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Target Costing in Swedish Firms – Fiction, fad or fact?

"An Empirical study of some Swedish firms".

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Abstract

Today’s fast changing business environment makes urgent necessity of product innovation and strategic management awareness, keys to companies’ competitiveness, long-term strategy implementation and survival. Firms can no longer produce and market huge amounts of standard products with a relatively stable market and technological climate. The business management has to grapple with unstable, rapidly changing markets and technologies in order to run their organisations and be able to sell products. To implement market – driven management policies across the organisation, measurement and cost control systems must be designed to motivate the desired consumer – oriented behaviour. Thus strategies that determine the direction of product innovation have become more crucial to corporate management today than ever before. In this situation therefore, target – costing system (Japanese) has been identified as the system which will help managers push forward this badly needed strategy. The increasing popularity of the system as opposed to “cost plus” (Western), has influenced my study in this thesis. Therefore contained herein is a study to examine whether Swedish firms are adopting target costing as their management practice. In the study, 41 companies are contacted and 16 indicate that they use similar systems. Use of the system is high among manufacturers and cost reduction is among their main motive for adopting the system. Cross-functional application and design/product conception departments are the leaders in driving the system.

Dedication:

I dedicate this work to my master and lovely son, Kwah Xenos and, my first lady and daughter, Kwah Driscolia.

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I will want to first of all thank God for all the extra energy he gave me during this thesis writing period. Secondly, I thank my supervisor Christer Johasson who gave me good directions and advices and very tough criticism. I also want to thank my classmates of MIM 2003 for their being there and above all, I want to thank all the faculty staff: my lecturers, Ann McKinnon, PHD candidate Daniel Svarvasson for his good heart and support. Lastly, this work could not have been a success with out the understanding and support from companies. I therefore thank all those company officials who responded to my questionnaire and my worrying phone calls. May God bless and guide them.

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Part one: Thesis formulation

Chapter 1. Research Approach.

This chapter provides us with an approach to this study.

1.1 Introduction and background material

The modern business atmosphere is characterised by the strengthening of global competition, rapid pace of automation and computer technology, environmental and safety issues, short product life cycle, consumers' need for high quality and innovative product at a reasonable price, and so on[1]. A company's survival and growth in such a challenging environment depends among other things on its capacity to produce and market indisputably innovative products that satisfy both the levels of quality and price expected by its market niche[2].

In order to satisfy customers, a firm needs to maximize its efficiency throughout its entire value chain. If efficiency is not maximized throughout the entire value chain, costs can rise above those of rivals and it may be difficult to regain these higher costs through increase of price. It is evident that cost management and management accounting has greatly evolved within this last decade in response to the shift in the business environment. Approaches such as Activity-Based Costing (ABC), Activity-Based Management (ABM), Total Quality Management (TQM), Target Costing or Target Cost Management (TCM), life cycle costing, balanced scorecard, and other new concepts have emerged to support the drive towards the need for strategic cost management[3].

Target Costing is often presented as one of the strategic cost management approaches better suited to strