past (Respondent15 2012) - Estimated duration of critical elements (Respondent15 2012)
Risk	- A very broad criterion but if the product1 supplier have the required production capacity currently and the technical knowledge to deliver the order (Respondent15 2012) - Very much reflected in the relationship (Respondent15 2012)
Quality performance	- The scrap-rate and scrap causes (Respondent9 2012f) - The delivery performance, e.g. JIT (Respondent15 2012)

Table 10 - The Western European OEM customers' key purchasing criteria

The Asian OEM customers have stronger focus on “good enough” solutions than the Western European customers and the product1 technical standard has traditionally been lower than in Europe (Respondent8 2012a). However, the trend in for example China is to replicate the European technology in order to increase their standard (Respondent8 2012a). Chinese OEMs want to utilize the product1s with the highest degree of reliability since quality is a huge problem in China (Respondent13 2012a). Price is generally a highly emphasized variable in Asia (Respondent8 2012a). Price is the Chinese market leaders' main focus and key criteria for the product2 OEMs in India (Respondent5 2012; Respondent13 2012a). Relationship is another important criterion in China and India since it is important to gain credibility for the offered product1 solutions (Respondent5 2012; Respondent13 2012a). Price is also an important criterion at the South Korean market but the customer emphasize at the same time technical advancement (Respondent4 2012a). The key purchasing criteria stressed in Asia are price, relationship as well as reliability and safety, see table 11.

Key purchasing criteria – Asia	Explanation
Price	- The price of the product1s (Respondent13 2012a) - The price is very much affected by the degree of localization of production (Respondent5 2012)
Relationship	- Relationship is to have relationships with the OEMs' employees (Respondent13 2012a) - Customers' experience of product1 manufacturer as a supplier (Respondent4 2012a)
Reliability and safety	- The solution the OEM can trust (Respondent13 2012a) - The degree of quality problems (Respondent13 2012a) - Linked to the product1s and suppliers passed performance (Respondent5 2012)

Table 11 - The Asian OEM customers' key purchasing criteria

The North American OEM customers have similar key purchasing criteria as the Asian, see table 12 (Respondent8 2012a). The North American product1s are very simple technologically and the customers have a throw-away approach (Respondent8 2012a). Furthermore, the product1 price on the North American market is in absolute terms lower than on the Western European and Asian market (Respondent8 2012b). The key purchasing criteria utilized on the North American product1 market focus on the product1 performance on: price, reliability and safety as well as quality (Respondent14 2012).

Key purchasing criteria – North America	Explanation
Price	- The price of the product1s (Respondent14 2012)
Reliability and safety	- The expected lifetime of a product1 (Respondent8 2012a) - Product1 suppliers’ technical expertise (Acme strategy document 2010) - Reliability means no unplanned failures (Respondent7 2012a) - Safety is that no accidents occurs (Respondent7 2012a)
Quality	- Degree of non-conformity goods (Respondent8 2012a) - Delivery performance (Acme strategy document 2010) - Product1 quality considered as a minimum requirement (Respondent14 2012)

Table 12 - The North American OEM customers’ key purchasing criteria

To provide a short description of Acme’s performance on the key purchasing criteria, Acme can be considered to have a strong engineering capability and are often perceived by the OEMs as the market leader technically (Respondent8 2012a; Respondent9 2012f). However, the FBU is considered to have a relative high price level on the markets overall (Respondent8 2012a; Respondent5 2012; Respondent9 2012f; Respondent13 2012a). One way to realize production cost reductions and thereby gain a lower sales price is to establish production units locally but the product1 segment is generally a too small market segment to motivate such activities alone (Respondent6 2012a). From a relationship criterion perspective, to have local sales organizations is very meaningful (Respondent4 2012c). Acme has local sales organizations on several important product1 markets: the Chinese, the Indian and the South Korean (Respondent9 2012g). The European sales organization is relatively strong but not in comparison to some of the main competitors’ in the region (Respondent15 2012). Additionally, the FBU manufactures product1s in the production facilities in China and Italy (Respondent10 2012a).

5 Market Attractiveness: Analysis

In this section the theoretical framework that has been developed will be applied to the empirical content that was presented in the last chapter. The discussion in this section will be structured in a similar way as empirical findings were presented. In the end of the chapter the conclusion section will present the product1 markets that are considered as the most attractive for the FBU.

5.1 The Product1 markets' Dependence

The geographical markets' attractiveness is affected by the fact that each product1 market can be segmented into two different markets: the market for new product2s and the aftermarket. These market segments contain many similarities, mainly due to that exchanged products are the same. However, the fact that customers differ between the markets implies that the market segments should be considered as two related segments and not one united segment.

There are several reasons to why the product1 market segments have a high interdependency, except that the two market segments are part of the same value system, see figure 4. The fact that the two different types of customers at the OEM market and the aftermarket have differing key purchasing criteria is another explanation to the markets' independence. However, the structural setup of segment1 systems decreases this market independence where the product1 options in the aftermarket for a segment1 system are restricted by the product1s used by the OEM in their construction of the product2s. The dependencies between the two markets will now be explained.

First, the OEMs' choice of complement product1s in their product2s restricts the possibility to use different product1s from a dimensional perspective. Hence, once a product1 manufacturer has initiated product1 deliveries to a system the actor can conveniently continue with this due to that the product1s are adapted to the utilized complement product1s. In contrast, the competitors must develop new product1s that are suited to fit the utilized complement product1s before being able to compete with the present product1 suppliers. An additional reason that resulted in giving the complement product1s a barrier role for entering a market for product1s for a segment1 system is that the inner complement product1 dimensions have not been publically available information.

Second, the product1s used for different segment1 systems are not standardized and each segment1 system has a special product1 design. Hence, the segment1 operators are not able to purchase standardized commodity product1s on the aftermarket but are restricted to use the specific product1s the OEM selected. However, the trend within the market, where the OEMs begin designing and manufacturing generic complement product1s on their own, allow for usage of more standardized product1s, which reduces the markets dependence.

Third, the OEMs' homologation requirement, created by the segment1 operators, contributes to increasing the investment length and the costs for developing product1s for new product2s. The homologation requirement and investment demanded for developing new product1s serves as barriers for new suppliers to enter the market. Hence, a product1 supplier with experience of supplying a certain product1 type that an OEM requests has two main advantages: the supplier will have a proven-track record for the product1 and the supplier will be able to adjust the product1 design without larger investments. A supplier that has not been delivering product1s to the OEMs' product2s will have to develop a new solution, pass the homologation process and convince the segment1 operator that their product1s provide greater value than the product1 types currently

utilized in the product2s. The trend on the market where the OEMs purchase product1s from several suppliers reduces the winner-takes-it-all characteristic on the aftermarket since the segment1 operator will have an option to procure product1s from two suppliers. However, the entry barriers for other product1 suppliers remain and the fact that the existing suppliers of product1s to the OEM often maintain similar market share within the aftermarket proves that the aftermarket still is dependent on the OEM market.

Four, the segment1 operators are adjusting their relubing operations after the type of component5 utilized in the product1s. Since the segment1 operators are unwilling to have several component5 types on stock in their service depots, due to for example inventory costs, new potential product1 aftermarket suppliers are challenged by the product1 design already in use. This creates two barriers for entrants: to gain access to the information about the component5 used and to design a solution where the component5 can be applied, which could be demanding since the component5 must be synchronized with other design features of the product1s, such as the component3.

The fact that the market for product1s sold to OEMs has a high influence on the product1 solutions utilized in the aftermarket, in combination with that product1 replacement interval for product2s is quite long, makes it critical for Acme to gain shares at the OEM market. By ensuring this the product1 supplier will be in a great position to gain high shares in the aftermarkets since there are various entry barriers that keep other product1 suppliers out of local product1 markets.

5.2 Geographical Market Characteristics

A first analysis for identifying attractive market segments is to understand the size and the growth of the various geographical market segments. In order to capture the full potential of the geographical product1 markets the size of each OEM product1 market has been compared with its aftermarket for product1s, see figure 6.



Figure 6 - The geographical product1 markets for OEM product1s and aftermarket product1s 2010 (Respondent9 2012j)

It is possible to see that the largest product1 market can be found in the Asian region. This region has the largest aftermarket but above all its OEM product1 market is substantially larger than the second

largest market, Western Europe. This market together with the North American product1 market have considerably larger aftermarkets than the remaining four product1 markets, which is a result of that these markets have been leading product1 markets historically (Respondent4 2012b). Furthermore, the North American and the Western European OEM markets are also greater than the four smallest aftermarket regions. However, the absolute size differences of the two regional groups are smaller for the OEM market than for the aftermarket.

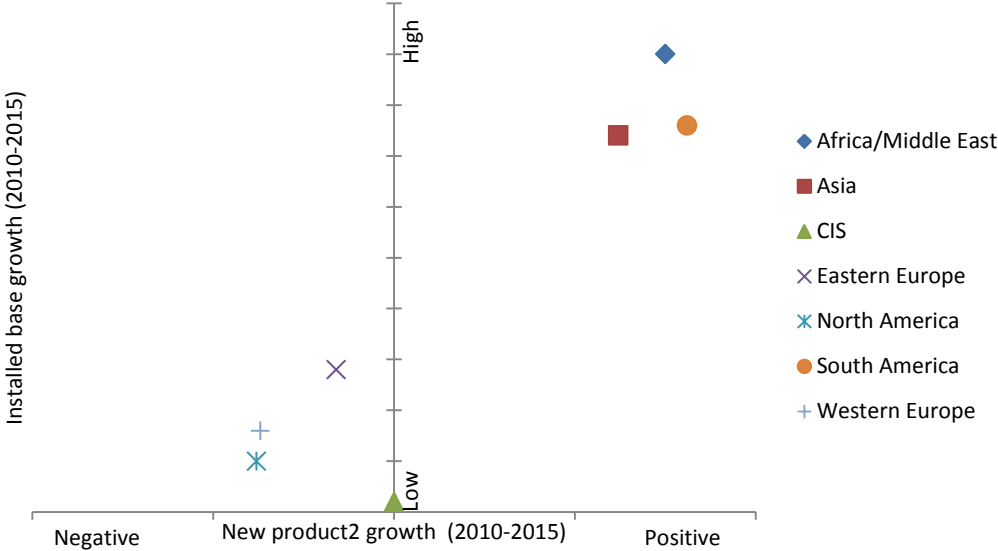


Figure 7 - OEM market growth indicator and the aftermarket growth indicator per geographical product1 market (Respondent9 2012)

In order to determine the geographical markets’ attractiveness it is important to assess the markets’ growth. The growths of the OEM product1 markets have been estimated by the indicator: new product2 growth, see table 5. The indicator is estimated to be valid since the amount of product1s is proportional to the amount of new product2s. Additionally, since the indicator focuses on the growth in new product2s it encapsulates product1s utilized in new product2s that both expands the installed base and replaces existing worn down product2s. The aftermarket growths have been estimated by the growth in the installed base since the market is proportionate to the amount of existing product2s. Due to that the average replacement interval on the aftermarket for product1s is approximately 12 years the effect of the current expansion on the aftermarket will be delayed. However, since the constructions of segment1 systems are long-term projects due to governmental influence the indicator can be considered as fair estimator of the aftermarket growth.

The geographical product1 markets can be clustered into two groups regarding the growths on the OEM market and aftermarket. Africa/Middle East, Asia and South America have high growth for both product1 markets whereas CIS, Eastern Europe, North America and Western Europe are expected to have negative growth on the OEM market and low growth on the aftermarket, see figure 7. The geographical markets’ growths should be valued in the assessment of the product1 markets, however the market size is a more important factor due to that the markets’ turnovers differs widely. Hence, it’s rather the absolute growth that is important rather than the growth in percent.

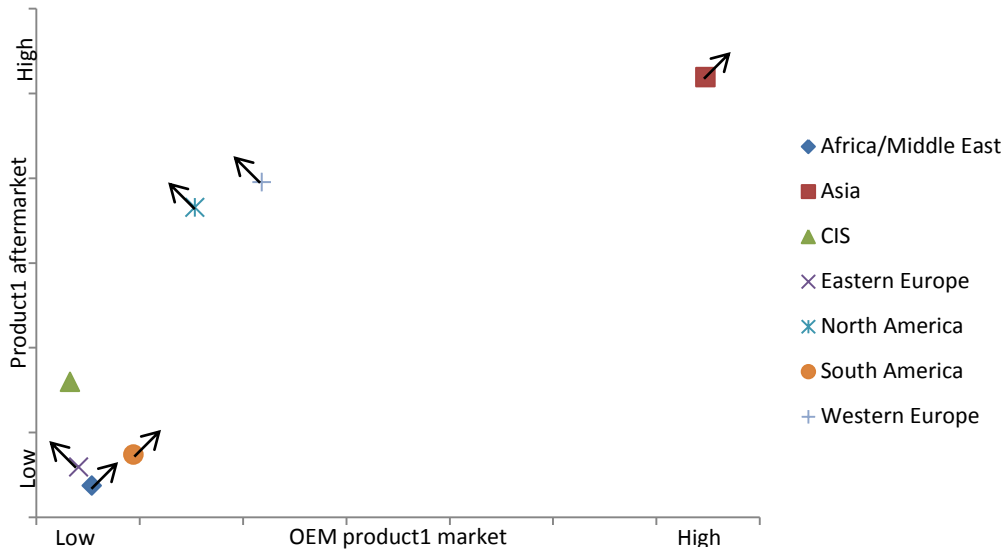


Figure 8 - An estimation of the OEM product1s' and aftermarkets' relative sizes and growth expectations for the period 2010-2015 for the geographical product1 markets'

In order to gain a complete perspective of the geographical markets' turnover and growth both aspects are presented in figure 8 where the arrows represent the markets' growth and thereby expected future direction. From an overall market size and growth perspective Asia appears to be the most attractive market due to the region's large OEM product1 market and product1 aftermarket. The growths within both of these markets are satisfying and the expansion of the Asian segment1 systems is furthermore expected to be consistent long-term (Respondent9 2012j). The North American and Western European markets are considered to be the markets that are the second most attractive since both the product1 markets are likely to be larger than the other geographical markets except the Asian. A less attractive trend within North America and Western Europe is the expected decline in growth for the OEM product1 markets. In contradiction, the two focal markets have both a high constant aftermarket demand which is very secure over time whereas the OEM product1 market demand for geographical markets are more uncertain in the long-term (Respondent9 2012j). To sum up, from a market size and growth perspective Asia followed by North America and Western Europe appears to be the most attractive markets.

5.3 Competitive Environment

The fact that the typical product1 supplier and many of the OEM customers have wide international operations and office presence contributes to a global competitive environment, where product1 competitors from various geographical origins can bid on product1s orders in any geographical market. Simultaneously, the final customers of the product2s in which the product1s are used, the segment1 operators, have very localized operational presence. The environment in the country and the municipality where the specific product2s are being operated therefore affects the product1 deals. The segment1 operators often have governmental connections and product2 deals are due to this often affected by the economic situation in the region. Moreover, the OEMs must adapt their technical specification of their product2 platforms after the local conditions. Some of the reasons to why the OEMs must do this are that: the segment1 operators' usage of functional demands that transfers the operational risk towards the OEMs; the climate differences between segment1 systems' locations; and the differences in the infrastructural setup of segment1 systems. Hence, despite that

the competitors and OEMs are international organizations it is fruitful to analyze the competitive situation within a more local context.

In order to assess the attractiveness of the geographical markets from Acme's perspective, Acme's current market positions geographically indicated by the firm's market shares on the various markets have been compared with the market fragmentation, indicated by the concentration of the product's competitors on the geographical markets in figure 9, based on the data in table 8. Acme's market positions have been ranked between 0-10 based on their absolute share. The markets' fragmentations have been indicated by the two-firm concentration ratio. The concentration ratio is according to Grant (2010) the most common way of estimating market concentration. The two-firm concentration ratio means that the aggregated market shares of the two most prominent firms within each market have been compared where a high combined market share has been considered as a low fragmentation and vice versa. The reason for selecting the two most prominent competitors' market shares is that relatively few competitors are generally present at this market. Including additional number of firms in the competitive concentration would therefore be rather meaningless.

The most attractive positions for Acme are in the brighter areas of figure 9. The most attractive position is generally at markets where Acme has a high market share in combination with that the market is fragmented. It is more difficult to coordinate prices for the competitors at a fragmented market in comparison to a concentrated market and therefore it is likely that the price pressure is higher at fragmented markets (Grant, 2010). Since a high market share on a fragmented market will imply that Acme can achieve higher scale economies than its competitors, that position is likely to be very beneficial. The possibility to gain advantages from economies of scale results in making the positions in the right side of the graph attractive. However, Acme is not only benefitted from a production perspective by having a relatively high market share but also from a sales perspective since a high market share will motivate a strong sales organization in a region. However, markets where Acme has a low relative market share can be attractive in case the firm has a marketing differentiation strategy, which is represented in the top left corner in the graph.

Thus, based on Acme's current market position and the market fragmentation, South American market appears to be the most attractive market due to the high market fragmentation. Secondly, the Asian and the Western European markets are also attractive due to the high market fragmentation and Acme's high market share respectively, see figure 9.

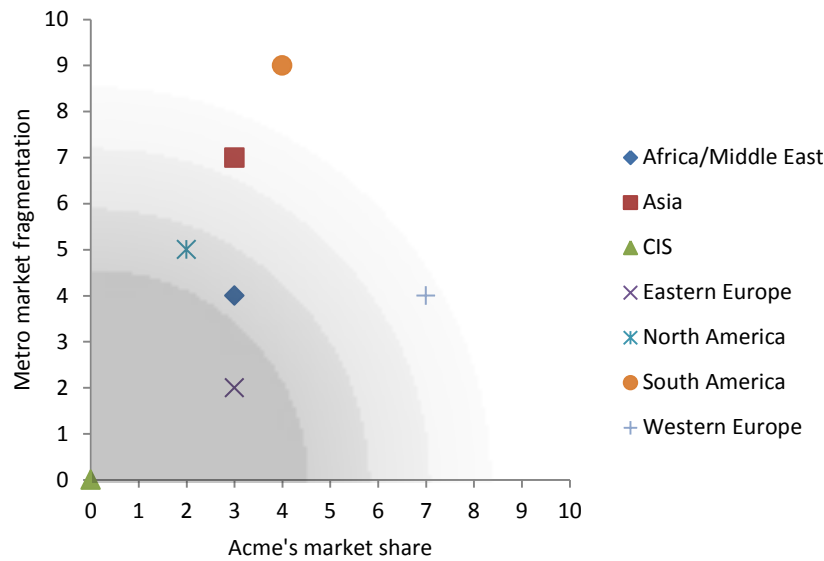


Figure 9 - Acme's product1 market share relative the product1 market fragmentation (Based on data provided by Respondent4 2012)

5.4 Entry Barriers

The various markets' attractiveness are also dependent on the barriers to entry. To have homologated product1s and to possess certain quality certificates is as explained a barrier to enter the global product1 market. However, having overcome this barrier there are still barriers that product1 suppliers must conquer in order to enter a new geographical market. These barriers must be mastered in order for a firm to establish a competitive position within a geographical market. That is, an existing product1 supplier could possibly utilize its global organization to win a few orders in an, for the supplier, unexplored geographical market but in order to gain a competitive position the entry barriers must be overcome. Thus, the entry barriers are in the form of expansion barriers for existing product1 suppliers to enter into new geographical markets. Three such barriers have been identified within the geographical product1 markets: the strength of the local safety emphasis; the demand of existing relationships with regional customers; the need for local manufacturing setup.

	Africa/ Middle East	Asia	CIS	Eastern Europe	North America	South America	Western Europe
Product1 safety	2	4	2	3	4	4	5
Customer relationship	4	4	5	4	5	2	4
Local manufacturing requirement	1	4	5	4	4	2	1
Entry barrier strength	2.3	4.0	4.0	3.7	4.3	2.7	3.3

Table 13 - Ranking of the different entry barriers strength within the geographical product1 markets. Ranking 1-5 where 5 is the highest score.

The product1 safety parameter captures the strength of the OEMs' and segment1 operators' preference to procure product1s that are perceived as having a high reliability and safety. The parameter contains mainly two aspects: the existence of product1 references with a proven track-record and the demand for advanced product1 solutions. The geographical markets have each been classified on the product1 safety parameter on a scale from 1 to 5 in table 13 where Western Europe scores the highest on this parameter due to high safety focus and high technical advancement in the

product1 solutions. The Asian customers are also stressing the vitality of safety in their product1 purchases but emphasis on product1 advancement is not perceived as high as in Western Europe, therefore Asia scores a 4.

The same situation holds for the South American market where safety also is a key purchasing criterion. Furthermore, despite that product1s are considered as a commodity in the North American market the importance of safety is high due to the OEMs' and segment1 operators' extensive product responsibility. Thus, the North American market is given a 4 on the safety parameter in table 13. In contrast, the CIS market is only given a 2 on the safety factor due to that the customers within the market focus on price and that product1s are regarded as a pure commodity. The Eastern European market is considered to have an understanding but not a main focus on safety and is therefore given a 3 on this parameter. The lack of understanding for safety in Africa/Middle East but that safety still is a demand implies that the region has been rewarded the score 2.

The possibility to build customer relationships is also considered to be a barrier to enter and expand within a geographical market. More specifically the parameter relates to the possibility to establish relationships with the customers that allows for the entrant to be accepted as a product1 supplier. The possibility to initiate relationships with the customers is affected by the strength and width of the current relationships between the established product1 suppliers and customers, as well as of the amount of potential customers present at the market. This barrier is especially strong in the CIS and North American markets since the potential OEM customers are few and the customer relationships are relatively solid and long-term. This holds especially for the North American market. Hence, these markets are given a 5 on the customer relationship parameter in table 13.

The customer relationship factor is clearly a barrier in the Asian market as well, where the Japanese product1 market is the extreme. The fierce competition on the Japanese product1 market implies that an existing relationship is a must to supply product1s. However, despite that the Chinese and Indian product1 customers value relationships, the fact that many OEMs are active on the markets reduce the barrier in Asia, which scores 4 on the parameter. The Eastern European market is ranked similarly due to that many of the segment1 systems within the region are OEM operated which implies that the product1 suppliers are likely to strengthen the relationships with the OEMs since these also are the aftermarket customers. Additionally, the Eastern European OEM market is relatively consolidated. Relationship as an entry barrier is also considered to be of strength 4 in Western Europe. Even though the OEM product1 market is rather fragmented the relationship barrier is relatively strong due to that Western Europe is the home market for several of the leading product1 suppliers. Additionally, the fact that product1 suppliers are involved during the OEMs' early design phases implies that the OEMs most likely will purchase the involved product1 supplier's solution since the product2 design has been adapted to the product1 supplier's offer.

The requirement of relationship with the local customers is judged to be less of an issue for new entrants in the South American market since many of the product2 orders are exported to South America. Furthermore, the market is relatively fragmented and many of the segment1 systems are not especially large. Considering this information the market scores a 2 on the relational factor in table 13. As for the South American market, the African/Middle Eastern market is also supplied by product2s from exporting OEMs to a relatively high degree. Despite this characteristic which reduce the importance of local relationships the segment1 operators and municipalities have a great

influence on the product1 decision whereas relationship in fact is vital within the region. Hence the market is given the score 4 on the relationship parameter.

Local manufacturing requirement refers to the regional characteristics concerning the need of establishing manufacturing in the specific country where the segment1 systems are located. The barrier encapsulates both formal legal requirements of local manufacturing but also the commercial need of local manufacturing, where for example competitors must establish local manufacturing to be able to deliver products within a competitive cost level for the market. However, the need to create supplier relationships is not included in the barrier since product1 manufacturers can source components from other markets and overall it is an operationally solvable problem to establish local supplier base over time. The entry barrier is noticeable at the Chinese and Indian OEM product1 market where local establishment demand becomes a demand to be commercially competitive. However, the absence of formal demand in Japan implies that Asia score a 4 on the parameter local manufacturing requirement in table 13.

The CIS market is ranked as a 5 since the formal demand of local production implies that it is a substantial entry barrier. The necessity of establishing local manufacturing in order to be competitive is also high in North America due to that the legal “buy American act” demands that orders only partly can be manufactured in foreign markets. Based on this background North America is ranked as a 4, which is the same as Eastern Europe where the cost level of the production is relatively low. The local manufacturing barrier is considered to be very low in Western Europe since the market focus rather is to outsource manufacturing to best-cost counties. Hence, the market scores 1 on the parameter in table 13. The African and Middle East market scores the same due to that many of the product2 orders are produced by the OEMs in other geographical markets and thereafter exported to the market. The similar situation holds for South America but the fact that several OEMs are locally present in the region implies that the barrier is considered to be of strength 2.

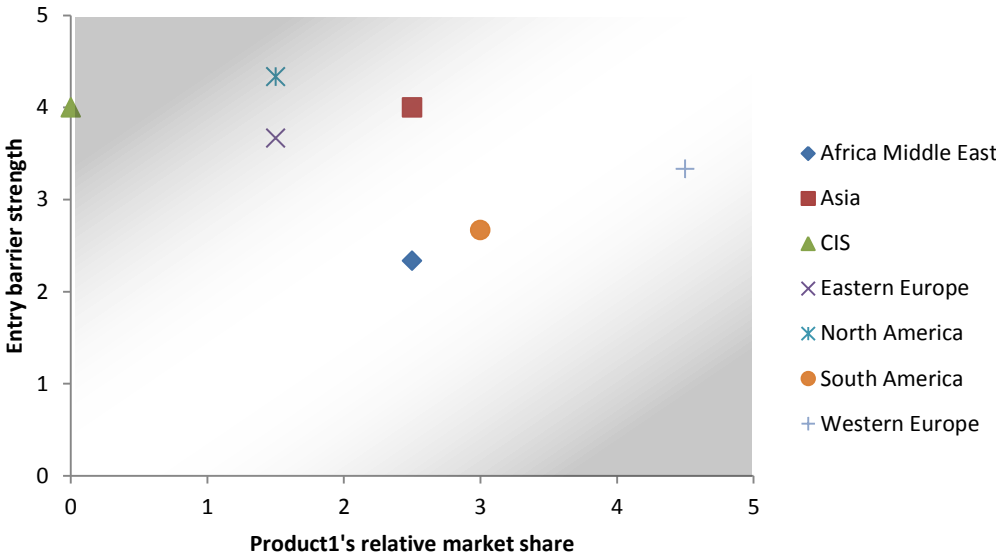


Figure 10 - The strength of the entry barriers to Acme’s relative product1 market share for each geographical market

After scoring the entry barriers on the geographical product1 markets, North America can be identified as the market where the barriers to enter is the strongest, see table 13. The market is followed by the entry barriers in Asia and CIS which are the second strongest. South America is the market where the entry barriers are the weakest. However, from Acme's perspective the value of the strength of the entry barriers on a market is dependent on the firm's market position. Therefore, the strength of the entry barriers on the geographical markets have been compared with Acme's market positions indicated by Acme's relative market shares based on the data in table 8. The comparison can be seen in figure 10, where the bright areas represent the attractive positions for Acme. Hence, in markets where Acme has a strong position the entry barriers serve as protection to increased competition, the top-right corner in figure 10, whereas weak entry barriers are positive for markets where Acme have weak positions, indicated in the low-left corner of figure 10. From this perspective the South American market appears to be the most attractive followed by the Asian and Western European market. Furthermore, based on the perspective presented in figure 10, Acme would benefit from strengthened entry barriers in Western Europe, which is in contrast to Asia where the entry barriers restrict Acme's abilities to compete.

In order to focus the analysis on the markets which appear to be the most attractive, a screening will be conducted based on the perspectives discussed. From a market turnover and growth approach the Asian market followed by the North American and Western European market seem to be the most attractive, mainly since these market are substantially larger than the other markets, see figure 9. From a market position view, presented in figure 9, Western Europe followed by Asia are the markets where Acme has a competitive position. From this aspect Acme appears to have an unfavorable position for the remaining markets. That holds for the previously discussed North American market as well, but taking the opposite approach Acme can be considered to have quite high market share potential on the North American market since the firm has a relatively weak position. However, entering the market could be difficult based on the insight given in figure 10, where the North American market has the strongest entry barriers. The South American market appears to be attractive based on Acme's current market positions. Furthermore, the Asian and Western European markets are the second most attractive markets from this view given in figure 10. To sum up, the Asian and Western European market are the geographical markets that are the most interesting from the presented assessments since these are ranked among the top three geographical regions for all assessments. Additionally, the North American market will also be evaluated further due to Acme's large potential. Hence, the geographical markets that will be investigated henceforth are the Asian, Western European and North American markets.

5.5 Key Purchasing Criteria Fit

In order to assess the market attractiveness it is important to consider the customers' demands which can be conducted more specifically by evaluating the customers' prioritization of their purchasing criteria. Based on the previous discussion about the OEM markets and aftermarket dependence and that the OEM market has a high influence on the product1 choices on the aftermarket, the OEMs' key purchasing criteria will be assessed. It is also worth noting that the OEM customers are active on several markets but rather it is the geographical regions characteristics that determine what purchasing criteria that are emphasized.

Key purchasing criteria	Explanation
Product1 design	<ul style="list-style-type: none"> ▪ The solution's technical advancement
Price	<ul style="list-style-type: none"> ▪ The product1 unit price
Relationship	<ul style="list-style-type: none"> ▪ The strength and interrelatedness of the relationship with the customers, e.g. strength of personal contracts ▪ The technical knowledge within the product1 suppliers' organization
Quality	<ul style="list-style-type: none"> ▪ The delivered product1s' conformance to the technical specifications, expressed by e.g. scrape rate ▪ The delivery performance of the product1 orders

Table 14 - Overall key purchasing criteria

The product2 OEMs in the different geographical markets stress different key purchasing criteria, see table 10-12. However, from our perspective the OEMs' in the different geographical markets emphasize the similar underlying factors despite these are referred to differently. Based on this and in order to be able to compare the key purchasing criteria stressed in the different geographical markets four generic key purchasing criteria have been identified, see table 14. The product1 design criterion encapsulates the advancement in the technical design and it is related to the Western European parameters design, experience and references as well as reliability and safety. The parameter describes what the product1 is aimed to achieve and experiences and references are therefore only considered to be an indicator of the parameter.

At the Asian and North American market the parameter is connected to the reliability and safety parameter. The price parameter is simply the product1s' unit price. The relationship parameter, in table 14, includes; the Western European perspective of references and experience as well as risk; the Asian relationship parameter; and the North American reliability and safety parameter. The key purchasing criterion quality is very much as the European quality performance parameter but it also includes quality performance references which are expressed in the Western European parameter references and experiences. The quality parameter is connected to the Asian key purchasing criteria reliability and safety since this key purchasing criterion focuses on product1 solutions which are safe and have low degree of quality problems. In North America quality is related to both the key purchasing criteria quality and reliability and safety since the generic quality parameter includes both unplanned failures and non-conformance goods.

	Geographical customers' requirements			Acme's performance		
	Asia	North America	Western Europe	Asia	North America	Western Europe
Product1 design	3	2	4		4	
Price	4	5	3		2	
Relationship	4	3	3	3	1	3
Quality	4	4	5		3	

Table 15 – The strength of the key purchasing demands on the further investigated markets: Asia, North America and Western Europe

In order to compare the regional OEMs' requirements on the four generic key purchasing criteria each of these parameters' relative importance have been ranked *between* the geographical markets on a scale from 1 to 5, see table 15. Hence, an understanding of how vital the key purchasing criteria are on the different markets is gained. This have thereafter been compared with Acme's

performance on the generic key purchasing criteria in order to understand how well Acme's overall offer matches with the markets' demands.

The generic key purchasing criteria product1 design is estimated to be a 4 in Western Europe due to the technical advancement focus. The OEM's technical demands in Asia is lower but the region score 3 on the parameter since the emphasis on advancement in technical solutions is increasing. The fact that product1s are considered as a commodity with relative low demands on lifetime, results in that North America is ranked as a 2 on product1 design. Acme is estimated to score a 4 on the parameter since the product1s' technical advancement is one of Acme's competitive advantages.

The North American OEMs have a strong price focus and the fact that the price level is in absolute terms the lowest among the compared geographical regions implies that the market is ranked as a 5 on the parameter price. The strong price emphasis among the OEMs active in India and China implies that Asia have been ranked as a 4. The Western European OEMs are perceived to focus slightly less on price and the usage of customer evaluation matrixes reduces this focus even more, hence they are ranked as a 3. Since Acme is perceived to have a relatively high product1 price on the markets the firm is given a performance of 2 on price.

The Asian OEMs are the customers that are perceived to have the highest emphasis on relationship, ranked as a 4, since it is an important factor in order to be accepted as a product1 supplier. In Western Europe, customer relationships become more important due to product1 suppliers early involvement in the conception phase, and therefore it is ranked as a 3. The North American relationship focus is not as strong as the Asian and it is estimated to be similar to the European. The FBU's performance on the relationship parameter is affected by the sales organizations strength on the different regional markets. In Asia, Acme scores a 3 on relationship since the organization has a wide presence but that the sales organizations is built around a few experienced employees. The European sales organization is stronger but compared to the competitors' strong sales organizations Acme's performance is judged as average, therefore given a 3. Acme's relatively low market presence in North America implies that Acme scores a 1 on relationship in the region.

Quality is a key purchasing criterion that is highly stressed overall and the Asian and North American markets are ranked as 4 since product1 reliability and safety is emphasized and quality issues important to avoid. However, the Western European market is ranked higher, as a 5, due to the OEMs' technological emphasis. Acme's performance is ranked as a 3 due to that the product1 manufacturers have had a number of quality cases during the latest years but above all that Acme's responsiveness in product1 deliveries is criticized.

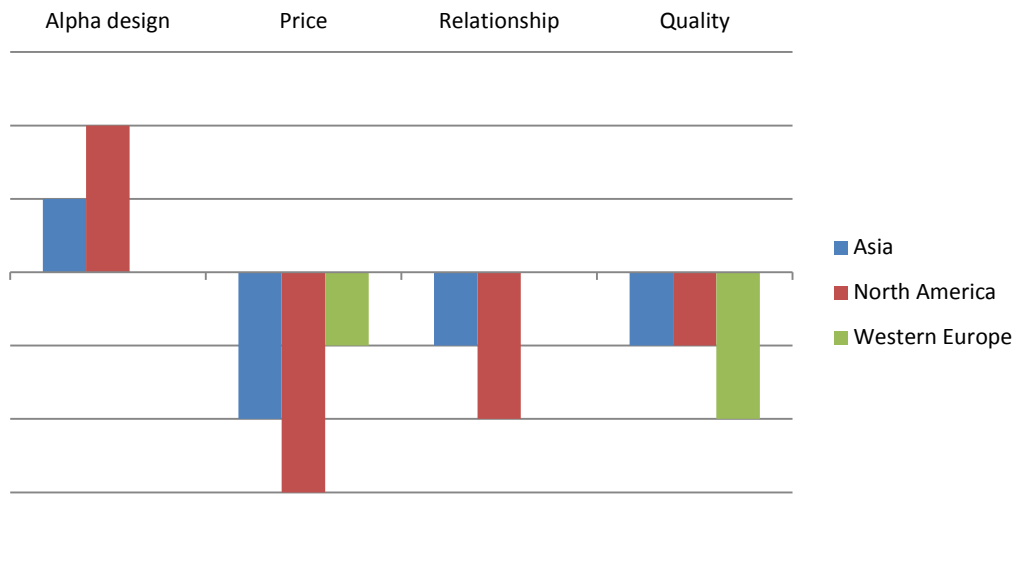


Figure 11 - Acme's residual performance on the customers' key purchasing criteria on the different geographical markets

Acme has based on this analysis the best offer fit with the Western European market where the firm has a lower performance on price and quality, see figure 11. The performance gap on the key purchasing criterion quality reflects to a large extent the Western European OEMs' high demand of timely deliveries. In contrast, Acme has the poorest fit with the North American customers where Acme overperform on product1 design since the North American OEMs are unlikely to fully appreciate Acme's technical solutions. As a result of this it is likely that Acme underperforms on the price criterion. The weak sales organization in comparison to its competitors in North America and the fact that Acme has had some quality cases implies that the firm underperforms on relationship and quality as well. Acme's offer fit with the Asian OEMs' demands is quite similar to the fit with the North American OEMs' demands. However, the higher emphasis on advancement in product1 solutions, an overall higher price level and Acme's stronger market presence in the Asian region compared to the North American market are the main reasons to why Acme has a closer offer fit with the Asian OEMs compared to the North American peers.

5.6 Conclusion: Selection of Markets

The Asian and European product1 markets followed by the North American product1 market were the markets that were identified as the most attractive for Acme from a market characteristic, competitive position and entry barrier perceptive. From the customer perspective, based on the segment1 OEMs' key purchasing criteria, the European followed by the Asian product1 market are identified to be the most interesting.

The North American product1 market is considered to be the least attractive among the three largest geographical product1 markets discussed. The size and growth of the product1 markets aftermarket are appealing but not in comparison with the European and Asian aftermarkets'. Furthermore, Acme's relatively low market share implies that there is an existence of expansion potential but the competitive concentration, the strong entry barriers and the firm's unfavorable offer fit undermine this potential. Above all, the lack of close connections with few OEMs in combination with that Acme deliver unappreciated technological advanced solutions at a too high price results in that Acme

seems to have other “low hanging fruits” that rather can be picked before focusing on the North American market.

The Western European market is the geographical market where Acme have the absolute closest offer fit with OEMs’ demands. This is not surprising since the Western European market is the market where Acme have the undeniably strongest market position, with an estimated market share of 30%, see table 8. From a market attractiveness perspective it is possible to question Acme’s market potential since it is likely to be challenging to gain additional market shares, especially considering that the OEMs utilize multiple sourcing strategies more frequently. Hence, although Acme will have the possibility to deliver product1s to a larger amount of segment1 systems, the firm’s market share in the received product1 orders are likely to be reduced. This change would probably benefit product1 suppliers with powerful sales organizations since product1 suppliers will have to conduct additional product1 projects simultaneously. This is not especially positive based on the market potential possibilities it provides for Acme. However, Acme is considered to have a relatively close fit to Western European OEMs’ purchasing criteria and that the market is attractive from a market characteristic and entry barrier perspective. Additionally, the Western European market is a strategic market from the perspective that many product2 orders that are exported are manufactured and occasionally procured from Western Europe. Despite the trend that the geographical markets becomes increasingly local and that the amount of export orders are expected to decrease. This market is especially interesting in the short-medium perspective when the export business still is active.

Based on the complete view of the perspectives from the theoretical framework, discussed in this section, the Asian product1 market is regarded as the most attractive for Acme. First, the OEM product1 market and aftermarket are the indisputably largest and the markets’ growths are relatively high. Acme does neither have a strong nor weak position on the Asian market and is perceived to have possibilities to gain market shares based on that the competition is relatively fragmented. Furthermore, the fact that Acme already is present on many of the national markets in the Asian region implies that the market’s strong entry barrier does not compose any major hinder for prioritizing the Asian product1 market. Acme has a certain key purchasing criteria gap on the Asian market and the firm’s offer is not fully aligned with the Asian OEMs’ key purchasing criteria. However, this gap can be managed by accomplishing internal changes that is a more appropriate fit to the OEMs’ key purchasing criteria.

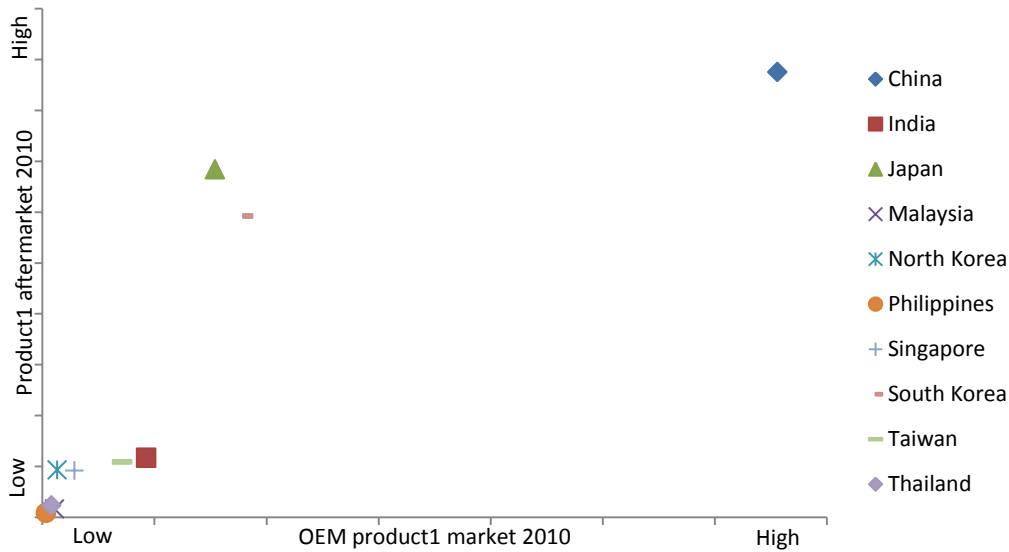


Figure 12 - The Asian OEM product1 market and product1 aftermarket 2010 (Respondent9 2012)

The Asian market can and preferably should be segmented based on domestic markets since national markets in Asia are of substantial size, where the OEM product1 market in China is of similar size as the complete North American or Western European based on turnover, see figure 12 based on data in table 6. The Chinese product1 markets, both OEM product1 market and aftermarket for product1s, are unambiguously the largest. This in combination with that Acme has a very competitive position on the Chinese product1 markets, where the firm has a substantial market share on a relatively fragmented market, implies that the Chinese product1 market is regarded as the most attractive product1 market, see figure 13 based on data in table 9. The market position analysis in figure 13 has been created in the same manner as for figure 9. Furthermore, the fact that the Chinese OEMs' emphasize reliability and safety highly, in combination with that the Chinese product1 market is becoming increasingly alike the Western European from a technological perspective, is contributing to the attractiveness. Another factor influencing the choice of the Chinese product1 market is that the FBU already has established manufacturing in China which allows Acme to deliver according to the local key purchasing criteria.

The Chinese product1 market is not the only national product1 market that is interesting within Asia since India, Japan, South Korea and Taiwan all have product1 markets of similar sizes as geographical regions. In comparison with the other mentioned product1 markets, the Taiwanese product1 market is estimated to have limited growth potential. However, the Japanese product1 market is not considered to be attractive since Acme has non-existent presence at the market, the entry barriers are substantial, Acme's lacks an established relationship with a local OEM and the competition is likely to be fierce since several of Acme's main competitors are Japanese.

The Indian and South Korean product1 markets are still interesting due to their market sizes and growth potentials. Currently the South Korean product1 market is substantially larger than the Indian, see figure 12. The fact that this market is driven by fleet replacements imply that the market possibly is restricted by the historical product1 suppliers in case of that the segment1 operators and OEMs collaborate in a similar way as historically, which could be likely due to OEM4's and Operator1's strong market positions. However, the Indian product1 market is expected to be

expanded substantially and there are many cities with more than 3 million that lacks a segment1 system.

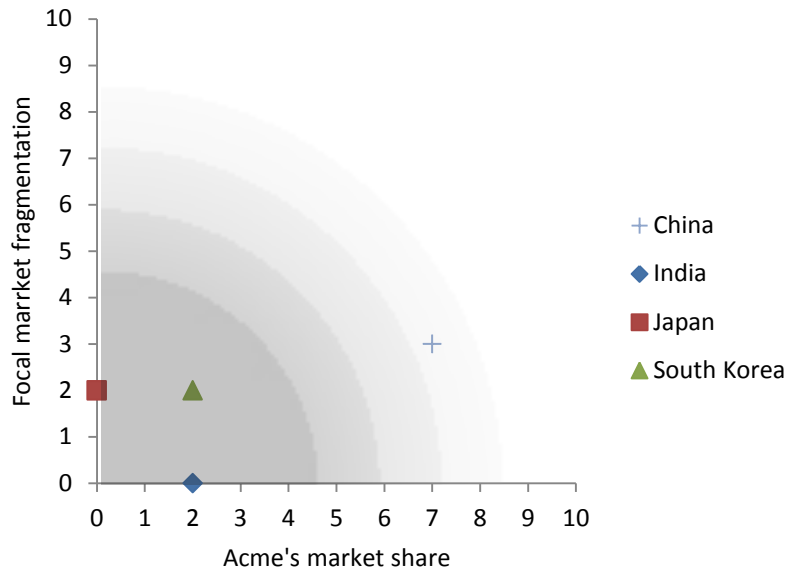


Figure 13 - Acme's product1 market share on important Asian markets relative the product1 market fragmentation (based on data from Respondent5 2012; Respondent9 2012; Respondent4 2012; Respondent13 2012)

By comparing the amount of segment1 systems with the amount of cities with more than 3 million inhabitants it is possible to identify that India currently has lower degree of segment1 systems than many of the other Asian counties. An adjustment to the general level of segment1 systems in India would imply a major expansion of the amount of segment1 systems, figure 14. This would imply a large increase of the Indian OEM product1 market. The aftermarket would most likely not expand directly due to the demand lag created by the replacement interval. Hence, a substantial demand for product1 to product2s expanding the installed base is needed. An expansion of the segment1 systems in India will in terms of figure 12, imply a substantial increase of the OEM product1 market whereas the aftermarket for product1s are likely to lag due to the replacement interval. The South Korean product1 market is also estimated to grow since several systems are expected to be expanded. However, from an overall market potential perspective the Indian product1 market is more attractive due its long term potential.

Additionally, the overall product1 market for all application segments within the focal industry is substantially larger in India than in South Korea, almost four times, see table 23. The overall product1 market is important to consider since the OEM customers are the same for product1s as for the other application segments. The market size of other application segments is therefore important to consider from the perspective of cross-sales. It is also central to consider from the manufacturing perspective since the product1 markets does not motivate localization of production alone since the quantities are too small. This is important for the perspective of India where the localization demand is increasing in importance as a response the customers' demands and competitors localization efforts. In contrast, all the product1s procured by the South Korean OEMs are imported.

In contrast to the weak localization barrier in South Korea, the relationship barrier is substantial due to OEM4's and Operator1's respective dominance of the OEM and the operator market. The fact that Acme has a very weak market share of the order-in-take market during the last years implies that this

is a major barrier. Acme’s position at the Indian OEM product1 market is not either especially strong however; Acme has relationship with several of the main OEMs. Acme’s competitors have a relatively strong position at both of the markets. From a market position perspective the Indian OEM product1 market does also appear as the most attractive among the two. However, Acme’s value proposition fit with the OEM’s key purchasing criteria is closer at the South Korean market where the customers demand relatively technically advanced solutions despite the price pressure. The Indian market is very much dominated by the price criterion.

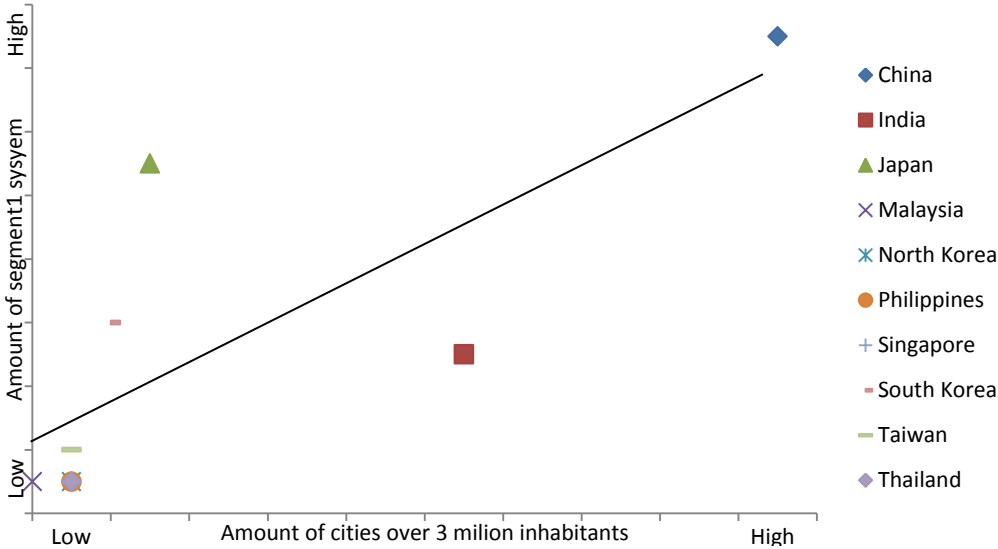


Figure 14 - Amount of cities in Asia per country with over 3 million inhabitants (UN Population Division 2008) compared with the number of segment1 systems (Anonymous source 2004). The solid line is a linear regression.

Overall, the Indian product1 market is considered to be more attractive than the South Korean product1 market. Despite that the South Korean product1 market currently are larger in absolute terms the expected expansion of segment1 systems in India implies that it is more appealing from a market potential perspective. Additionally, Acme market position on the markets favor India even though the firm has a closer key purchasing criteria fit with the South Korean customers. Based on this, India is considered to be the secondly most attractive product1 market after the Chinese.

All in all, the three markets that are considered to be the most attractive for the FBU are China, India and Western Europe. The main reasons for selecting China is that it is a very large market with great expected growth in combination with that the FBU currently has an attractive competitive position. India is mainly selected due to the high growth expectations but also due to that the competitive space is under current establishment. Western Europe is essentially interesting from a market size perspective but also due to that the FBU has relatively good fit with the customers’ key purchasing criteria on this market. Additionally, the importance as the number one exporting market contributes to the Western European market’s attractiveness.

6 Capability Assessment: Theoretical Framework

This chapter presents the theoretical base for the capability assessment. It initially explains how firms' competitive advantages are gained from their resources and capabilities. Additionally, it gives insight to how these resources and capabilities can be adapted in order for firms to increase their competitiveness. Based on the perspectives explained a capability framework is finally presented.

6.1 The Resource Based View of the Firm

A perspective of how firms gain sustainable competitive advantages is given by the resource-based view of the firm (RBV) which focuses on firms' internal strengths and weaknesses (Barney 1991; Grant 1991; Penrose 1959). The RBV considers two important perspectives that are simplified in the competitive environment explanation: that firms within an industry are homogenous in their control of strategically important resources and that potential temporary heterogeneities among such resources between firms are short lived due to the high mobility of the resources (Barney 1986; Porter 1981). From the perspective of the RBV, strategic resources are heterogeneous and therefore a source of competitive advantage (Barney 1991). Additionally, Grant (1991) highlights that the RBV provides a better base for firms to formulate their long-term strategies since firm's resources and capabilities may be more stable than the firm's external environment.

6.2 Resources, Competencies and Capabilities

A key concept in the RBV is the firm's resources which here are defined according to Grant (2008, p. 130) as "the productive assets owned by the firm". Furthermore, Grant (2008) stresses that a firm's resources are far more than the ones stated on the balance sheet. In order to capture a complete view of the firm's resource position the resources can be divided into three principle types: tangible, intangible and human resources. The tangible resources are the most transparent since they typically consist of financial and physical assets considered in the firm's balance sheet. According to Grant (2008), the intangible resources are generally more valuable than the tangible resources. Examples of intangible resources are patents which are technology related assets but also brand names and valuable relationships which are denoted as reputational assets. These resources can be difficult to identify and appraise due to their non-physical characteristics. The same holds for human resources, such as skills and know-how.

Grant (2008) emphasizes that resources are not productive on their own and it is the competencies that enables the resources to be deployed in order to create value in the organization. The term competencies will be defined in accordance with Johnson's et al. (2008) definition as a firm's skills and abilities which resources are deployed efficiently through an organization's activities and processes. It is the firm's capabilities, defined accordingly to Helfat and Lieberman (2002, p. 725) as "a firm's capacity to deploy resources for a desired end result", that create competitive advantage. Firm's capabilities are not as transparent as their resources and Grant (2008) present two approaches for classifying and disaggregating activities: function analysis and value chain analysis. A functional analysis identifies the capabilities within each of the firm's organization's functions whereas a value chain analysis maps the capabilities based on Porter's value chain model and its various primary and supportive activities (Grant 2008).

6.3 Resource and Capability Assessment

The purpose of a firm is according to Schilling (2010) to create value. Prahalad (1993) gives insight in to that value creation is a process that is guided by the strategic intent of the firm. The strategic intent is the top managers' expression of their aspirational level that will increase the firm's competitiveness either within the existing or new markets. Schilling (2010) envisions that a firm has a certain current resource and capability position and that a gap will be created once the strategic intent has been expressed. The resources and capability gap appears because that the resources and capabilities needed in order to reach the firm's future desired position differs from the current position (Schilling 2010).

A firm's strategic intent is a forward-looking perspective that in order to be realized should be captured in the formulation of the actual strategy (Grant 2008). Furthermore, Grant (2008) expresses that a strategy must have a consistence between the firm's internal position and its industry environment in order to be successful. Grant (2008) complements Schilling's (2010) description of a firm's current position by, in addition to the strategic intent, resources and capabilities, also highlighting the importance of organizational structure and management system. These factors influence the possibilities to implement the created strategies and have therefore an effect on the possibilities to create value from the organization's resources and capabilities (Grant 2008). A firm's surrounding industry environment is generally defined by the firm's relationship to its customers, competitors and suppliers (Grant 2008).

The possibilities to create value and earn excess profits in the external environment depend according to Grant (1991) on two factors: the attractiveness of the industry and the establishment of sustainable competitive advantages. It may be beneficial to analyze the industry attractiveness broadly in an initial phase, however in order to understand the competitive environment the industry could be segmented into different markets (Grant 2008). After having segmented the market and detected the segments with the highest perceived attractiveness it is possible to identify the factors that give a firm sustainable competitive advantage. These factors are denoted key success factors and they are the factors that the customers' particularly value among their purchasing criteria. It is on these factors that a firm must outperform its competitors in order to achieve competitive advantages (Grant 2008; Johnson et al 2008). This analysis should be conducted on a market segment level since the customers' preferences and thereby the competitors' performance on the purchasing criteria varies between market segments (Grant 2008).

How firms gain competitive advantages by for example performing better than the competitors on the customers' vital purchasing criteria has traditionally been explained by their strategic market position and Porter's (1980) generic strategies: overall cost leadership, differentiation and focus strategy (Grant 1991). However, Grant (1991) stresses it is a firm's resources and capabilities that allows a firm to reach these market positions as well as it is the firm's capabilities that is the ultimate source of a firm's competitive advantage.

The firm's current competitive position and thereby their capability position will also according to Grant (1991) affect the direction of the current strategy. The author stresses that the firm must adapt their resources and capabilities in order to increase the competitiveness. This can be explained by that resources and capabilities are heterogeneous in their profit-earning potential (Grant 2008). The ability for resources and capabilities to earn profits are affected by three factors; their possibility

to create competitive advantage; to sustain that competitive advantage and to appropriate the returns of the competitive advantage (Grant 2008). This perspective, highlighted in Grant (1991), gives insight for how a firm could adapt their resources and capabilities in order to reach a more desirable future position. Such a position is from the aspect of Schilling (2010) one where the firm is able to create excess value.

6.4 Strategies for Competitive Advantage

The initial step for firms to earn profits from the employed resources and capabilities is to establish strategies that allow for the firms to gain competitive advantages and then sustain their advantages for long enough to reap the rewards (Grant 2008). Porter (1985) presents three generic strategies for achieving competitive advantages within a certain competitive environment: cost leadership, differentiation and focus. The cost leadership strategy is basically about setting a strategic direction to be the low-cost producer in the focal industry whereas employing a differentiation strategy implies that a firm seeks to be unique in its industry along some dimension that are highly valued by the customers (Porter 1985). Pursuing a focus strategy means to optimize the strategy for it to fit the customers within a narrow market segment (Porter 1985).

Porter (1985) emphasize that establishing and sustaining competitive advantage is all about choosing a generic strategic direction and applying it consistently. However, there are according to Porter (1985) conditions under which cost leadership and differentiation can be applied simultaneously. One such condition is when cost is strongly affected by market share or interrelationships between industries. Here, the cost is widely affected by market share rather by activities such as product design, technological level and service provided. Furthermore, unmatched interrelationships can lower or at least offset the higher costs of differentiation (Porter 1985). Finally, to gain competitive advantages that are sustainable, a firm must often undertake further investments in order to continuously improve their strategic position (Porter 1985). Hence, it will be important for a firm to understand the drivers of the employed strategy both in order to create and sustain their competitive advantages.

6.4.1 Drivers of Differentiation

A firm can differentiate itself from its competitors by being unique at some factor that is valuable for the customers (Porter 1985). Porter (1985) denotes the underlying factors to why activities are unique as drivers of uniqueness. However, since these drivers are basis of the differentiation, these will be named drivers of differentiation in this section. The drivers of differentiation discussed by Porter (1985) and further discussed by Grant (2008) and Schilling (2010) are presented in table 16.

Drivers of differentiation	Description
Product features and performance	- Simply the performance and quality of the products and service delivered
Complementary products and services	- Complementary products and service that enhance the usability and desirability of a good - Can be delivery, repair, claim related services etc.
Intensity of marketing activity	- The marketing efforts undertaken, both in terms of investments but also the rigorousness in the performance of the activities
Technology embedded in design and manufacture	- The extent to which new technologies are utilized in the value activities
Quality of purchased inputs	- Excellent quality performance can be a uniqueness feature
Procedures influencing the rigorousness in the performance of activities	- How carefully activities are undertaken - Example: accuracy in quality control, service procedures, frequency of customer sales visits etc.
The skill and experience of employees	- The employees' education and attitude are underlying factors - Affected by the culture within the organization
Location	- Uniqueness that stem from the localization such as the access to skilled employees and other resources, but also the distribution chain length
The degree of vertical integration	- The extent to which the firm is interrelated with its suppliers and customers - Example of benefits: can reduce development times of new products, can lead to high responsiveness by having an integrated supply chain etc.

Table 16 – Summary of drivers of differentiation (Grant 2008; Porter 1985; Schilling 2010)

6.4.2 Drivers of Cost Advantage

A firm's cost position derives from the cost behavior of the value activities (Porter 1985). There are a number of principal determinants that affects a firm's relative unit costs named cost drivers (Grant 2008). Porter (1985) also discusses cost drivers and a combination of the authors' perspectives is presented in table 17.

Economies of scale arise for the ability to perform activities more efficiently at large volumes or the ability to amortize the fixed cost over greater sales volumes (Porter 1985). Grant (2008) emphasizes several sources of economies of scale. First, technical input-output relationships do not need to be proportionate, where increased output does not need to infer proportionate increases in input. Second, some resources' and activities' natural indivisibility imply that some investments are lumpy and firm can, by amortizing the investments over greater sales volumes, gain economies of scale advantages. Third, increased sales volumes give greater division of a labor (Grant 2008). Porter (1985) stresses that the scale sensitivity for different activities varies extensively and highlights furthermore that manufacturing and product development generally are more scale sensitive than sales operations. However, it is not only the technological setup that determine what gains for economics of scale that are obtained but also how the activities actually are operated (Porter 1985).

The rationale behind economies of learning is that the cost of undertaking an activity is reduced over time due to learning, which increases its efficiency (Porter 1985). Repetition of activities develops both individual skills and organizational routines (Grant 2008). The improvement factors that generate economies of learning are numerous. However some examples of such factor improvements are layout changes, improved scheduling, labor efficiency improvements, product

design modifications that facilitate manufacturing, yield improvements, procedures that increase utilization of assets as well as more efficient usage of raw materials (Porter 1985). Cost reductions that originate from learning tend to appear gradually and the learning based improvements gained alter with the degree of management attention devoted to the focal area of interest (Porter 1985).

Drivers of cost advantage	Sources of the drivers
Economies of scale	<ul style="list-style-type: none"> - Technical input-output relationships - Indivisibilities - Specialization - Manufacturing setup
Economies of learning	<ul style="list-style-type: none"> - Increased individual skills - Improved organizational routines
Production techniques	<ul style="list-style-type: none"> - Process innovations - Reengineering of business processes
Production design	<ul style="list-style-type: none"> - Standardization of design and components - Design for manufacture
Capacity utilization	<ul style="list-style-type: none"> - Ratio of variable to fixed cost - Fast an flexible capacity adjustment
Input costs	<ul style="list-style-type: none"> - Locational differences in input costs - Bargaining power
Localization	<ul style="list-style-type: none"> - Operational costs such as labor costs, energy costs - Logistics cost
Residual efficiency	<ul style="list-style-type: none"> - Motivation and organizational culture - Management effectiveness
Linkages	<ul style="list-style-type: none"> - Coordination between value chain activities - Linkages with suppliers - Collaborations with customers
Timing	<ul style="list-style-type: none"> - Access to scarce resources - Marketing costs - Research and development costs - Supply and distribution chain readiness - Certainty of customers' requirements

Table 17 – Summary of cost drivers (Grant 2008; Porter 1985; Schilling 2010)

Production techniques have also an influence on cost and new process technologies, like new machinery, may radically reduce the costs (Grant 2008). However, the greatest productivity gains from process innovations are generally obtained from organizational improvements rather than from technological innovations. To completely rethink the logic of business processes has historically also proven to be a technique that can result in major cost reductions (Grant 2008). Despite this, Grant (2008) stresses that firms should evaluate such projects carefully since there is a risk of destroying organizational capabilities that have been built up over a long time.

An additional driver of the unit cost is the product design (Grant 2008). By standardizing the design of products and components, firms can realize economies of scale and learning in the production (Porter 1985). More generally, by emphasizing the production perspective in the design of products and increase the integration between the production and designing function great advantages such as cost reductions can be gained (Grant 2008).

A value activity that has a considerable proportion of fixed costs will be affected by underutilization, which raises its cost because the fixed cost must be spread over fewer units (Grant 2008; Porter

1985). The ratio of fixed to variable cost indicates a value activity's utilization sensitivity (Porter 1985). The profitability of businesses with very high level of fixed costs is highly sensible to drops in demand (Grant 2008). Hence, competitors' ways of configuring their value activities will affect their sensitivity to demand changes (Porter 1985). Notably, firms should consider their capacity utilization over an entire business cycle since the utilization level can vary momentarily (Porter 1985).

Input cost is another cost driver and it is not likely that all competitors pay the same price for identical inputs (Grant 2008). This can both derive from locational differences between input prices as well as varying bargaining power positions (Grant 2008). Input costs are closely related to the localization driver since the input costs to some extent are affected by the localization decisions (Porter 1985). However, the localization does also affect other cost such as wages, energy, logistics and taxes (Porter 1985). Additionally, Porter (1985) stresses that changing location often involves trade-offs: it lowers some costs but raises others.

Residual efficiency means that firms should reach their full potential and reduce any "organizational slack", such as surplus costs that restrict the firm from reaching its full efficiency potential (Grant 2008). These costs, which relate to the employees motivation and cultural behaviors, are often very difficult to eliminate (Grant 2008). However, they can be reduced by a management style that has a strict focus of lowering the residual efficiency (Grant 2008).

Furthermore, the interconnections between a firm's value chain activities as well as the linkages with the suppliers' and customers' activities affect firms' unit costs (Porter 1985). In excess to the connection between the research and development activities and the operational activities, the coordination of the material flow in the purchasing, inbound logistics and operational activities have an influence on the unit cost (Porter 1985). However, a firm's linkages with the suppliers' activities such as timeliness of supplier deliveries and the focal firm's raw material inventory have also an impact on the unit costs (Porter 1985). Also, the collaboration with the firms' customers such as the linkage between the firm's research and development activities, application engineering and the customers' research and development department has an effect on the unit cost (Porter 1985).

The cost of an activity is often affected by timing and firms can receive advantages by being the first mover (Porter 1985). An organization's position as a technology leader can shape the customers' expectations about the firm's solution and thereby lower the marketing costs over time (Schilling 2010). Early movers can also ensure access to scarce resources such as government permits, access to distribution channels and relationship with strategic suppliers that can be costly to develop for a follower (Schilling 2010). Despite this, being an early mover can imply disadvantages whereas followers can gain access to technology and thereby avoid high development cost. Other cost drivers that challenges early movers are undeveloped supply and distribution chains as well as uncertainty in the customers' demands (Shilling 2010).

6.5 Capability Assessment Framework

In the upcoming section the capability framework utilized in this report will be presented. This framework is built upon the different perspectives of capabilities and resources that have been presented in the previous sections. These perspectives have been integrated in order for the framework to be adjusted to the particular purpose of this report.

The capability model is a continuation of the market framework presented in the theoretical section of the market attractiveness part of this report, see figure 15. The capability model is market specific and before the model is being applied for a firm, the attractiveness of the company's market segments should be assessed. This approach is in accordance with the perspective presented by Grant (1991).

The capability analysis has its origin in the customers' key purchasing criteria since these criteria form the basis for the customers' evaluations of the offers on the market. These criteria are basically what Grant (2008) and Johnson et al (2008) denote as key success factors. The key purchasing criteria can vary between markets and this is one of the reasons to why it is important to first identify the most attractive markets. Furthermore, the key purchasing criteria can also differ between the various customers within a market. This variation can be managed differently depending on the particular organization's managers' strategic intent. If the strategic intent is to gain a broad market position various customers' key purchasing criteria can be weighted based on the customers' market share or any other appropriate factor that captures the different customers' importance. This approach will create requirements, weighted key purchasing criteria, which are important criteria to be successful on the market in general. The alternative approach, suitable for managers with the strategic intent to serve a certain customer, is to utilize that customer's key purchasing criteria as the key success factors.

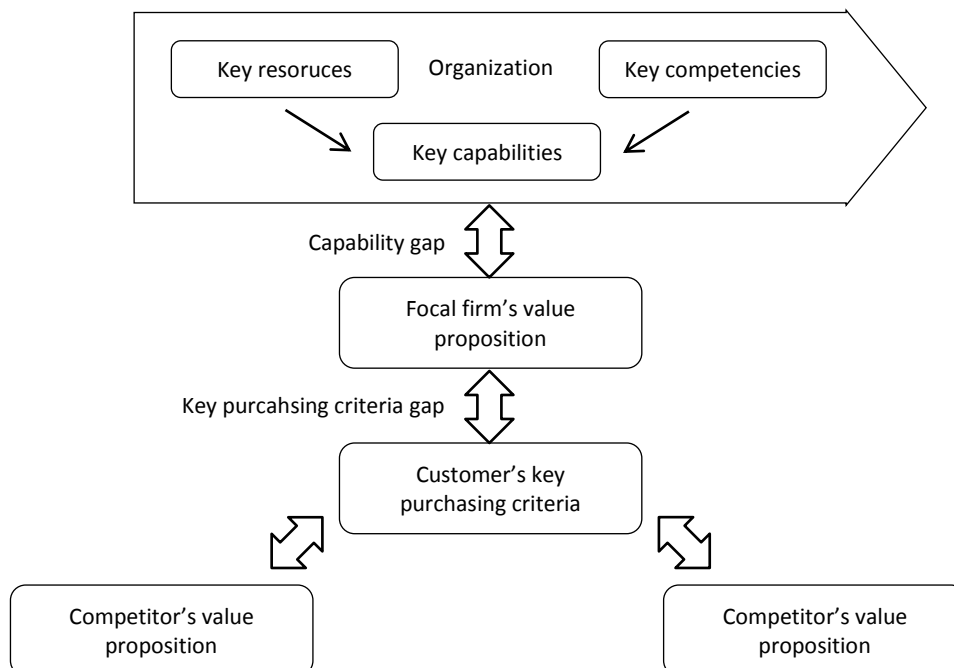


Figure 25 – The capability framework

The focal firm's value proposition and its fit with the customers' key purchasing criteria will have an influence on its profit potential on the specific market. It is not only how the actual value proposition fits with the customers' key purchasing criteria that determine the focal firm's key purchasing criteria gap. In fact it is the relative performance of the competitors' value proposition on the customers' key purchasing criteria that matters. This is in accordance with Grant (2008) and Johnson et al (2008) who emphasize that the focal firm must also outperform its competitors in order to realize the full profit potential within the market segment. To do so, the focal firm must perform better than the competitors on the key purchasing criteria and thereby have smaller positive gaps.

In order for the focal firm to increase its competitiveness within a market segment, the firm must improve their relative performance on the customers' key purchasing criteria in comparison with its competitors'. A firm's performance on the key purchasing criteria are delivered by the firms value proposition which according to Grant (1991) are built by the firm's capabilities, that in turn depends on the firm's resources and competencies.

Therefore, if the focal firm has an intention to reach a more competitive position, the firm should adapt their capabilities, and thus their resources and/or competencies, in order to adjust their value proposition. An adaption of the capabilities means to change these from a current state to a future more desirable state. Hence, a certain capability gap arises and in order close this gap by adjusting the firm's capabilities a more competitive position can be reached. However, an organization has various capabilities and all are not critical components of their value proposition. Therefore, the key capabilities that are the critical components in order for the firm to reach its new value proposition must be identified. As discussed, this identification can be conducted in several ways but in this report the capabilities will be mapped based on the value chain.

7 Capability Assessment: Empirical Findings

In this chapter the empirical findings that the capability analysis is built on are presented. First, the customer and competitive situation in the Chinese, Indian and Western European market are explained respectively. In the end of the chapter Acme is presented from a value activity perspective.

7.1 China: Customers

The most prominent OEM from the perspective of installed base is OEM6, while OEM7-1 is the leader in terms of order intake. OEM7-1 is gaining market share rapidly due to their competitive prices, see figure 16 (Respondent13 2012a).

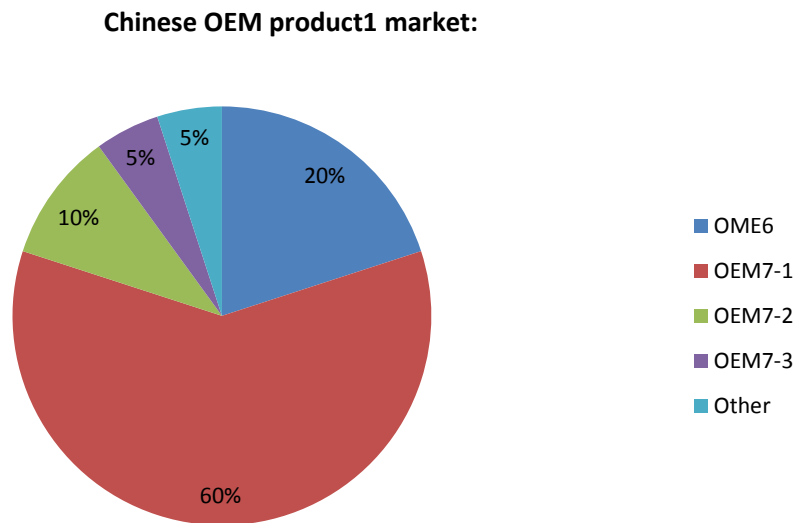


Figure 16 –Order in-take market share at the Chinese OEM product1 market 2011 (Respondent13 2012)

In China the OEMs' key purchasing criteria are price, reliability and relationship (Respondent13 2012a). The price criterion is the unit price of the product1 (Respondent13 2012a). Reliability is emphasized due to that quality problems are huge issues in China; hence customers want to utilize the most reliable and safest solutions (Respondent13 2012a). The reason for this can partly be explained by the existence of safety regulations from the Chinese authorities (Respondent13 2102-02-24) and it is important that quality standards are followed (Respondent9 2012c). However, these quality standards are for now not that well developed for the product1 segment (Respondent9 2012c). The large emphasis on the reliability criterion also is explained by the strong influence of Western European technology in China which the OEMs want to imitate (Respondent8 2012a).

The relationship criterion is about having personal relationships with the OEMs' employees (Respondent13 2012a) but it is also about the customers' experience of a product1 manufacturer as a supplier (Respondent4 2012a). Localization of production is per se not a requirement by the OEMs, however it is important in order for the product1 suppliers to achieve competitive prices on the product1s (Respondent13 2012a). Nevertheless, the trend is that the Chinese Ministry for the focal industry to a greater extent demands local production to strengthen the Chinese economy and competence (Respondent3 2012). This affects both foreign OEMs, such as OEM1, OEM2 and OEM3, and foreign product1 suppliers, such as Acme and Competitor1. For foreign OEMs and product1 suppliers this often means that the Chinese Ministry for the focal industry emphasizes collaboration

with Chinese OEMs. More specifically, these collaborations often are in the form of joint ventures with foreign OEMs (Respondent8 2012a) or product1 suppliers (Respondent3 2012). By doing this it is easier for domestic OEMs and domestic product1 suppliers to increase their competence within the production of product2s and production of related products, such as product1s.

The three key purchasing criteria are valued a bit differently by the OEMs, see figure 17. OEM6 does not emphasize reliability as much as the other OEMs and instead they value the relationship parameter much higher. The reason for this is that OEM6 has a very mature technology platform compared to other OEMs that have less developed platforms (Respondent13 2012a). Reliability is stressed highly for the rest of the OEMs.

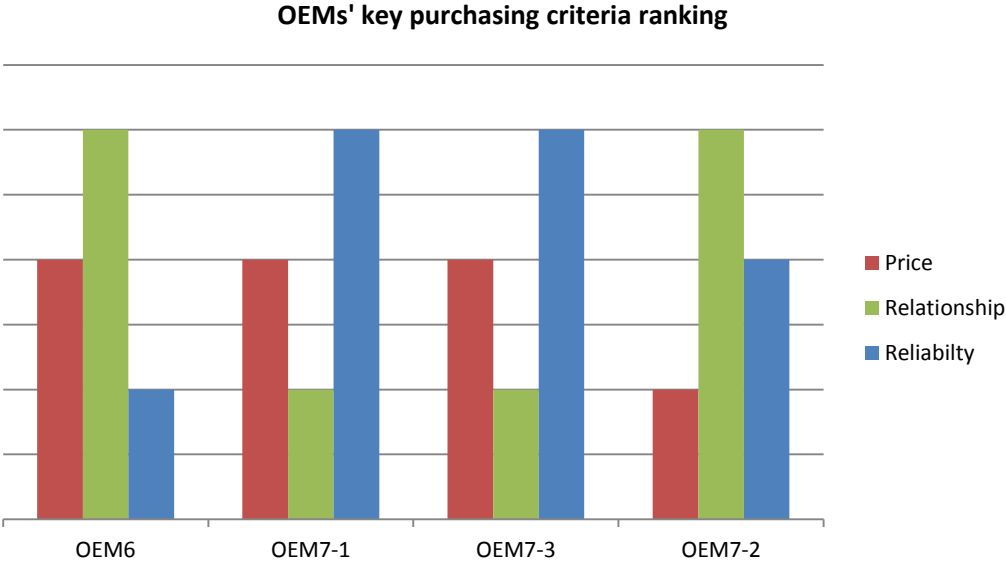


Figure 17 - OEMs' ranking of key purchasing criteria (Respondent13 2012)

7.2 China: Competitors

Acme’s biggest competitors within the Chinese product1 market are Competitor1 and Competitor3. Acme, Competitor1 and Competitor3 have an equal market share of 30% while other product1 manufacturers have a market share of 10%, see figure 18 (Respondent13 2012a). There are other local Chinese players besides Competitor3 that could become more serious players, but they are many years away from becoming competitive enough to threaten the current leaders (Respondent13 2012a). The reason for this is that customers are risk averse and want to go with the most reliable solutions (Respondent13 2012a).

In order to illustrate how different product1 suppliers perform on the key purchasing criteria for each OEM in China a ranking was done, see table 18-21. Here each of the most prominent product1 suppliers has been ranked by a number from 1 to 3, in terms of how they perform on each OEM’s key purchasing criteria. The rating goes according to: the higher the number the better the performance.

Chinese product1 market

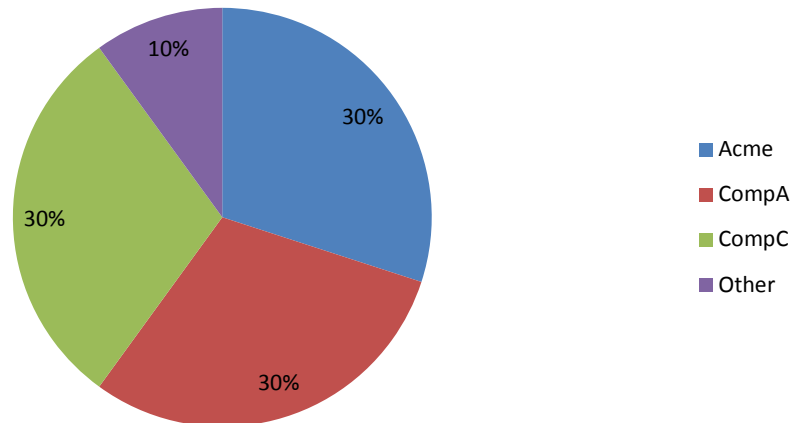


Figure 18 - Market share distribution for the Chinese product1 market (Respondent13 2012a)

Both Competitor1 and Competitor3 have a great local presence in China. Competitor1 localized since a long time ago and manufactures most of their product1s in China (Respondent13 2012a). Competitor3 is a Japanese company and have therefore a strong organization within a geographically close market. The localization speed of the competitors has overall been faster than that of Acme's (Respondent13 2012a). In terms of technical capability, Competitor1 is quite similar to Acme (Respondent8 2012a). Competitor3 however is very focused on profitability (Respondent4 2012a). Competitor3 is not present on all projects but when they are, they go in aggressively with a low price (Respondent4 2012a). Also, Competitor3 is not very technically oriented but often considered to be good enough in this aspect by the OEMs (Respondent4 2012a).

OEM7-1 performance rating				OEM6 performance rating			
	Reliability	Price	Relationship		Reliability	Price	Relationship
Competitor1	2	2	2	Competitor1	3	2	3
Competitor3	1	3	1	Competitor3	3	3	2
Acme	3	1	3	Acme	3	1	1

OEM7-3 performance rating				OEM7-2 performance rating			
	Reliability	Price	Relationship		Reliability	Price	Relationship
Competitor1	2	2	3	Competitor1	2	1	2
Competitor3	1	3	1	Competitor3	3	1	3
Acme	3	1	2	Acme	1	1	1

Table 18 – 21 - OEM's ranking on product1 suppliers performance on key purchasing criteria (Respondent13 2012a)

7.3 India: Customers

During the last ten years six larger product2 orders have been purchased on the Indian OEM product1 market, see table 22 (Respondent5 2012). The Indian OEM OEM13, that has formed a joint venture with the Korean OEM OEM4, has a leading market position, both regarding the order intake during the ten last years but also based on installed base, see figure 19 and figure 20 (Respondent5

2012). The two market leading actors, OEM4 and OEM2, have been supplying the product2s by producing locally whereas the other OEMs have leveraged on their domestic production capacity and delivered product2s to India through exports (Respondent5 2012; Respondent7 2012a). Both OEM13/OEM4 and OEM2 are utilizing the same types of product1s, the product1 type1 and product1 type2 of the dimension XX*YY, in their product2 platforms sold on the Indian market (Respondent11 2012).

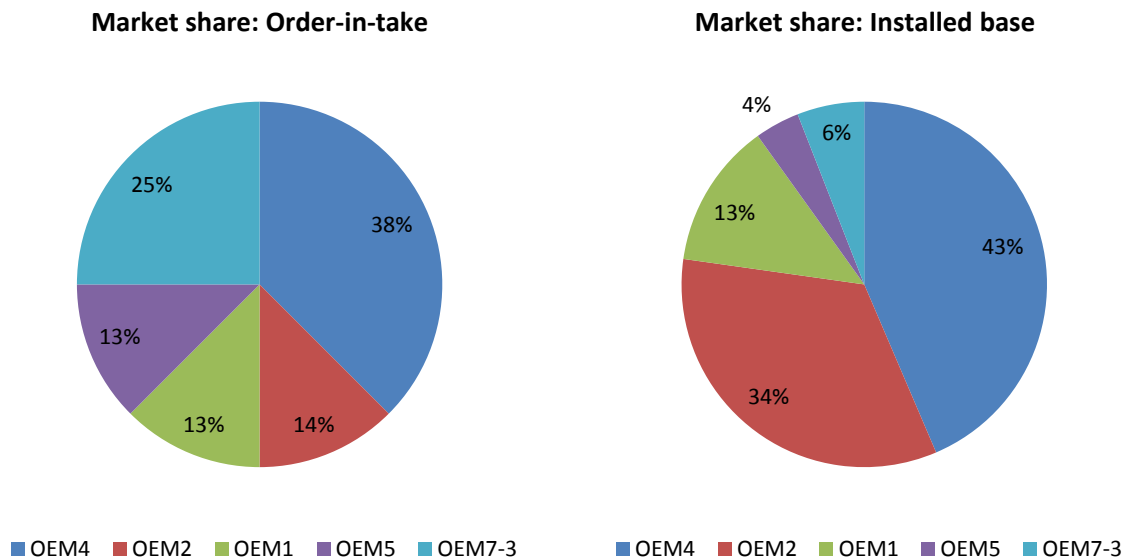


Figure 19-20: Market share for Indian OEMs based on order-in-take for the last 10 years and total operated product2s in installed base (Respondent5 2012)

The market leading OEM, OEM13/OEM4, is utilizing a specific strategy for procuring product1s from product1 suppliers that the firm has not conducted prior business with (Respondent5 2012). In order to be able to supply the OEM larger quantity orders, product1s suppliers must first deliver smaller orders, named development orders (Respondent9 2012e). OEM13/OEM4 utilizes this method in order to ensure the safety of their installed base and to evaluate suppliers that have not delivered product1s to the Indian product1 market (Respondent9 2012e). This procurement strategy is only used by OEM13/OEM4 and not by the other OEMs that are delivering product2s to Indian segment1 systems (Respondent5 2012). Despite that all OEMs are not using development orders; safety is the number one priority for all OEMs in their procurements of product1s (Respondent5 2012). The product1 suppliers' solutions' safety is generally evaluated by the product1s' operational performance (Respondent5 2012). However, safe product1s are a prerequisite in order to be able to deliver to OEMs on the Indian product1 market and the characteristic is therefore not considered to be a key purchasing criterion by the OEMs (Respondent5 2012).

The two key purchasing criteria that the OEMs emphasize on the Indian market are price and localization (Respondent5 2012). After safety these are the criteria the OEMs value the most when evaluating product1 orders (Respondent8 2012a; Respondent5 2012). The OEMs that are active in India demand standardized product1s and focus on identifying several comparable product1s (Respondent3 2012). It is very difficult to sell product1s on differentiation in India and the demand for standardized solutions is likely to increase (Respondent3 2012). After the OEMs have found a

number of suitable product1 options technically, the product1 order is awarded to the supplier with the lowest price (Respondent3 2012).

In order to ensure low priced product1s some of the OEMs request localized product1 production (Respondent7 2012b). The localization demand is expressed in that OEMs require that a certain amount of the components should be produced locally in India (Respondent5 2012). One of the reasons for that localization implies lower product1 prices is that the import tariffs of up to 29% can be avoided (Respondent7 2012b). OEM13/OEM4 has historically been using the localization requirement as a conditional demand (Respondent5 2012). OEM2 demanded also a certain amount of local content within their product1 purchase to the Indian segment1 system1-2 (Respondent8 2012b). To be rewarded the product1 order in this project the product1 supplier had to assure to localize production during the period of the project (Respondent8 2012b). However, the receiver of the order, Competitor1, has not produced any product1s yet in India but rather in China (Respondent8 2012b). Localization requirements like this often involve demand for localization of production initially whereas the suppliers also must begin to procure input components locally over time (Respondent8 2012b; Respondent3 2012).

Additionally, Indian OEMs prefer to do business with domestic partners due to that these are considered to be more trustworthy (Respondent1 2012). The actor OEM13/OEM4 has had production in India for long whereas OEM1 and OEM2 are increasing their establishments in India locally (Respondent5 2012). OEM1 has a factory producing product2s in India but it has not been given any certification by the local authorities to deliver product2s produced in the factory to the Indian product1 market (Respondent7 2012b). Therefore, OEM1 will deliver their current Indian product2 project by exporting the product2s from a production site in Europe or South America (Respondent7 2012b).

Despite that the three historically strong OEMs have been localizing production on the Indian market the actors have had difficulties in receiving orders (Respondent8 2012b). The Indian authorities are communicating that a lot of segment1 systems will be established and expanded but until today the three large OEM's have been rewarded fewer projects than expected (Respondent8 2012b). Furthermore, the managing director of the most prominent governmental institution of the focal industry, which has consulted all Indian segment1 systems, has expressed that OEM13 will have a greater say in receiving product2 orders since they localize production and design which will bring down cost (Anonymous sources, 2009)

Project	OEM	Product2s produced	Location of OEM's product1 sourcing decision	Product1 supplier
Indian segment1 system 1-1	OEM4	417	South Korea	Competitor2 India
Indian segment1 system 1-2	OEM2	438	Germany	Competitor1 China
Indian segment1 system 1-3	OEM5	48	Spain	Acme Spain
Indian segment1 system 2	OEM4	150	South Korea	Competitor2 India
Indian segment1 system 3	OEM7-3	64	China	Acme China
Indian segment1 system 4	OEM1	168	France	Competitor1 Europe/India

Table 22 - The OEMs and product1 suppliers that have been supplying the Indian product2 projects during the last 10 years

Application segments	China	India	Japan	South Korea
Segment2	-	1 000	5 000	-
Segment3	1 000	10 000	39 000	2 000
Segment8	289 000	179 000	3 000	3 000
Segment4	15 000	-	10 000	1 000
Segment5	25 000	9 000	1 000	1 000
Segment6	16 000	6 000	1 000	-
Segment7	2 000	4 000	1 000	-
Segment1	17 000	2 000	7 000	7 000
Segment9	47 000	51 000	-	1 000
Total	411 000	263 000	68 000	16 000

Table 23 - The product1 amounts per application segment for the four largest domestic focal industry markets in Asia. Yellow and green cells are markets consisting of product1s over 7 500 respective 15 000 product1s per year (Respondent9 2012j)

7.4 India: Competitors

Competitor1 is the order intake market leading product1 supplier in the Indian product1 market, see figure 21 (Respondent5 2012). Competitor1 has reached this position since it has been rewarded substantial orders by OEM1 and OEM2, see table 22 (Respondent5 2012). Competitor1 has not had local manufacturing in India previously but is currently establishing a manufacturing unit that will be able to produce product1 type1s (Respondent5 2012). In contrast, the actor with the second largest market share Competitor2 has had local production in India for over 10 years, see figure 21 (Respondent5 2012). Competitor2 has supplied all of OEM13/OEM4s larger product2 projects with product1s during the last 10 years, see table 22 (Respondent5 2012).

OEMs that have found a product1 solution that they are satisfied with would often like to use the supplier repeatedly (Respondent3 2012). When partnerships between OEMs and product1 suppliers have been established on the Indian market with several successful deliveries of product1s, it is challenging for a new actor to displace the current supplier (Respondent5 2012). The rationality for locating production in India is that local product1 production is less expensive than exporting product1s (Respondent10 2012b). The reason for this is that the product1 manufacturer avoids import tariffs, transportation costs and inventory costs during this transport (Respondent10 2012b).

Market share: Order-in-take

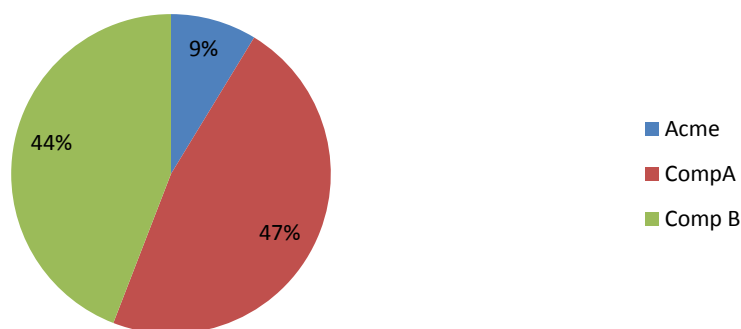


Figure 21 - Market share for product1 suppliers on the India OEM product1 market based on order-in-take for the last 10 years (Respondent5 2012)

Acme has supplied product1s to Indian product2 projects conducted by OEM5 and OEM7-1, OEM7-2 and OEM7-3 (Respondent5 2012). These product1 projects have not been sold by the FBU’s Indian sales organization but the local organizations in Spain and China respectively, where the product2s have been produced (Respondent5 2012). In contrast, Acme quoted for product1s delivered in the OEM2’ Indian segment1 system1-2 but the proposed produced product1s from the City2 factory was substantially more expensive than the quote from Competitor1 (Respondent8 2012a). Competitor1 which was awarded the order quoted based on production of their product1s in China (Respondent8 2012a). Despite that OEM2 has a local supply manager in India the product1 supplier was selected from the OEM’s organization in Germany (Respondent8 2012b). This was also the case for OEM1’s Indian segment1 system 4 order (Respondent7 2012b).

7.6 Western Europe: Customers

The market leading OEMs of product2s presented in figure 22 has all production units locally in Western Europe (Respondent7 2012a). The strength of the OEMs’ market positions within the regional markets in Western Europe differs and is related to the firms’ origin whereas OEM5 for example has a strong position in Spain (Respondent7 2012a). OEM1 with an origin in France has a strong position within this local market whereas OEM3 is prominent within Germany (Respondent7 2012a). OEM2 has production of product2s in both countries but the main production is in Germany (Respondent8 2012b). The leading domestic product1 markets within Western Europe are the ones in Germany, France, Spain and United Kingdom (Respondent7 2012a). However, the Western European market serves also as an exporting market whereas the OEMs manufacture product2s within their factories delivered to other geographical markets (Respondent3 2012). OEM5 is for example exporting to the American markets from their Spanish sites (Respondent2 2012b). The export orders from Europe are declining as other markets are becoming increasingly localized but despite this the characteristic makes the product1 market strategically important (Respondent3 2012).

Market share: Delivered product2s 2006-2010

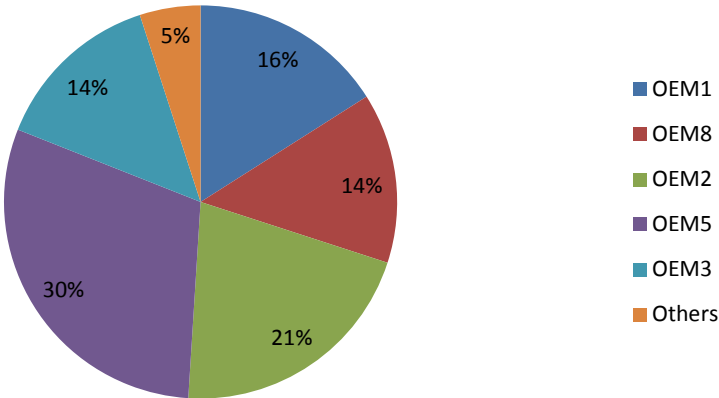


Figure 22 - - Market share for product1 OEMs at the Western European product1 market based on delivered product2s 2006-2010 (Respondent9 2012)

The segment1 systems within Western Europe are not especially technically standardized which historically have been beneficial for Acme since the firm have been able to utilize its technological

knowledge (Respondent8 2012a). The OEMs and segment1 operators within Western Europe has a high emphasize on safety and value quality product1 but are becoming focused on cost, especially total cost of ownership (Respondent8 2012a). The Western European OEMs with OEM2 as the leader has recently improved their purchasing method for input components where these actors have begun utilizing an evaluation matrix where the suppliers performance are ranked based on various factors (Respondent8 2012a). By weighting the factors after importance the OEM can identify the supplier which performance has the overall most satisfying performance (Respondent8 2012a). The evaluation factors the OEMs prioritize the highest are presented in in table 24.

Most prioritized evaluation factors	Description
Design	The degree to which the functional demands are met The product1 solutions' innovativeness
Quality performance	The product1s' performance in the field Evaluated on similar product1s' performance in operations Delivery performance of orders
Reliability and safety	Overall evaluation of the product1 design Duration of critical elements Life-time calculations
References and experience	Amount of and quality of references for similar product1 types
Risk	The results of risk evaluations such as FMEA Delivery possibilities of order
Price	Product1 unit price

Table 24 - The evaluation criteria the Western European OEMs weight as the most important in their evaluation of product1 suppliers' proposals (Respondent8 2012a; Respondent15 2012)

7.7 Western Europe: Competitors

Several product1 suppliers are present at the OEM product1 market in Western Europe but the market is mainly dominated by two actors: Competitor1 and Acme, see figure 23 (Respondent9 2012j).

OEM product1 market share in Western Europe

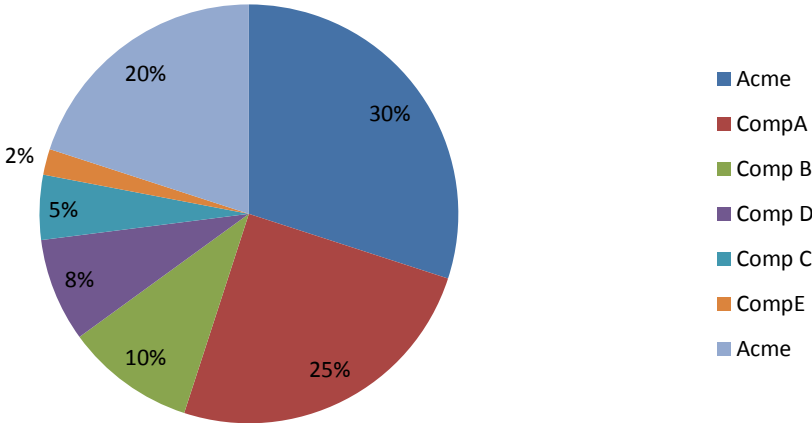


Figure 23 - The product1 manufacturers respective market shares on the Western European OEM product1 market (Respondent4 2012)

One of the most prominent OEM’s ranking of the Western European leading product1 suppliers’ performance on some competitive dimensions has been presented in table 25 (Respondent8 2012a). However, the OEM’s perception of the product1 is believed to be shared by the market leading OEMs and can therefore be considered as representative for the market (Respondent8 2012a).

Competitive dimensions	Acme	Competitor1	Competitor2	Competitor4
Product range	10	12	3	3
Delivery performance	10	6	8	12
Price	3	5	10	7
Innovation	13	12	9	11
Image	9	12	3	12
Manufacturing capability	12	4	4	10
Customer service	7	7	8	10
Quality	10	9	6	8

Table 25 - The OEMs’ perception of the leading product1 suppliers’ performance on competitive dimensions (Respondent8 2012a)

The two leading suppliers, Competitor1 and Acme, have a fairly similar performance in Western Europe and both firms have strong engineering capabilities (Respondent8 2012a). Acme can be considered to have slightly more technically advanced solutions than Competitor1 but the advantage is not enough in order for the OEMs to identify a benefit from purchasing Acme’s product1s, which is the case for example Acme’s product1s’ maintenance intervals (Respondent15 2012). Competitor2 has overall less technically advanced solutions in comparison to Acme whereas Competitor4’s product1s’ advancements are high for product1s that are produced in Japan but lower for product1s produced in Europe (Respondent9 2012g).

Quality, technically, is how much the product1 performance deviates from the predetermined specifications (Respondent9 2012d). Top quality is demanded by the OEMs and this is therefore a minimum requirement for the product1 suppliers in order to be competitive (Respondent9 2012d). However, all product1 suppliers have some quality claims (Respondent9 2012h). Acme has generally fewer quality related problems than Competitor1 (Respondent9 2012f). From a delivery performance perspective, Acme is considered to lag behind its competitors since the firm has low responsiveness in timely deliveries and response to customer inquiries (Respondent3 2012).

Acme has the highest price on the Western European OEM product1 market, which is negative since the criterion is important for the OEMs (Respondent8 2012a). However, the price difference between Competitor1’s and Acme’s offers differs between OEMs but overall the difference is not huge but clearly notable (Respondent7 2012a; Respondent8 2012b). The price level is vital which can be indicated by that the difference in product1 price is most likely the main reason for that Acme lost the majority of their market share for OEM2’s product2 factory in Europe to Competitor1 a couple of years ago (Respondent8 2012b). Competitor4 is trying to expand within the product1 segment but it is not price competitive due to that the supplier lacks the proper sales volumes in Europe (Respondent7 2012a). A market trend is that Western European customers is focusing more on life-time cost than only on the product1 unit price (Respondent8 2012a). Furthermore, the price pressure on the exporting orders is increasing due to that the product1 requirements are becoming more standardized (Respondent2 2012b). The product1s utilized for product2s that are exported from Western Europe have generally more standardized characteristics than the product1s that are used

in Western European applications (Respondent4 2012b). The standardization and price pressure is challenging for Acme which has lost some export orders due to their price level (Respondent2 2012b).

An additional factor that is important for product1 suppliers in gaining orders from the OEMs, which has an influence on several of the OEMs' evaluation criteria, is the strength of the relationships with the OEMs (Respondent8 2012a). The trend for Western European OEMs is that they involve the product1 suppliers more frequently in the conception phase of the product2 design which means that the technical requirement of the product1s are affected by the influenced product1 supplier (Respondent8 2012a). Moreover, both Competitor1 and Acme have good relationships with OEM1, OEM2, OEM5 and OEM3 within the Western European product1 market (Respondent8 2012a; Respondent8 2012b). However, Acme's relationship with OEM2 and OEM5 is challenged by that Competitor1 is increasing their market share among these customers (Respondent8 2011-05-11; Respondent4 2012a). Acme's relationship with OEM1 is satisfying due to their substantial market share for the OEM (Respondent8 2012b). Competitor4 as a French supplier has also a strong relationship with OEM1 but has a weak position in Germany (Respondent7 2012a). Competitor1 has overall a very strong market presence in Germany (Respondent15 2012). Competitor2 has a low activeness in general at the Western European product1 market (Respondent8 2012b).

7.8 Acme

Acme's product1 related business will be analyzed from the value chain activities: research and development, supply chain, manufacturing as well as marketing and sales. The value chain activity supply chain is a combination of the activities that commonly are included in procurement as well as inbound and outbound logistics. The FBU's business has been characterized in this way since it reflects the business' setup.

7.8.1 Manufacturing and Supply Chain

The FBU has four factories that it controls and utilizes for its production of focal industry product1s (Respondent10 2012a). The product1s the FBU manufactures are produced in the factories in City2, Italy, and in City1, China (Respondent10 2012a). The procurement of input material is conducted at a factory level (Respondent9 2012d). However, a few components such as steel are purchased in a synchronized way on an Acme group level (Respondent9 2012d). The manufacturing in Acme's factories is organized into production channels where such a channel accomplishes a number of value adding processes (Respondent10 2012a). The production channels within the FBU are very machine intensive and the vast majority of the production costs are therefore fixed (Respondent10 2012b). The FBU has conducted a project where similar machines with high flexibility and low setup time have been installed in all factories (Respondent10 2012a). This will allow the FBU to produce all product1 types in each factory (Respondent10 2012a).

The FBU has a production strategy to manufacture the product1s in a standardized way with low variety in the beginning of the production process and to be able to create a great variety of different product1s in the final production channel by having the possibility to vary input components such as component3, component4 and component6 (Respondent10 2012a). The mentioned input components have a relative low cost in comparison to component1 and component2 and are therefore not that relatively costly to have in inventory (Respondent10 2012a). The procurement costs of component1 and component2 have the largest share in the cost break-down structure of

product1s and due to this the FBU wants to avoid inventory of these input costs (Respondent10 2012a). However, the component2 are strategic input components based on that the production is based on much of Acme's know-how and core technological competence whereas Acme wants to have the component2 production in-house (Respondent9 2012d). The FBU is currently conducting a project to evaluate, reselect and develop the component1 and component2 suppliers with the focus to decrease price levels and lead times etc (Respondent6 2012b).

An option to reduce cost of product1s in the City2 factory could be to use component1 made from ready-made steel pipes (Respondent10 2012b). This would imply that ready-made steel pipes and the related value-adding activities are bought externally for the supply of component1, as the City2 factory does not have the necessary manufacturing setup to produce the component1 (Respondent10 2012b). However, when doing it in this way the component1 need to be soft-turned and hardened and after these operations the material structure of the outer component1 is unknown (Respondent9 2012h). An important aspect is also that this option implies that there will be a certain point where the production of component1 from ready-made steel bars is as economically feasible as the production of regular component1s. The reason for this is that soft turning of component1 from this material could be less economically beneficial for the supplier than continue to produce regular component1 if the machines are in use (Respondent9 2012h).

7.8.1.1 The City1 Factory

The FBU's production facility in City1 is a joint venture together with the Chinese OEM OEM6, which in turn is owned by the Chinese Ministry for the focal industry (Acme City1, China, 2006; Respondent9 2012j). Acme holds a 51% stake in the joint venture and thus has management responsibility of the venture (Acme City1, China, 2006). The production of product1s for the segment8 segment was the main reason Acme chose to establish the City1 plant in China (Respondent3 2012). Today the City1 facility produces product1s not only for segment8, but also for segment4, segment5, segment9 and segment1 applications (Acme City1, China, 2006). Currently most segment8 product1s are produced at the City1 site (Respondent10 2012c). Compared to the competitors, Acme has however been a bit late at establishing local production and localizing suppliers in China (Respondent6 2012a). Competitors have thus been faster at localizing here (Respondent6 2012a). Local production is very important in order for Acme to improve the cost levels and this could be done further to decrease costs (Respondent13 2012a). For now, Acme both export certain product1s to the Chinese market and produce product1s locally that are sold in China (Respondent10 2012b). As the Chinese Ministry for the focal industry is demanding more local production, local production is becoming more and more important compared to exporting (Respondent3 2012). However, increasing localization also has some risks because of that joint venturing is emphasized by the government, who in turn gets access to knowledge and processes that they easily can copy (Respondent3 2012). Acme are careful in choosing the product1 types produced in City1 since the joint venture setup implies that Acme inevitably shares IPRs and know-how with their Chinese partner (Respondent3 2012).

The City1 facility is a large factory with low product variability and produce bigger batches compared to the factory in City2 (Respondent6 2012a). As of now, the City1 plant almost only produces product1s for the Chinese market, but a goal is to increase the assortment and get certificates to supply other Asian markets (Respondent6 2012a). The plant runs with a high efficiency (Respondent10 2012a; Respondent6 2012a). However, capacity utilization varies a lot from year to

year depending on the orders they receive (Respondent3 2012). About 220 000 product1s are produced here each year but it could be increased to around 250 000 product1s per year (Respondent6 2012a).

Even though the City1 facility has good capacity and good quality (Respondent10 2012b), there are problems with production scheduling and planning (Respondent6 2012a). The reason for this is that people are not as well educated as in Europe and do not have the same experience in production scheduling and planning (Respondent6 2012a). The problem can be derived from a different mindset that is more traditional, where it is not about balancing the production, but rather about always running the machines in high speed even when it is not needed (Respondent6 2012a; Respondent10 2012b). This problem can be exemplified with the current large storage capital in the City1 plant (Respondent10 2012b).

Compared to the City2 factory, the City1 facility is more vertically integrated in their supply chain (Respondent9 2012d). Regarding the production of component1 for the product1s, instead of purchasing input component1 in various sizes, like the City2 factory, the City1 plant purchase steel bars that they forge themselves (Respondent9 2012d). In the production process the steel bars are first heated and cut off in steel chunks (Respondent9 2012h). Thereafter, the steel chunks are forged into rough steel component1 (Respondent9 2012h). After this process the component1 are soft turned, giving them the basic dimensions that will resemble the final product, and also hardened (Respondent9 2012h). After the hardening is done you cannot soft turn the steel to change the dimensions, instead you have to hard turn or grind the component1 (Respondent9 2012h). Because the operations get more expensive the further you get you want to coordinate the production of component1 for various application segments as much as possible before they are hardened (Respondent9 2012h).

Acme coordinate the production between various segments (Respondent9 2012h), but as of today the production of product1s for segment1 applications are not coordinated with the production of product1s for other application segments at the City1 site (Respondent13 2012b). In the City1 facility, the component cost is approximately half of the total unit costs as the value added is more than in City2 facility (Respondent10 2012b). For this reason the effect of volume changes in production has a larger impact on cost than at the City2 site (Respondent10 2012b). Regarding input components for the production, they are all sourced locally (Respondent10 2012b). Suppliers in China are however less flexible than the European ones because they are less mature (Respondent6 2012a).

The City1 production facility mainly produces product1 type1 and product1 type2 of the dimensions XX mm (inner component1) x YY mm (outer component1) x ZZ mm (outer component1 width) and XX*YY*ZZ. The product1 type1 and product1 type2 XX*YY*ZZ is two types of product1 produced in the City1 factory for segment1 applications in China, where the product1 type2 XX*YY*ZZ is the most common product1 for segment1 applications that is produced (Respondent13 2012b). The product1 type1 XX*YY*ZZ was a common product1 dimension historically for Chinese segment8 applications, but as the Chinese increased the load size of segment8 they changed to the product1 type2 XX*YY*ZZ (Respondent2 2012a). However, there is still an aftermarket in segment8 for the old segment8 design (Respondent2 2012a). The product1 type2 XX*YY*ZZ is also a common product1 type for the application segments segment2, segment3 and segment9 (Respondent2 2012a). Acme

has previously conducted projects to investigate the possibilities to coordinate the production of common product1 types (Respondent10 2012b). However, the production of product1s in the City1 plant is currently not coordinated with other application segments (Respondent13 2012b)

7.8.1.2 The City2 Factory

The factory in City2 has a production set up that allows for a flexible production, which is a result of that input component1s are procured and the volume demanding forging process is therefore not conducted in-house (Respondent10 2012a). The input component1s are purchased from local suppliers externally and the component2s are procured from an internal component2 channel located in Europe (Respondent10 2012a). The production costs of component2s in Acme's Chinese factories are substantially lower due to the component2s channels' higher utilization (Respondent10 2012a).

Despite the flexible production, the utilization of the factory is very low (Respondent10 2012a; Respondent10 2012b). One reason for this is that the factory currently has two production channels since the FBU wants to exchange the old production channel setup (Respondent10 2012a). Theoretically, one production channel would be sufficient to supply the demand (Respondent10 2012a). The reason to why the FBU has two channels in operation is that there is an organizational resistance to begin utilizing the new channel (Respondent10 2012a). However, there are several other factors that contribute to the low utilization of the production capacity such as suppliers' delivery performance, the production planning and the internal material flow (Respondent10 2012a; Respondent6 2012a).

Only a small number of suppliers have a satisfying delivery performance and problems as late deliveries, unplanned part shipments and quality problems are frequently occurring (Respondent6 2012a). The FBU is currently undertaking a project to update the planning parameters that aims to improve the accuracy of the production planning (Respondent6 2012b). Additionally, a reorganization of the planning of the production is conducted since the planning team has had the responsibility for the procurement and overall production planning but the planning of the final product1 variety setting operations have been in control of the manufacturing teams (Respondent6 2012b). Hence, the FBU will initiate a project that will result in giving the planning team the full responsibility (Respondent6 2012b). The production is designed to have a pull-based flow but due to the current planning issues this system is not utilized (Respondent10 2012c).

7.8.1.3 Potential Localization in India

Acme group has several factories in India but these are not controlled nor adjusted to the FBU's operations (Respondent9 2012g). The majority of the Indian factories have another production setup than the one utilized within the FBU's factories (Respondent9 2012g). The Indian factories have a more standardized and volume based manufacturing layout (Respondent9 2012g). However, Acme's Indian factory in City3 has a more flexible production system and there is furthermore a possibility to expand the capacity within the factory (Respondent9 2012g). This factory is fully owned by Acme but the fact that another business unit within Acme has the majority of the production within the plant delimits the FBU's possibilities to coordinate and control the production (Respondent9 2012f; Respondent9 2012g). Currently, no product1s are produced in Acme's Indian factories (Respondent9 2012i). The ownership of the factory is a factor that is important to consider from the aspect of intellectual property rights (Respondent3 2012). When co-locating with another actor, such as in

China, one has always to be aware of the risks that other actors may exploit your intellectual property rights and know-how (Respondent3 2012).

The FBU can establish production in another country by for example producing focal industry product1s in another business unit's factory, setting up a complete factory, establishing a single production line and/or form a joint venture with a local competitor (Respondent8 2012b; Respondent10 2012b). Establishing a complete factory is a huge investment but will also generate substantial production capacity (Respondent10 2012b). The investment needed for setting up an assembly line is radically lower but such an alternative only generates additional production capacity of approximately 25 000 product1s per year (Respondent10 2012b). In this case, the FBU needs to source the input components from existing suppliers which will lower the potential profit margin (Respondent10 2012b).

The assembly line option is in contrast to establishing a complete plant a low risk option, due to the lower investment need (Respondent10 2012b). In comparison to establishing a factory, it is less difficult to localize an assembly channel from a technology transfer perspective (Respondent10 2012b). A potential joint venture investment is very dependent on the partner and their manufacturing capability (Respondent8 2012b). In order to realize such an alternative in India the FBU is likely to need to undertake substantial development of their potential partners in order to be able to produce product1s of the required quality in a reliable way (Respondent8 2012b). Except the investment costs, the factors determining the profitability of the investment are the price level on the market and the volumes awarded on the market which affect the utilization of the production investment (Respondent10 2012b).

7.8.2 Research and Development

An important point from a design perspective is that in order to reduce cost, the design of product1s for other application segments is more important than the design of the product1s on their own (Respondent10 2012b). The reason for this is that the product1 volumes are so small compared to other application segments in the City1 facility (Respondent10 2012b). As coordination of production for various application segments is important in order to reduce cost, it would be interesting to investigate how the design of other applications could be utilized for the product1 segment (Respondent10 2012b). For example, if the production of product1s could be joined with the production of the old type of Chinese segment8 product1s (product1 type1/product1 type2 XX*YY*ZZ) costs could be reduced (Respondent10 2012b).

An ongoing project within Acme is to enlarge the product1 type1s and product1 type2s outer component1 width from XXX1 mm to XXX2 mm at the City1 site in order to include other application segments in China, but also to make it interchangeable with the standard product1 type1 and product1 type2 produced at the City2 site, which is XXX1 mm in outer component1 width (Respondent2 2012a). By doing this substantial cost reductions could probably be achieved (Respondent2 2012a).

From a design and production perspective the FBU has no specific "product1s" rather product types as the product1 type1 in some dimension with certain features that are commonly sold to product1 customers (Respondent10 2012a). The FBU has never conducted any efforts to adjust the most frequently purchased product1s within the product1 segment to the specific demands of the product1 customers (Respondent9 2012f). The vibration levels are relatively high for segment1

systems, which wear the cage in the product1s and affect the component5 negatively and thereby reduce the product1s' maintenance intervals (Respondent9 2012f). By changing the product1 component5 in order to increase its lifetime the maintenance interval can possibly be extended (Respondent9 2012f). Acme could also conduct technical investigations like design-of-experiments, which optimizes the technical performance base on the required demands (Respondent9 2012f). Such technical investigations are not especially costly but take long time to accomplish (Respondent9 2012f).

7.8.3 Sales and Marketing

Acme has relatively decentralized sales and marketing organizations in comparison to its suppliers (Respondent3 2012). The local sales and marketing organizations within the focal markets will be discussed in the following sections.

7.8.3.1 China

Acme has established a local sales unit in China (Respondent12 2012). The sales offices are spread out geographically and Acme are represented in areas where a lot of product2s are produced (Respondent3 2012). In 2008 Acme had 2-3 people working within the sales department in China but since then they have increased the capacity to 20-25 employees (Respondent3 2012). However, there is still a surge for more resources in this area and Acme need to increase their capacity with the growing Chinese market (Respondent3 2012).

Concerning Acme's relationships with OEMs in the Chinese market, this is a key area in order to increase the business activity (Respondent13 2012a). Some competitors do have better relationships than Acme (Respondent13 2012a). Here it is important to improve the sales and application engineering capability in order to speed up the response time to customers (Respondent13 2012a). Acme has a relatively weak relationship with OEM6 due to the fact that OEM6 is strongly interlinked with Competitor3 (Respondent9 2012g). Acme's relationship with OEM7-2 is also rather weak. This is because they recently shifted to the use of an OEM9 installed base design, which calls for Competitor3 or Competitor4 product1s (Respondent8 2012a). Furthermore, Acme's relationship with OEM7-3 is also quite weak and the reason for this is that Acme has had quality issues where they lost some credibility (Respondent8 2012a). OEM7-3 is now more strongly interlinked with Competitor1 instead (Respondent8 2012a). It is however possible to regain credibility in a relationship if the product1 supplier responds fast to customer claims or requests and correct the problems (Respondent3 2012). Acme is today a leading product1 supplier with OEM7-1 based on good performance (Respondent13 2012a).

7.8.3.2 India

The FBU has a local sales organization in India and the capacity of this has been expanded during the last couple of years by recruiting staff in India locally and educating these (Respondent9 2012g). Despite this, Acme's product1s have low credibility at the Indian market (Respondent5 2012). In order to increase this, the local sales organization should increase their promotion of Acme's capabilities by visiting the customers' factories (Respondent5 2012).

7.8.3.3 Western Europe

The factor that determine to what extent Acme will be able to influence the OEMs' product2 design during the conception phase is the frequency of their customer visits and how active the Acme employees are during these meetings (Respondent15 2012). Acme has both sales personnel and

application engineers that visits the OEMs where the application engineers are especially important in the conception phase as the discussions are mainly technical (Respondent15 2012). Acme are lacking application engineering capacity especially in central Europe, where Competitor1 has a lot more application engineers (Respondent15 2012). For example, in Germany Acme's application engineers are in front of the customers a couple of times per year whereas Competitor1's application engineers are in-front of the customer every second week (Respondent15 2012). In fact, Competitor1 has overtaken some of Acme's customers within the product1 segment (Respondent8 2012b). Competitor1 began for example to deliver product1s to OEM2s product2 production in Germany a couple of years ago which was mainly due to that their price levels was 10-20% lower than Acme's. In addition, to increase the amount of application engineers the cooperation with the OEMs could possibly be improved by locating an application engineer at each customer, such as in the automotive industry (Respondent3 2012). This will hopefully imply more product1 orders but also improve Acme's responsiveness in filing documentation required by the customers (Respondent15 2012).

The FBU has previously had low interaction with the segment1 operators due to that the aftermarket was another Acme division's responsibility (Respondent8 2012a). However, the new organizational structure implemented in the beginning of 2012 will enable the FBU to communicate with aftermarket customers such as segment1 operators (Respondent8 2012a). This will create possibilities to strengthen the FBU's aftermarket position (Respondent8 2012a).

8 Capability Assessment: Analysis

In this chapter an assessment of Acme's capabilities on three strategic markets: China, India and Western Europe will be presented. For each of the markets an assessment of Acme's relative performance on the OEMs' key purchasing criteria is conducted. Thereafter, Acme's performance on the key purchasing criteria on the markets will be related to internal functions that influences the firm's performance.

8.1 China: Key Purchasing Criteria Assessment

The Chinese OEMs' most important key purchasing criteria have been identified as price, relationship and reliability. The price criterion could be defined either as the initial deal unit price for the OEM or the price by also considering the life cycle cost of the product¹. However, since the Chinese OEMs mainly emphasize product¹ unit price, the price criterion is taken to mainly consider this aspect. The relationship criterion is the strength of the relationship between an OEM and a product¹ supplier and is reflected in the product¹ supplier's personal relationships with a certain OEM. The reliability criterion is about having a trustworthy solution for the OEM. Here, safety is particularly emphasized as quality problems are considered big issues in China and therefore the OEMs want to utilize the most reliable solutions.

The three aforementioned purchasing criteria are considered key because they are regarded as the most likely criteria the Chinese OEMs use when evaluating a product¹ supplier based on the data. They are also considered as key because it would be very hard for a product¹ supplier to gain orders by completely lacking in one aspect while overperforming in another one. For example, while a solution might be considered to have high reliability by a Chinese OEM, it also has to have a satisfactory price level in order for the OEM to consider it interesting. The relationship criterion will also influence the decision as a supplier and an OEM might have established integrated processes and systems and that the supplier might have a good previous track record with the OEM. Thus, an OEM makes an overall assessment of the company and its solution before the deal. It should also be mentioned that these purchasing criteria cannot be regarded as completely mutually exclusive due to their quite unspecific nature, which means that they could affect each other. For this reason it is sometimes hard to treat these variables as completely separate entities. However, the analysis will focus on them individually for illustrative and explanatory purposes but do collective assessments when needed.

In order to illustrate how the most prominent OEMs perceive Acme and its main competitors, in terms of how they perform on the different key purchasing criteria in the Chinese product¹ market, the data in table 18-21 was used to calculate weighted averages of the product¹ suppliers' performance on the different key purchasing criteria, see figure 24. A bar that is below the base line represents underperformance on a certain criteria compared to the competition while a bar above the base line accordingly represents overperformance on a certain criteria compared to the competition. In order to gain a complete understanding of the OEM's performance the perspectives given in figure 24 should be complemented by a qualitative analysis.

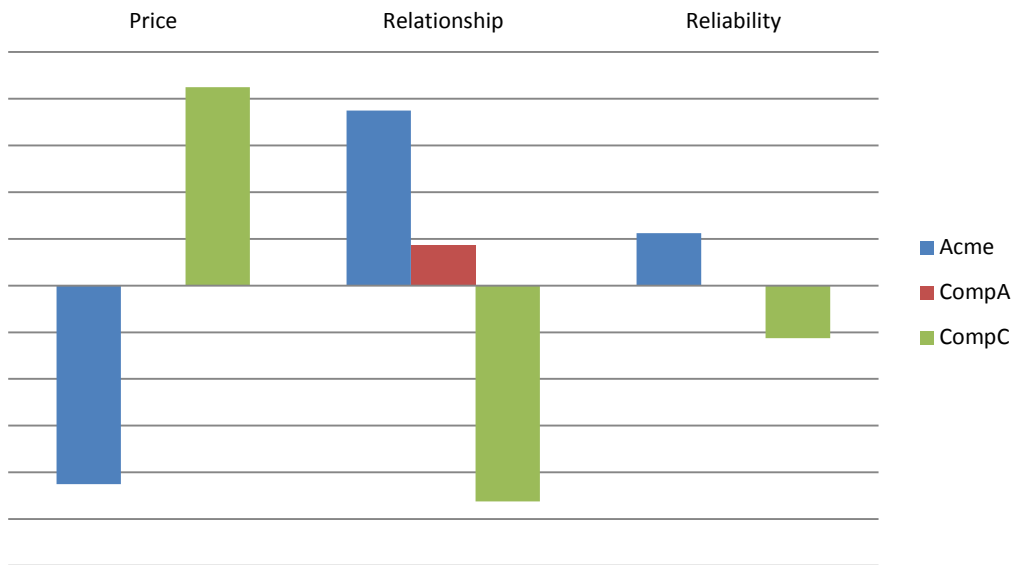


Figure 24- Product1 suppliers' relative performance at OEM's key purchasing criteria

As seen in figure 24 regarding the key purchasing criteria, Acme performs worst relative to the competition on the price criterion in the Chinese market. The competitors have a price level that is more in line with the OEMs requirements. Partly, this can be explained by the fact that both Competitor3 and Competitor1 have a local presence that is greater than that of Acme's. This can be explained by the competitors' higher localization speed. More specifically, the competition has been faster than Acme at establishing both local production and local suppliers in China.

As Competitor1 produce most of their product1s that are sold to the Chinese market in China, it is likely they have certain production related learning advantages in China, which would give them a lower cost position. Because they possibly also have been able to develop their local suppliers to a greater extent, this might give them additional cost advantages. As Competitor3 is price leader and use an aggressive low-cost pricing strategy for the projects for which they are present, this gives them a strong advantage on the price criterion. Even though Acme is quite localized in China as of now, they have lagged behind the competition.

Localization cannot purely be viewed as physically placing productive resources in another country or region but should perhaps rather be viewed as being able to place and also put the productive resources into use so they can work independently. Therefore, an aspect such as learning effects by training or learning by doing of local resources/employees is important to increase localization, and thus cost. This is perhaps the biggest reason why Acme has lagged behind the competition in China. This also has been stressed in interviews in the form of education and training of personnel in order to provide them with a mindset that is more in line with Acme's supply chain. The root of this challenge seems to be culturally related, whereas in China manufacturing is all about producing all the time without considering supply chain issues. Having a rather inflexible plant like the City1 plant where mostly segment8 product1s are produced, is however much easier from a cultural point of view than a flexible plant that requires more competence from the personnel. Yet, this may imply that expanding within a smaller segment like product1 in the City1 facility means that supply chain related issues become even more important in order to have an efficient production. All in all, this creates a negative gap performance wise on the price criterion for Acme compared to competitors.

The reliability criterion is however a criterion that Acme performs quite well on in China. All of the OEMs except OEM7-2 rate Acme the highest on this criterion. OEM7-2 is a bit indifferent regarding reliability, which is explained by their technical platform shift to the OEM9 design. As the reliability criterion is in general highly valued in China, due to both safety regulations and influences of Western European technology, this makes it an important criterion to perform well on. As technological competence is an important aspect here, it will be important for Acme to maintain the perception of being technologically advanced, as it is something that work as a differentiator that the Chinese OEMs value. In the long run however, this could prove to be problematic depending on how Acme pursue strategically. As expanding in China also means increased collaboration with the Chinese government through joint venturing etc., the threat from local competition will become fiercer through learning from how Acme work as well as by deteriorating Acme's IPR portfolio. Thus, there is a trade-off between the degree of localization and OEMs' perception of technological competence.

Expanding the product1 production in the City1 facility is therefore a good choice since Acme already produces product1s here and could possibly coordinate this production with the manufacturing of product1s for e.g. segment9 and product1s used for Chinese segment8 applications on the aftermarket. The main problem for Acme is that their performance on the reliability criterion does not motivate the much higher price of Acme's product1s compared to the competitors'. Even though the reliability is perceived as slightly better than Competitor1's, Competitor1 is "good enough" and performs much better on the price criterion which then makes it more attractive for OEMs to go with Competitor1's product1s.

Coordination with other segments such as segment9 might however hold the reliability criteria intact while reducing the cost for Acme and thus opening up for price reduction. Since Competitor1 is more localized than Acme it is likely that they might perform better in terms of delivery times on the reliability criterion. This is because it is very reasonable that they to a greater extent have been able to develop local suppliers as well as transferring knowledge and competence to local employees.

Acme's performance on the relationship criterion is very dependent on the individual supplier-OEM relationship. The strong relationship Acme has with OEM7-1 is of course very positive, as the OEM currently is the most prominent customer in the Chinese OEM product1 market due to their price level. Thus, Acme has the strongest relationship with the OEM that is most likely to be the selected supplier for new segment1 systems in China, which is advantageous considering that China has the greatest growth in the world in terms of new segment1 systems. If OEM7-1 also in the future continues to be the largest customer in this market this could facilitate Acme's efforts to expand within the Chinese product1 market. As the trend is that OEM7-1's market share actually is increasing, this indicates that this might actually be the case on a longer time horizon. Leveraging the relationship with OEM7-1 could therefore be important for Acme in order to expand within the Chinese product1 market.

In general, Acme has few close relationships in the Chinese product1 market. The relationships Acme has with OEM6, OEM7-3 and OEM7-2 are weaker and that shows that Acme is quite narrow in their performance on the relational key purchasing criteria. Thus, Acme's relationships are not very diversified in the Chinese product1 market. However, it is possible that if Acme increases their business for segment1 applications with OEM7-1 this could increase their business within the same

application segment with the other subsidiaries of OEM7-1, OEM7-2 and OEM7-3. The rather weak relationship Acme has with OEM6, as indicated in the data in tables 16-19, can be explained by the fact that OEM6 emphasizes the relational aspect very much compared to reliability, as seen in figure 17, and Acme overperform on the reliability criterion but not on the relational criterion.

Acme perform very well on the reliability criteria in general but as it is less valued by OEM6 than for the other OEMs this could perhaps have made it hard to develop the relationship with OEM6 in the first place. OEM6 seems to also have a preference for Japanese suppliers but as they are not big in product1 this should not stop Acme's ability to increase the business in this segment. For these reasons, Acme might lose some potential to reach the current product1 aftermarket as OEM6 has the greatest installed base of product2s. However, this relationship could perhaps be easily strengthened considering the fact that Acme already has a close connection to the OEM6 group, as they own the City1 facility together.

By comparing Acme to the competition on the same key purchasing criteria, Competitor1 is a bit more diversified and has a strong relationship with both OEM6 and OEM7-3 while Competitor3 has a particularly strong relationship with OEM7-2. Competitor1's greater local presence has of course positively influenced the relational criteria. Since Competitor1 entered the Chinese market early and established a local sales organization they have probably to a greater extent been able to increase the competence level of local sales people and application engineers than Acme. Even though Acme has increased the resources in sales and application engineering they appear to still be some steps behind Competitor1 in this area. Competitor1's stronger local presence has thus facilitated their efforts to build and develop customer relationships. Competitor1 can be considered to be stronger than Acme on the relational criteria performance wise, as indicated in figure 24 but when considering the types of OEMs Acme might have an advantage because of OEM7-1's product1 OEM market prominence.

Concerning Competitor3, they perform approximately the same as Acme on the relationship criterion. This could be explained by Competitor3's performance on the reliability criterion, which in general is highly valued in China that in turn negatively influences their ability to develop relationships. However, Competitor3 do have a good relationship with OEM7-2 but this is explained by their technical platform shift, which matches Competitor3 product1s quite well.

Overall, Acme has a slightly negative gap performance wise on the OEMs key purchasing criteria as they may be a bit too focused on a single customer within the product1 segment and lacks resources and competence within sales and application engineering. Table 26 below summarizes the analysis and shows the most important performance gaps on the OEMs key purchasing criteria that has been identified.

Acme's key purchasing criteria	Acme's performance	Acme's competitors' performance	Performance gap
Price	<ul style="list-style-type: none"> - All important OEMs judge Acme worst on the price level 	<ul style="list-style-type: none"> - The competition has a price level that is more in line with OEMs requirements - Competitor3 is price leader - Both Competitor1 and Competitor3 have very high local presence 	<ul style="list-style-type: none"> - Price is the largest negative performance gap for Acme in this market -Competitors have higher localization speed -Acme lacks a coordinated production of product1s
Relationship	<ul style="list-style-type: none"> - Acme has strong relationship with OEM7-1 - Weaker relationship with OEM6 OEM7-2 and OEM7-3 	<ul style="list-style-type: none"> - Competitor1 localized early and has built strong relationships with OEM7-3 and OEM6 - Competitor3 has close relationship with OEM7-2. 	<ul style="list-style-type: none"> -Acme has strong relationship with the currently strongest actor within the OEM product1 market - Acme has few close relationships, thus not very diversified - Acme might miss out on current product1 aftermarket deals - Competitor1 has a strong local sales organization
Reliability	<ul style="list-style-type: none"> - Acme is market leader based on OEMs' perceptions - Acme might perform worse than competition on delivery times due to less developed supplier base and local competence 	<ul style="list-style-type: none"> - Competitor1 is perceived as performing slightly below Acme on this criterion - Competitor3 well below Acme, but is often considered good enough 	<ul style="list-style-type: none"> - A positive gap, Acme has good performance - Ensure quality in order to stay ahead - Product performance does not motivate the higher price -Competitor1 has faster customer response because of early localization

Table 26- Acme's key purchasing criteria performance gaps at the Chinese product1 market

8.2 China: Capability Assessment

In this part a capability analysis is presented where all of Acme's performance gaps on the OEMs key purchasing criteria are linked to their respective implications on a capability level from a value chain activity perspective of the firm. Figure 25 below shows all of the identified implications for the firm's capabilities. All of the different implications will now be discussed more in detail.

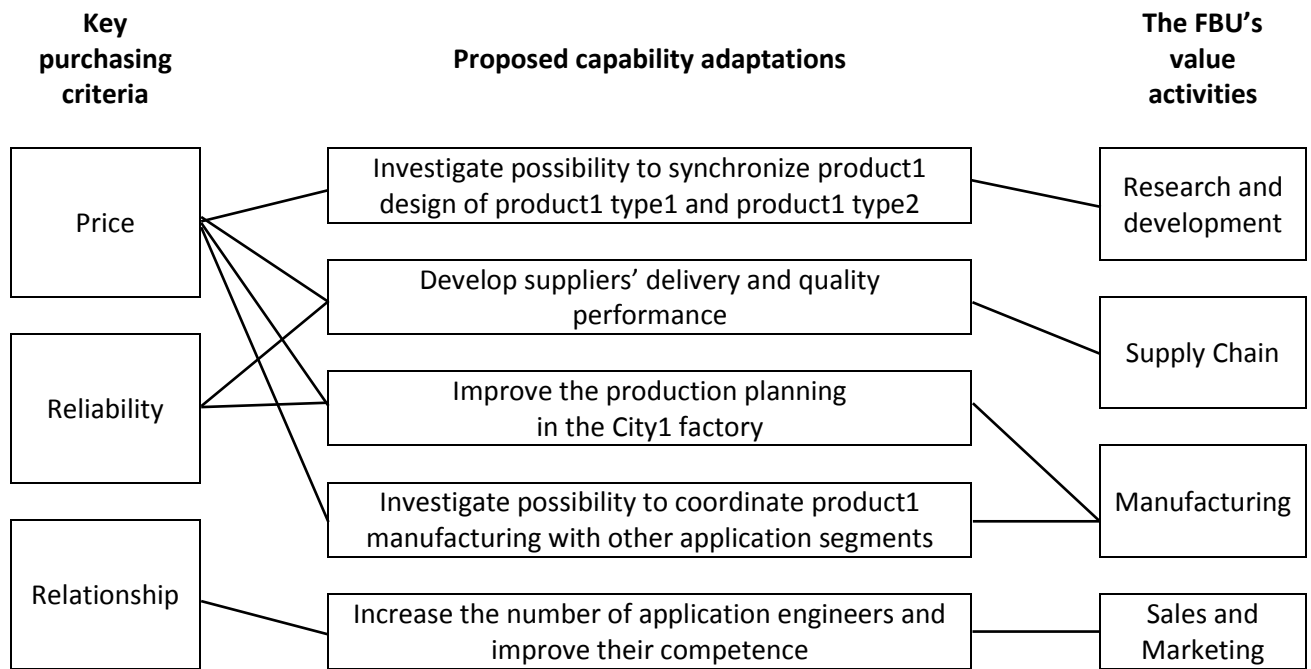


Figure 25 - Acme's capability implications in terms of key purchasing criteria and value activity within the Chinese product1 market

8.2.1 Price

In order to achieve a more competitive price for product1s produced at the City1 site the cost reducing activities the FBU is recommended to investigate are 1) to find a design that is suitable for product1 that could be coordinated in the production with other application segments to reach cost efficient volumes 2) to increase the competence within production planning and scheduling among employees to increase flexibility and reduce the cost of inventory capital 3) to actually start coordinating manufacturing of product1s with other application segments which currently is not done today.

From a design perspective, the Acme product1s are perceived to be slightly better than the competition and more than good enough. However, from a price aspect they perform poorly. The potential to improve the cost, and thus the price, is to develop a product1 design that could span across many application segments and where the product1 segment would be included. This could be done by investigating the possibilities to coordinate the production of product1s with segments that use the same dimensions, e.g. segment9 and the old design of Chinese segment8 product1s. However, for this to be feasible the aggregated volumes must be enough to achieve cost efficiency.

The main focus should be to coordinate the production of product1 type1 and product1 type2 XX*YY*ZZ as they are used for product1 and is common in other application segments. To further increase manufacturing coordination the FBU should investigate the possibility to synchronize the product1 design of product1 type1 and product1 type2 XX*YY*ZZ. It will also be important to develop the product1 type1 and product1 type2 XX*YY*ZZ by increasing the width of the outer component1 to XXX1 mm. By doing this it will be possible to include other application segments in China, which would open up for the possibility to coordinate a design that suits segment1 applications with other application segments. The product1 type1s and product1 type2s would thus be interchangeable with those manufactured in the City2 facility and production batches that

currently are produced in the City2 factory could be moved to the City1 facility in order to scale up the production and thus reduce cost.

Managing the supply chain in City1 facility is something that Acme is challenged by today, which affects the costs and thus the price. The competence among employees within Acme's supply chain has been identified as a big issue for achieving a more cost efficient production. Education and training of employees on how to work better with production planning and scheduling will thus be important aspects irrespectively if Acme choose to expand within the production of product1s or not in the City1 facility. However, expanding the product range and increase volumes of smaller segments like product1 would put even more pressure on achieving better supply chain competence.

Increasing the competence in production planning and scheduling, in order to achieve the wanted coordination with other application segments, would be very important to achieve a more cost efficient production. Furthermore, the risk that unwanted inventory increase with the amount of product variations also stresses the importance of increasing the supply chain competence. If coordination would be achieved in the production of component1s and component2s, this would be particularly true for the end of the process where the final variant would be set. The increase of input components that will be needed in the end of the process in order to set the final variant would need to be coordinated. Not only will the internal supply chain competence be needed to increase, but also the external supply chain competence. Here, it will be important to continue to collaborate and develop local suppliers in order to increase their level of flexibility.

8.2.2 Relationship

Regarding the relationship key purchasing criteria Acme is not diversified relationship wise in the Chinese market. As discussed, Competitor1 seems to perform better in this aspect as they have localized earlier and has a strong local sales organization. For Acme it will be important to increase both the amount and competence of the application engineers. Even though Acme has done this in the past, it will be necessary to continue doing this to accommodate for the huge, and rapidly growing, Chinese market. By doing this it will be possible to be speed up the responsiveness to customers' requests and strengthening the portfolio of relationships, thus making it more diversified.

The relationship could then perhaps also be leveraged with OEM7-1 on the product1 side, opening up for access to a substantial part of the Chinese OEM product1 market. The rather weak relationship Acme has with OEM6 could perhaps also be strengthened on the product1 side and thus increasing Acme's access to the current Chinese product1 aftermarket. All in all, Acme has a rather risky position regarding the relational criterion. If another OEM would grow notably within the product2 segment or if the relationship with OEM7-1 would be weakened in for example a case of an upcoming quality case, Acme would likely suffer from their rather focused portfolio of relationships.

8.2.3 Reliability

As mentioned, there is potential for Acme to increase their competence within production planning and scheduling as well as to develop their local supplier base at the City1 facility. This is aligned with how Acme could decrease their costs, but it would also give Acme more timely deliveries and better response time to customer requests. Developing local competence within production planning and scheduling as well as increasing competence about Acme's supply chain is thus essential in order to close in on the competition. Further on, although the City1 factory has complete local sourcing it will be important to develop the current local supplier base in order to achieve more timely deliveries.

8.3 India: Key Purchasing Criteria Assessment

The fact that price and localization are the only key purchasing criteria expressed by the OEMs according to the Indian sales organization is not fully compatible with that the order intake market leader Competitor1 has not been manufacturing product1 in India historically. In such a scenario Competitor2, the only leading product1s supplier with local production in India, literally would have had a monopoly. However, this is the situation for the product1 order purchased by OEM13/OEM4. The fact that OEM13/OEM4 is the only OEM that utilizes the system of development orders differentiates the customer. It also highlights that price and localization are not the only key purchasing criteria and that it is also vital to develop relationships with OEMs.

Relationships appear to be a key purchasing criterion for other OEMs that do not use development orders too. This is indicated by that Competitor1 has been awarded the export orders from OEM1 and OEM2 in cases where the OEMs' product1 procurement decisions were taken in central parts of Western Europe, where Competitor1 has high market activeness. The fact that CSR Purzhen chose the FBU as the product1 supplier for their product2s delivered to Indian segment1 system5 can also serve as evidence for this since the relationship between the actors are close.

A related aspect to relationship is product1 safety. These factors are related since the OEMs, especially BEML/OEM4, evaluate product1 suppliers' solutions' safety on their product1s operational track-record. By not having an established relationship with an OEM and product1s in the operating installed base, the OEMs will likely question the product1s' safety in the evaluation of product1 for their product2s. However, despite that safety is ranked as the most important characteristics of product1 suppliers' offers the parameter does not differentiate suppliers since it is a prerequisite in order to be accepted as a supplier to the OEMs.

Price appears to be a very important key purchasing criterion based on the fact that this is the criterion after safety the OEMs rank the highest. The localization demand is absolute for the product1 orders where it is applied; despite that price is the underlying reason for using the requirement. The fact that Indian authorities have no formal demand on local content does not matter for the orders with localization requirements: unless the product1 supplier does not have or intend to establish local production they will be disregarded.

The fact that the OEM13/OEM4 is the only OEM that has procured product1s locally indicates that this is the only actor applying the localization requirement. However, the fact that OEM2 has applied the requirement in combination with that the OEMs are increasing their localization of production capacity in India indicate that localization will become a more frequently used requirement in the future. Another motive for this is that the OEMs benefit from localized product1 production, which can result in lower product1 prices and higher flexibility in deliveries, imply that localization can be considered to be a key purchasing criterion, at least for some of the leading OEMs.

The localization criterion is also related to the relationship criterion since OEMs prefer to conduct business with domestically located firms. This can be captured in the criterion relationship since a local establishment for a product1 manufacturer is likely to imply strengthened relations with OEMs due to that personal relationships between the firms are created locally. Based on the aforementioned perspectives, the key purchasing criteria the OEM appears to emphasize in India are localization, price and relationships, see table 27. The localization criterion is defined as to have local manufacturing and potentially local sourcing of input components. The relationship criterion involves

having personal relationships with key employees within the OEMs’ organizations both within India and within the main Indian exporting product2 markets.

Key purchasing criteria	Acme’s performance	Acme’s competitors’ performance	Performance gap
Localization	<ul style="list-style-type: none"> - The FBU has currently no local production - Other Acme division has a several factories in India 	<ul style="list-style-type: none"> - Competitor2 has a local product1 production well established production - Competitor1 is establishing production of product1 type1 	<ul style="list-style-type: none"> - The gap is binary, the FBU has no production in India in contrast to their competitors
Price	<ul style="list-style-type: none"> - The OEMs rate Acme worst on price level - Acme has lost orders due to their price level 	<ul style="list-style-type: none"> - Competitor2 is estimated to provide product1s with low price due to local setup - Competitor1 offered low price quotes on product1s on OEM2 orders. Their price was much lower than Acme’s 	<ul style="list-style-type: none"> - Acme is clearly lagging behind for this factor - Competitor1’s OEM2 quote which wasn’t produced in India was under Acme production price. Hence, Acme’s manufacturing setup should be investigated
Relationship	<ul style="list-style-type: none"> - Acme has weak relationship in India: no previous orders with OEM13/OEM4 - Previous projects have been supplied by the FBU sales organizations in other counties - Relatively good relationship with OEM at markets exporting to India 	<ul style="list-style-type: none"> - Competitor2 has a well-established relationship with OEM13/OEM4 and is the installed base market leader - Competitor1 has strong relationship with leading OEMs in Western Europe - Competitor1 has not supplied any product1s to OEM13/Competitor2 	<ul style="list-style-type: none"> - Acme has a challenging position in strengthening the relationships with OEM13/OEM4 since Competitor2 has a strong position and Acme a low installed base market share, which implies little track-records - Acme has possibly a weaker relationship with the leading OEMs which are supplying the Indian market from Western Europe

Table 27 - The Indian OEMs’ key purchasing criteria and Acme’s relative performance in comparison

Acme can be considered to face fierce competition from Competitor1 and Competitor2 which perform better than Acme on the OEMs’ key purchasing criteria. This can be verified by the OEM product1 market share split, see figure 21 where Acme has significantly lower share than the competitors. Moreover, Acme can be considered to have negative performance gaps for all there key purchasing criteria, see table 27.

Acme’s lack of local manufacturing in combination with the firm’s relatively weak brand awareness at the Indian product1 market are the most probable explanations to why Acme has not received any development orders from OEM13/OEM4. An additional explaining factor could be Acme product1s’ price level. Nevertheless, it is positive that Acme has leverage on their sales organizations in other markets in order to deliver product1s used in Indian segment1 systems. The fact that Acme has delivered product1s which are used in Indian product2s will likely increase the firm’s possibility to

receive development orders from OEM13/OEM4 since their product1s have been tested operationally. This is positive from the perspective that the Indian product1 market is becoming increasingly localized both from the aspect that OEM13/OEM4 is expected to gain market share and from the aspect that OEM1 and OEM2 recently have localized manufacturing in India. However, the fact that non-Indian OEMs receive relatively few product2 orders from system operators is also challenging from Acme's perspective due to the lack of delivered developing orders from OEM13/OEM4. However, Competitor1 will also be challenged of such a scenario since the firm has not supplied any larger OEM13/OEM4 order. The firm's possibilities to receive development orders are likely improved by that Competitor1 currently is establishing a factory in India. It is also worrisome for Acme that the firm has not been awarded any exporting product1 orders from OEM1 and OEM2 since these orders can ensure that their product1s becomes accepted on the Indian market.

Hence, to establish and nurture relationships with the OEMs will still be central in the future but the Indian product1 market's main emphasis appears to be on the key purchasing criterion price. This is indicated by that the OEM only procure standardized product1s and thereby aims to find comparable product1 that finally compete for the order on price. Additionally, the official request by the leading segment1 consultancy to reward local product2 manufactures additional orders in order to reduce the cost for segment1 systems will most certainly increase the overall cost focus. Therefore, it will be critical to close the price performance gap. The product1 order supplied for the product2s operating the Indian segment1 system2 indicates that it will be challenging for Acme to compete on price levels on the Indian market when the product1s are produced in the City2 facility. Furthermore, the fact that the vast majority of the product1s supplied to the Indian product1 market have been manufactured in Asia also indicates that Acme will have a challenge to compete on price by supplying product1s from the City2 factory.

8.4 India: Capability Assessment

The succeeding capability analysis is based on the discussions about Acme's performance gaps and specifically on the challenge of serving the Indian market with production from the City2 factory. Within this section, the manufacturing and supply chain activities will mainly be focusing on capability adaptations related to the City1 factory and to a potential establishment of local production in India. The proposed capability adaptations that are considered to have the largest impact on the key purchasing criteria on the Western Europe are presented in figure 26.

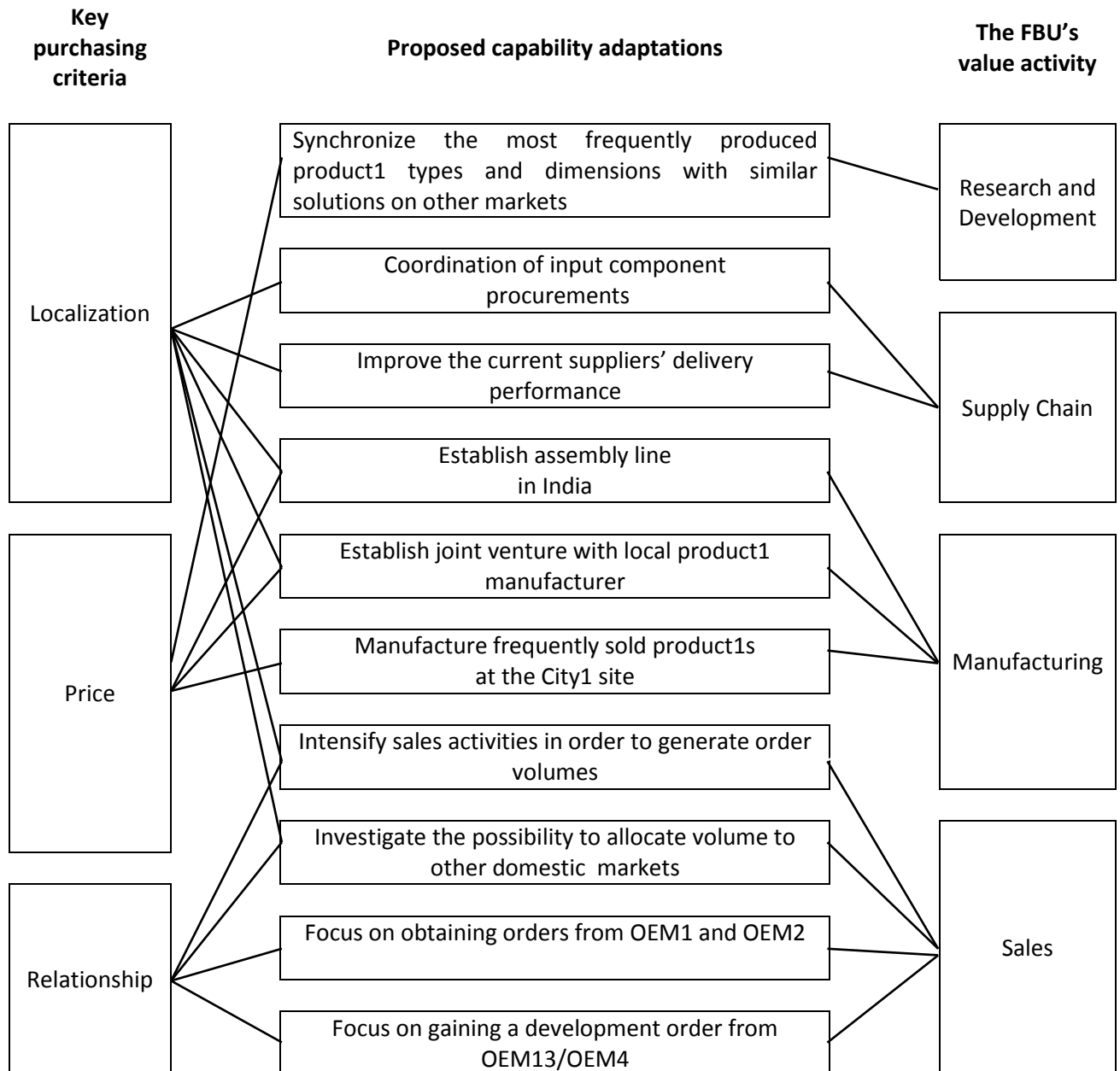


Figure 26 - An overview of the suggested capability adaptations within the FBU's value activities for the Indian market mapped against the key purchasing criteria

8.4.1 Localization

The localization gap can per se only be filled if the FBU establish production of product1s within the Indian market. That is an activity that requires large investments and thereby risks. One of the more obvious risks is that the FBU will be unable to ensure the required sales orders to gain a high utilization of the proposed established production facility. OEM13/OEM4's development order strategy will be a hindering factor in receiving larger orders directly. Therefore it is important to receive orders from other OEMs, such as OEM1 and OEM2, which do not require localized production to the same extent. Since these OEMs' have a strong focus on price for the Indian product1 orders, Acme must first of all offer orders within a price competitive range from their existing production setup.

Furthermore, a possible localization could be realized in several ways and these affect the probability to succeed as the risk level differs. An alternative is to establish a local production by setting up an assembly line in the City3 factory. The fact that the assembly line alternative involves relatively low risks and that it is not as complex to implement as a full complete factory results in that this clearly is more attractive option than establishing a complete factory. The lower capacity of this option is also appealing since the Indian product1 and the focal industry markets' development is a bit uncertain. Additionally, the fact that the City3 factory is fully owned implies that the FBU eliminates the risk of that production know-hows are distributed or intellectual property rights shared externally. By only establishing an assembly line in India the input components must be sourced. The FBU should try to leverage on the existing City3 factory's suppliers to the extent it is possible. Otherwise, input components should be tried to be sourced from the City1 or City2 suppliers based on the overall cost and the deliver flexibility the options implies. Supplying an assembly channel in India with input components from the FBU's existing factories' suppliers imply high demands of supply chain coordination. Furthermore, it requires that the general delivery performance among these suppliers become improved.

The current product1 market is far from large enough to ensure for a satisfying utilization of an assembly line establishment. Therefore it will be important for the FBU to gain orders of product1s to other application segments within India as well. From the perspective of table 24, the application segments within which the FBU will be most likely to gain volume orders are segment8 and segment9. The segment3 and segment5 application segments are also fairly large. Based on this, it will be vital to have a high activeness on the Indian product1 market before realizing a localization in order to ensure a sufficient market share that can motivate a market establishment. The Indian sales organization should quote intensively and aggressively on orders beforehand but also increase the sales activities such as customer meetings before such an establishment in order to increase the possibility to gain orders. Additionally, the FBU should investigate which other domestic product1 markets that will be possible to serve with product1s from a potential production channel in India. The absolute market sizes of the surrounding markets will therefore be interesting to investigate, see table 24 for the largest domestic product1 markets in Asia per application segment. However, in such an investigation Acme's market position and the strength of their product1 offer should also be considered as well as the implication of import tariffs and delivery times from India to the surrounding markets' customers.

Another alternative for an establishment is to form a joint venture with an Indian product1 producer. The main advantage with establishing a joint venture is that Acme most likely will be rewarded with additional product1 orders from Indian OEMs. The disadvantage of a joint venture is that Acme probably have to develop their local partners' operations in order to ensure a sufficient delivery performance and product1 quality. The risk of sharing intellectual property rights and production related know-how must also be taken into consideration.

All in all, an establishment of a joint venture with a local Indian product1 manufacturer is generally the option to prefer since global OEMs have difficulties of gaining ground in the Indian market. By collaborating with a local manufacturer the FBU will have to share the profits but will have a position where it is more likely to receive orders from Indian OEMs. The risks of sharing property rights must however be weighted towards the gains of a potentially stronger market position within the Indian market. Sharing technology is not that risky in the longer perspective since the Indian product1

supplier most likely will gain access to the sophisticated product1s technology anyway in potential collaboration with other actors. In a scenario where the international OEMs begin to receive market orders, the preferable option for the FBU is to establish an assembly channel. This option is favorable in many ways, such as that it allows for increased control and faster establishment. However, the FBU will have a more difficult time to receive orders from the Indian OEMs by establishing an assembly line since the firm will act as a foreign actor. The preferred choice of localization depends on which types of potential customers that will be awarded the product2 projects. For now a joint venture appears to be the most attractive option.

8.4.2 Price

The key purchasing criterion price is highly interrelated with localization. This is due to that local production often implies low product1 prices as a fact of that the high import tariffs costs, transportation costs to India and inventory cost during the transportation can be avoided. In the assembly channel establishment scenario, where the input components are sourced from other countries than India, these cost will still be existent but since the product1s will be assembled in India the FBU will avoid to be taxed for the value add during this process.

Despite the costs product1 exports to India imply, the FBU should investigate the possibility to supply the most frequent product1 types and dimensions that can be coordinated with the Chinese and other markets' demand from the City1 factory. The fact that both the leading OEMs on the Indian product1 market, OEM13/OEM4 and OEM2 are utilizing product1 type1's and product1 type2's of the most frequently applied product1 dimension XX*YY*ZZ create an opportunity to quote product1 orders based on synchronized production. This has potential to imply significant price reductions for these product1 types. However, in order to establish such coordination with other domestic markets, an investigation of the product1 designs' offered on the Indian product1 market should be conducted where these product1 designs are compared to similar product1s offered at other markets. The possibility to receive low cost product1s by synchronizing production of the XX*YY*ZZ product1 type1 at the City1 site should be evaluated before any localization decision is taken.

8.4.3 Relationship

The FBU should actively improve their relationship with the customers active on the Indian market but the specific direction of these activities will depend on the localization strategy that is chosen. A generally strategic activity will be to ensure deliveries of development orders to OEM13/OEM4, considering their market position and its expected development. However, their localization requirement is not compatible with Acme's current position. Therefore it will be vital to be rewarded development orders that possibly lack this requirement. If such an opportunity appears Acme could potentially apply a penetration price strategy, just in order for OEM13/OEM4 to gain experience of Acme's product1s and in order to increase the credibility at the Indian market. Noteworthy, a penetration price strategy may be risky due to that OEM13/OEM4 expects Acme to deliver at a similar price in the future as well. Additionally, some credibility can be aimed to be gained by visiting the customer but the real qualifier in order to gain large product1 orders is ultimately to deliver product1s for operational activities.

The fact that OEM1's and OEM2's product1 orders are negotiated on the Western European market gives Acme better possibilities to receive product1 orders. However, Competitor1's strong market presence in Germany and France is apparently paying off. That Competitor1 was rewarded the OEM2

order was not entirely surprising but in order for Acme to gain future Indian business with OEM2 the product1 price should be reduced. However, it was more alarming that Competitor1 also gained the OEM1's product1 order for the Indian segment1 system4 since Acme has a close relationship with the OEM. Moreover, Acme's Indian sales organization should focus on intensifying the conversation with the global OEMs' local strategic personnel. Additionally, it will be important for the Indian sales organization to have a frequent communication with sales organizations in other markets in order to be reactive for upcoming product1 orders.

8.5 Western Europe: Key Purchasing Criteria Assessment

The most highly emphasized evaluation factors by the Western European OEMs give a strong indication of what factors that are the key purchasing criteria on the market. However, these factors are several which imply that it is difficult to gain an overall perspective of the product1 suppliers' performance on the product1 market. Furthermore, all of the evaluations factors presented in table 24 are not mutually exclusive as well as these do not capture the importance of having close relationships with OEMs on the market, which has been stressed as an increasingly meaningful variable of gaining product1 orders. Therefore, highly emphasized evaluation factors has been combined and reorganized into four key purchasing criteria: design, price, relationship and quality, presented in the first three columns in table 28. Noteworthy is that the key purchasing criterion relationship does not relate to the evaluation factors in table 24 but has been added since it influences the product1 suppliers possibilities to receive important information about future product1 orders as well as it can affect the OEMs' functional criteria.

In order to compare the product1 suppliers' performance on the key purchasing criteria these have been related to the OEMs' ranking of the product1 suppliers' performance, see column 4 in table 28. Design has mainly been related to the firm's innovation ability but also to product range since firms with large product ranges are likely to have product1s that suits the demand. The price key purchasing criterion was already given. The aspects of relationship cannot be entirely described by the competitive dimension since these do not capture such intangible aspects but can be indicated by the image on the market and the firms' service abilities. The key purchasing criterion quality includes both technical and delivery aspects and has therefore been related to the competitive dimensions delivery performance and quality.

Key purchasing criteria	Description	Evaluation matrix factors (see table 24)	Competitive dimension relations (see table 25)
Design	- The degree of fulfillment of functional criteria - The advancement in the design - The expected performance: durability, load capacity etc	1) Design 2) Reliability and Safety	1) Innovation 75% 2) Product range 25%
Price	- The unit product1 price	1) Price	1) Price 100%
Relationship	- The strength and wideness of the firms contacts with the important OEMs		1) Customer service 25% 2) Image 75%
Quality	- Conformance to expected operational and technical performance, measured by scrap rate etc - Delivery performance of product1 orders)	1) References and experience 2) Risk 3) Quality performance	1) Delivery performance 25% 2) Quality 75%

Table 28 – The key purchasing criteria emphasized by the OEM at the Western European market connected to the evaluation matrix factors and competitive dimensions

The market leading product1s suppliers’ performances on the key purchasing criteria are presented in figure 27. These have been created by comparing the individual OEM’s performance with the average market performance on the key purchasing criteria based on the competitive dimensions in table 24 and the relations between the key purchasing criteria and the competitive dimensions presented in table 25.



Figure 27 – The market leading product1 suppliers’ performances on the key purchasing criteria

The comparison in figure 27 reveals that Acme has the leading product1 design and quality performance on the market whereas the OEMs rank Acme as the least price attractive supplier. Acme seems to be challenged by Competitor1 on the product1 design criterion, Competitor4 on the quality criterion and Competitor2 on price, respectively. Additionally, Acme appears to be perceived fairly low on the relationship parameter that mainly includes the market image. The validity of the

relationship parameter can be questioned based on that Competitor4 has the closest relationships with the OEMs which appears to be questionable since the product1 supplier has less than 10% market share. In order to verify the performance gaps a complementary qualitative analysis is presented in table 29.

Key purchasing criteria	Acme's performance	Acme's competitors' performance	Performance gap
Design	<ul style="list-style-type: none"> - Acme has a strong engineering capability - Acme's advanced design provide little value to the OEMs 	<ul style="list-style-type: none"> - Competitor1 has high technical knowledge - Competitor2 has less advanced technical solutions - Competitor4 has good technical knowledge but low testing capacity in Europe 	<ul style="list-style-type: none"> - Acme is performing on a top level and has relatively high technical expertise - Acme and Competitor1 is relatively comparable
Price	<ul style="list-style-type: none"> - Acme is having a relatively high price - Acme has lost export orders due to their price level 	<ul style="list-style-type: none"> - Competitor1 has a lower price level - Competitor4 is not price competitive due to that the OEM lacks the production volumes in Western Europe. 	<ul style="list-style-type: none"> - Acme is lagging behind its main competitors on this factor - Competitor1's price level is in the range of Acme's
Relationship	<ul style="list-style-type: none"> - Acme has a decentralized sales organization - Acme has good relationship with all the leading OEMs in Europe - Relatively strong relationship with OEM1 and OEM5 	<ul style="list-style-type: none"> - Competitor1 has a centralized sales organization and very strong position in Germany - Competitor4 are strong in France 	<ul style="list-style-type: none"> - Acme appear to be strong relationship with most OEMs but especially OEM1 and OEM5 - Have a relatively weaker relationships in Germany
Quality	<ul style="list-style-type: none"> - Acme has generally good technical on field performance - Acme has on time delivery problems and has weak customer responsiveness 	<ul style="list-style-type: none"> - Competitor1 has generally more quality related issues but has better responsiveness 	<ul style="list-style-type: none"> - Acme has a leading position on quality but has still some quality issues - Acme has weaker delivery performance than needed

Table 29 - The Western European OEMs' key purchasing criteria and Acme's relative performance in comparison

All in all, Acme appear to have a relative satisfying position from a design perspective considering both the quantitative analysis in figure 27 and qualitative perspective in table 29. The fact that the segment1 systems in Western Europe are not especially standardized increase the importance of this criterion since it allows Acme to utilize their design skills. However, this criterion is less important for the export orders since these are more standardized. The relationship criterion is becoming more important in order for a product1 supplier to be able to deliver adapted solutions since the product1 suppliers with close technical OEM relations affect the OEMs' technical product1 specifications in the conception phase of the product development process. Since this is a rising trend it will be

increasingly important for Acme to strengthen their technical relationships with the OEMs in Western Europe.

The perspective given for the relationship criterion in figure 27 is slightly misleading since the relational aspect is more difficult to measure on a central level for Europe and the insights provided in table 29 are more valuable. Acme appear to have relatively strong relationship with all leading OEMs. However, this is dependent on the previous product1 orders the product1 supplier delivered and in the case of that Competitor1 is a main supplier of product1s to OEM2 in Germany and that the OEMs prefer to utilize the same product1 suppliers for several orders repeatedly, Acme's position has weakened over the years. Hence, Acme should focus on improving relationships with OEM2 and OEM3 but at the same time develop and nurture their relationship with OEM1 and OEM5 in Europe. The relationships are to large extent built up during collaborations so it is therefore important to offer attractive solutions and thereafter be very active in the relationships.

Furthermore, Acme has the weakest position among the competitors at the key purchasing criterion price. This is worrisome due to that this is the factor that the OEM's value the most. However, the usage of design evaluation matrixes reduces the criterion's importance. From the perspective of quality, Acme is reckoned to have a leading position. Despite this there exist an opportunity to differentiate further since Western European OEMs to an increasingly extent demand flexible deliveries whereas Acme is perceived to have a relatively weak delivery performance.

8.6 Western Europe: Capability Assessment

The suggestions presented in the following capability analysis is affected by that the Western European segment1 systems generally have low degree of standardization. On the basis of this perspective, the market has been believed to best be served by Acme's local factory in City2 since this factory has a flexible production setup. However, some of the product1 orders exported from Western Europe are of more standardized product1 dimensions and can therefore be suitable to be produced in City1 factory. Since this only regards a few product1 types the following section will focus on the supply chain and manufacturing from the perspective of the FBU's City2 factory. The proposed capability adaptations that are considered to have the largest impact at the FBU's performance on the Western European key purchasing criteria are presented in figure 28. In the figure, the connections to the value chain activities have also been presented.

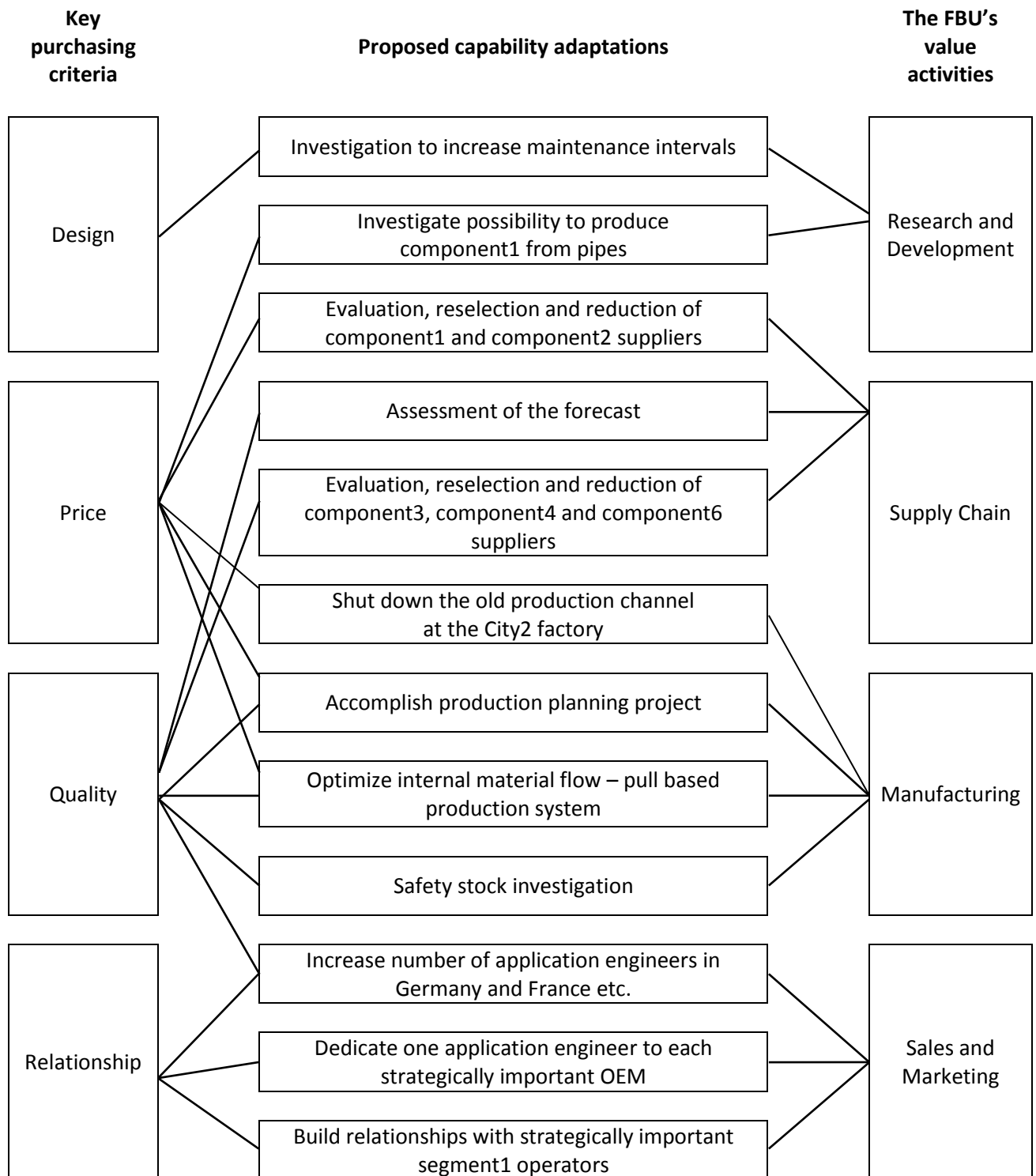


Figure 28 - An overview of the suggested capability adaptations within the FBU's value activities for the Western European market mapped against the key purchasing criteria

8.6.1 Design

The performance on the key purchasing criteria can mainly be improved by the research and development value activity. However, it will be vital for the research and development departments to nurture and improve their connections to other business value activities such as sales and marketing as well as operations. This is in line with Porter's (1985) perspective that the organization

must coordinate their activities in order to fully meet the customers' needs. Hence, it will be important to improve the communication between the sales and application engineering teams and the design department at City2 plant. Additionally, despite that Acme is the design market leader the customers are not possible to identify any meaningful benefits from Acme's solution. Therefore the FBU are recommended to investigate performance improving design changes. This could be conducted by accomplishing a design of experiments project that focus on finding a technically optimized product1. Such a project could have the objective of improving the maintenance interval for the product1 that would allow for the product2s to be serviced less often.

8.6.2 Price

There exist an extensive amount of options that could be implemented in order to reduce the cost level which would allow for price decreases. Firstly, Acme's sales price on the European market is naturally very affected by the largest shares of the cost break down structure, the purchasing cost of the input components of component1s and component2s. Hence, to finalize the current evaluation of the suppliers of component1s and component2s and continuously improve their price and delivery performance will be critical to reduce the input costs. A related option is to exchange suppliers to receive lower purchasing costs and supplier related waste. However, in doing this Acme should ensure that the volumes are sufficient to motivate an exchange of a supplier from a cost perspective and consider the trade-off between procurement unit cost and required need for safety inventories.

Additionally, Acme should examine the possibilities to reduce the number of component1 suppliers in order to gather higher volumes among few suppliers in order to reduce the price levels. The possibilities to procure component2s from the component2 production in the City1 facility should furthermore be investigated since a change from the current internal supplier could imply a substantial cost reduction for the component2, which can imply a notable reduction of the total product1 price. The reduction must however be weighed against the lead time and suppliers' delivery flexibility. The actual exchange of suppliers can give short-term advantage, but as stressed by Porter (1985) the actual tuning of the cooperation with the suppliers is also critical from a cost perspective. Therefore it will be important for the procurement value activity to develop the selected suppliers in order to reduce lead time and coordinate safety stock levels.

Third, in order to reduce the production cost the FBU would clearly benefit from realizing a higher utilization of their City2 factory. Since the FBU only need one production channel to fulfill the demand, the management must overcome the organizational difficulties. Hence, the management must take the actions needed to close down the old production channel in order to reach a higher utilization and thereby a more competitive production in the City2 factory. A critical activity in this process will be to change the attitude among the employees that are reluctant to undertake a change and realize an understanding that an efficient production system contribute to their competitiveness as an organization.

A fourth option to realize a more cost efficient production is to eliminate the production planning and internal material flow problems that affect the capacity utilization negatively. In order to resolve the production planning issues, Acme should complete their current improvement project within the field: to update the planning parameters and centralize all the production planning. By reorganizing in order to eliminate the final planning activities by the manufacturing teams, utilization improvements are likely to occur. However, since the utilization of the City2 facility is at an absolute

very low level the new production planning related challenges are likely to occur when the existing issues have been managed. Therefore it will be important to manage arising challenges as the utilization level and factories' performance improves. One such improvement will be to continuously evaluate the safety stock level.

Fifth, an action that possibly could reduce the cost within the longer term is to analyze and improve the internal material flow. There is a possibility to further improve the utilization by exploiting the potential of the pull based material flow which currently is not utilized due to the planning problems. However, the FBU should tune the pull based system as the production planning improves in order to seize the potential gains.

Sixth, in order to reduce cost for the production of product1s, the option to purchase component1s made from steel pipes is appealing. From a design perspective this would imply that certain investigations would be needed in order to assess whether or not this would be suitable for the product1 segment. As mentioned, the material structure could for example be an issue. Furthermore, the FBU need to consider that the solutions must be re-homologated in case the production process changes. An important consideration is that the supplier of component1 made from ready-made steel pipes could have some production related factors that influence the choice whether or not this would be economically feasible for Acme. The potential benefit of producing component1 from pipes is that method would allow for cost efficient low volume production. However, since producing component1 from ready-made steel pipes in higher volumes could be costly for the supplier. Furthermore, Acme should make the new homologated solutions based on steel pipes as easy as possible to manufacture with the current resources and capabilities. From a design approach it will therefore be necessary to employ a design for manufacturing approach (Porter 1985).

8.6.3 Relationships

The capability adaptations that are suggested in order to improve the FBU's relationship with the customers are to large extent related to the marketing and sales capabilities. There are several actions that the FBU could undertake in order improve their relationships with their customers.

First, the product1 suppliers' influence and activeness during the OEMs' conception phases demand more technical customer interaction and it is therefore increasingly important to strengthen the application engineering presence in Western Europe. Since all the three globally important OEMs as well as OEM1, OEM2, OEM5 and OEM3 have manufacturing in the region it is vital to have a high presence of technical personnel here, especially in Germany, France and Spain. Also, the fact that the product1s for many export orders are procured in Western Europe contributes to the region's strategic importance. Furthermore, Competitor1's highly competitive position in central Europe is worrying. However, from a relational perspective it will be crucial to continue to communicate with the non-current customers in order to be able to receive updated information about upcoming projects. This is also vital in order to have the possibility to receive future orders from these customers. Hence, it will not only be important to increase the amount of application engineers but doing this strategically by focusing on certain local markets where the OEM's procurement organizations are located. Overall, a sales perspective that has longer term focus is requested which would allow for the sales organizations to higher extent invest in relationships that may not be profitable in the short term.

Second, a closely related proposal to the prior concerns the idea to dedicate an application engineer to each of the most strategic OEMs by letting these employees physically being located at the OEMs' facilities. The proposal is dependent on that the OEMs approve such localization. However, if such an option is achievable it most likely will improve the communication between the organizations, especially on a technical level.

Third, in order to receive business in the longer perspective Acme is suggested to initiate relationships with segment1 operators. The product1 operators are the actors that benefit from improved product1 performance whereas for example design that implies longer maintenance interval implies a higher availability of the product2s. By establishing relationships with segment1 operators, Acme can both improve their understanding of the actors' operational challenges as well as potentially influence their technical demands in new product2 orders to be more adapted to the solutions offered by Acme.

8.6.4 Quality

The majority of the capabilities that the FBU can improve in order to ensure an increased performance on the key purchasing criterion quality are ones that affect the firm's delivery performance. There are several ways for the FBU to improve their performance on the OEMs' quality criterion. First, it will be interesting to evaluate and develop the suppliers of component3 and component4. This is due to that the varieties of these components are numerous in combination with that the inventory levels are relatively low. Hence, poor delivery performance of these suppliers affects the utilization level negatively. Therefore it will be important to investigate the reliability of the suppliers' production process, the quality of their components and the extent to which they use safety stocks.

Second, it will not only be critical to investigate the suppliers' delivery performance but also to ensure that these have the proper information about the City2's production's demand. Therefore, the forecasting process should be assessed in order to ensure that needed planning information is communicated to the suppliers.

Third, the relatively low inventory levels should be investigated. Inventory is generally not appreciated but in the case increased inventory levels of component3 and component4 can reduce the work-in-process inventory it can be favored to raise the increased inventory levels of these components. The inventory levels of these variety components should be evaluated and possibly increased, also by considering the current suppliers' delivery performance. Increasing safety levels are especially important in order to win orders on the aftermarket.

Fourth and fifth, the production planning improvement project as well as continuously enhancing the internal material flow will in addition to reducing the production cost also be beneficial to be able to ensure more reliable deliveries.

Sixth, employing additional application engineers can also imply that the FBU perform better on the quality criterion since it will increase the capacity to respond to orders. This would allow the FBU to be able to respond to requests in a timelier manner. Losing potential deals due to low responsiveness is very unnecessary.

8.7 Conclusion: Capability Assessment

The main key purchasing criteria on which OEMs evaluate product1 suppliers and their offers that have been identified on the different markets are design, price, relationship, reliability and quality. The reliability and quality criteria are to a high degree interrelated where reliability can be seen as a broader term in which quality is included. The design criterion is considered to be indirectly related to the reliability criterion since the advancement in the design has an effect on the operational performance of the product1s. Due to that the combination of the design criterion and quality criterion can be considered to be similar to the reliability criterion the key purchasing criteria on the focal markets are regarded as relatively similar. However, to what extent the different criteria are emphasized differs between the specific markets. For example, the pricing criterion in Western Europe is not perceived as important relative to the price criterion in India. Furthermore, it is important to consider that the markets to some extent are intertwined for the relationship criterion. This is due to some markets' exporting characteristic and that the product1 suppliers' relationships with the OEMs on these markets affect the supplied market shares on the importing markets. However, as the markets are becoming increasingly localized strengthening local relationships is becoming increasingly important. The reliability criterion appears to partly serve as an order qualifier since this high reliability often is expected by the OEMs. However, the criterion is considered as a key purchasing criterion since the OEMs value product1s' brand experience and recognition, which are factors influencing the communicated reliability. The conclusions from the capability analysis are presented under each of the key purchasing criteria below.

8.7.1 Price

The capability adjustments that can be achieved in order for Acme to obtain a more competitive performance on the key purchasing criterion price are business unit wide and adaptations will most likely affect all markets. The most vital capability adjustments that are proposed aims to achieve higher degree of synchronization of the product1 production, careful and decided localization of production, higher utilization, reselection and development of suppliers as well as appliance of new production methods.

8.7.1.1 Synchronization

The main focus in order to achieve cost efficient production of product1s is to obtain scale in the production by synchronizing the production of product1s for segment1 with product1s for other application segments. The capacity within the City1 facility can be used to start coordinating the production of product1s with similar characteristics as for the product1 segment. The product1 type1 and product1 type2 XX*YY*ZZ have been identified as the most suitable product1s for coordination since the majority of product1s utilize these dimensions. Coordination could be achieved both within the product1 segment, by establishing a common design and aggregating the product1 orders, but also across other application segments, by making product1s for segment1 more alike product1s used in other application segments. The coordination of product1 production cannot solely be investigated from a production perspective. For example, coordination of product1 type1 and product1 type2 XX*YY*ZZ between different application segments in the City1 factory will demand that the product1s are being re-homologated due to the usage of case carburized steel. This as well as the customers' attitude to carburized steel product1s must be evaluated before any potential coordination. The main point is that achieving greater coordination of segment1 applications with product1s for other application segments could release a lot unutilized potential in the production system. Figure 29 below describes the effect of coordination in its simplicity.

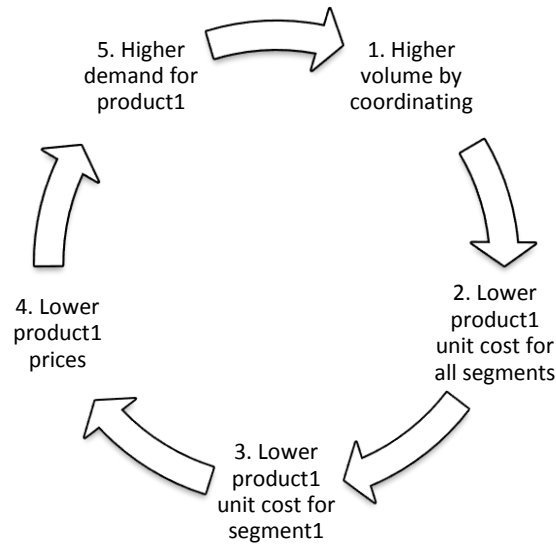


Figure 29 - Coordination of product1 with other segments to reduce cost

8.7.1.2 Localize Carefully and Decidedly

The need for localizing on some markets is driven by either that it is an absolute requirement or that it is necessary to achieve a competitive price position. To gain a more competitive price level it will be important to localize carefully and decidedly. In essence, this means that while Acme need to evaluate risks of localizing they still need to be definite in their decision-making once decisions are made. Gaining orders through increased localization must be weighed against the impact on the fixed cost in different manufacturing facilities and risks of sharing strategic IPRs.

The fact that increased localization will reduce the distance to the local OEMs and thus reduce cost should also be considered. This is especially important since the OEMs are becoming increasingly localized. However, when a decision about localizing is made Acme needs to be determined in their decision-making in order to reap the full benefits of a localization of production. The FBU should investigate the potential of localizing production of additional product1s in the City1 factory that would allow for greater coordination in the product1 production. In order for the FBU to achieve a competitive price level at the Indian product1 market and to be able to gain orders from local actors, localization is recommended. With regard to localization proposals, it is important to stress that the flexible City2 factory has a good fit with the production of product1 orders. In general, the majority of the product1 types are recommended to be produced in the City2 plant with exceptions for high volume types that are possible to coordinate with other application segments.

8.7.1.3 Factory Utilization

As identified in the analysis, the production planning must be improved in both the City2 and the City1 sites in order to increase the utilization of the factories. At the City2 site the process to move the manufacturing responsibility from the manufacturing department to the supply chain department need to be accomplished in order to allow better production planning. It will also be important to investigate and possibly increase the safety buffers of variance defining components in the assembly. At the City1 site, the competence among Acme’s supply chain personnel needs to be enhanced, preferably through further education. Furthermore, in the City2 factory it will be important to continue with the work of closing down the old production channel in order to increase the efficiency.

8.7.1.4 Supplier Selection and Development

To reduce cost it will be important to work with the supplier base in both the City2 and the City1 factories. The main focus will be to work with the supplier base of component1s and component2s in the City2 plant and the supplier base of steel for component1s and component2s in the City1 facility. The reason for this is that component1 and component2 have the largest impact on the product1 price. In City2 it will be important to work with renewing the supplier base for component1s and component2s and investigate the possibilities to reduce the number of suppliers to reduce cost. For the City1 factory, it is more important to develop the current supplier base and their supply chain and manufacturing capabilities.

8.7.1.5 Using Component1 from Steel Pipes

In order to reduce cost for the production of product1s, an option that should be explored is to purchase component1s made from steel pipes at the City2 site. This option could be suitable for product1 orders since the production method is likely to be cost efficient for production of small quantity orders. However, the fact that the new solutions would need to be homologated could be costly. This could however pay off in the long run because of the lower cost.

8.7.2 Relationship

Focusing and being decisive about specific strategic efforts will be necessary in order for the FBU to strengthen relationships with OEMs. It will be important to improve the application engineering capability in order to strengthen relationships in markets where the purchasing decisions are being made. In China it will be important to increase both the amount and competence of application engineers in order for Acme to become more diversified in their relationships and also to be able to take advantage of the growth opportunities in the product1 segment. Increasing the competence of the application engineers in China will be important for transferring the knowledge of the FBU's products and technology to China.

In Western Europe increasing the amount of application engineers will be important in order to become more proactive in responding to orders. Here, the FBU should strive to have dedicated application engineers placed at the OEMs' main sites. In general it will be important for the application engineers to communicate both with the OEMs and the operators. The FBU has not had any communication with the operators in the past and by increasing the communication with these actors the FBU could increase their aftermarket presence and also possibly induce demand from the operators' side in the OEM market.

In India, the FBU should focus on obtaining development orders from the local OEMs. However, the Indian sales organization should also focus on establishing relationships with international OEMs that localize in India. Simultaneously, the sales organizations at the exporting markets should be responsive in case the international OEMs receive Indian product1 orders. Overall, the FBU's sales organizations' focus should be more long-term. Non-current customers should be given higher emphasis. The focus should initially be to obtain smaller orders in order to establish an active relationship that could result in larger orders and long-term customers.

8.7.3 Reliability

The two capability adaptations that are considered to be most important for improving the FBU's reliability performance are to ensure more trustworthy deliveries and a product1 design that would

allow the product1 customers to perceive that the Acme product1s provide valuable operational benefits.

8.7.3.1 Delivery Performance

The main focus for the FBU in order to improve their performance on the reliability key purchasing criterion is to improve the delivery performance. Improving production planning, renewing the supplier base as well as developing suppliers for component3 and component4, as mentioned earlier for reducing cost, will also be important for achieving a more reliable production system. Additionally, it will be necessary for the FBU to fully implement the production strategy at the City2 factory to deal with delivery performance issues.

8.7.3.2 Redesign of Product1s

The FBU should consider adapting the product1s' design in order for the products to better fit the product1 customers' wants and needs. This could be done by conducting a design of experiment project. Since an important feature is to prolong the maintenance intervals for segment1 operators, designing a product1 that improves on this aspect should be done.

8.7.4 Final Remark

To conclude, the FBU does not have a natural strategic fit with the increasingly price driven product1 market since such a market preferably is served by a cost advantage rather than a differentiation strategy. Hence the FBU must improve on the price criterion in order to increase their competitiveness within the market. However, the FBU has an opportunity to undertake capability adaptations that would allow for the organization to realize a more cost competitive market position. However, the FBU should not strive to become the price leader but the focus should rather be to achieve a "good enough" price level. This is also more realistic and in line with the current strategic position. The FBU should focus on improving on the relational criteria by nurturing the current relationships as well as developing new ones that will be important for sustaining and increasing growth. In order to be perceived as an attractive partner it will also be vital to be perceived as a reliable product1 supplier by continuously providing excellent product1 solutions in a timely manner. Finally, in order to sustain and improve current Acme's position within the product1 markets the firm is recommended to undertake and investigate the proposal presented in this chapter.

9 Conclusions

This thesis investigates how Acme, as a premium supplier, can enhance their competitiveness in the product1 market by adjusting the price-performance balance in their offers. To gain an understanding of how the business unit could increase their competitiveness, two research questions were constructed around the following areas: First, the report focused on identifying the product1 markets for segment1 that were the most attractive from the FBU's perspective. Secondly, the strategic capabilities that needed to be adjusted in order for the FBU to increase their competitiveness within the attractive product1 markets were identified.

The three product1 markets for segment1 that are considered to be the most attractive for the FBU are presented below.

1. The Chinese product1 market
2. The Indian product1 market
3. The Western European product1 market

The product1 market for segment1 in China is considered to be the most attractive product1 market since it is relatively large and has an appealing growth in combination with that the FBU has an established local factory and supplies product1s that fits the customers' key purchasing criteria fairly well. The Indian product1 market for segment1 is considered to be the second most attractive since it has great growth potential and it is in an early development phase. The Western European product1 market for segment1 is attractive due to the market's substantial size, Acme's strong position at the market and the fact that many of the product1 orders for product2s sold for export are negotiated there.

In order for the FBU to gain improved market positions and enhanced competitiveness at the focal markets, the business unit must improve their relative performance on the OEM's key purchasing criteria. The key purchasing criteria are market dependent but it is possible to conclude that the following three key purchasing criteria capture the OEMs' demands on the focal markets:

1. Product1 price
2. Relationships with the OEMs
3. Reliability

The FBU has a weak performance on the price criterion on all of the focal markets, especially in India. Furthermore, the FBU perform medium to good on the relationship criteria for the Chinese and Western European product1 market. This is favorable for the product1s sold for India product2 orders as well, since several of the product2 orders are being supplied by export from these regions. However, the FBU has relatively weak relationships with the OEMs in India locally. The performance on the reliability criterion is good from a quality perspective but the customers' overall perception is negatively affected by the FBU's weak delivery performance of product1 orders and technical documentation.

The capabilities that relate to the FBU's performance on the criteria price and reliability are to a large extent business unit specific since these mainly are affected by the FBU's value activities within manufacturing and supply chain. Capability adaptations that improve the FBU's performance on these criteria will therefore benefit most of the markets. The capabilities that are related to the

relationship criterion are to a higher degree market specific. However, from a relationship perspective there is still a notable degree of market interdependence due to the frequent occurrence of export orders. Hence, to what degree capability adaptations of related to the relationship criterion depend on the export characteristic of the market where the changes are conducted.

Based on this discussion the most critical adjustments that should be conducted within the FBU's business within a short term perspective¹ are presented below².

- Coordinate the production of product1 type1 XX*YY*ZZ between the application segments and factories [Price]
- Improve the production planning in the City1 facility but especially at the City2 site [Price; Reliability]
- Evaluate and reselect suppliers of the input components component1 and component2 [Price] as well as of the input components component3 and component4 [Reliability]
- Employ additional, and provide further education of, application engineers as well as locating these close to the key OEMs' production units [Relationships]

In the longer term perspective³ the FBU is recommended to realize projects that focus on the fields presented underneath.

- Localize production in India [Price; Relationship]
- Redesign other product1s than the product1 type1 XX*YY*ZZ to allow for further coordination of production [Price]
- Improve the product1 design in order to increase the product1 maintenance interval [Reliability]

The currently changing product1 market characteristic, where price to an increasingly extent is emphasized, challenges the FBU as a premium supplier. Therefore it will be vital to undertake actions, as the ones recommended, in order to reach a competitive price level. This is especially important as the customers cannot obtain any substantial benefits from the FBU's higher priced product1s than their competitors. Simultaneously, the FBU needs to ensure timely deliveries and should in the longer term utilize their engineering capabilities to develop features that actually provide additional customer value. The FBU must improve their local presence of technical personnel in the regions where the OEM procure their product1s. Also, the FBU should be more long-term focused in their customer contacts and expand their sales organizations in order to have the capacity to communicate the excess value FBU's solutions actually provide.

The product1 market is developing and growing globally, especially in Asia. Acme has the technological competence to follow the development on the market. However, the customers do not benefit sufficiently from the firm's products' technical advancement for Acme's premium price to be motivated. Hence, Acme has a great challenge in tapping the market potential. However, by realizing the proposed recommendations the firm will be in a better position to defend their current market shares and seize the great market potential.

¹ Short term is defined as within a two year period

² The key purchasing criteria that relates to the capability adaption proposals are presented in brackets

³ Long term is defined as longer than two years but shorter than five years

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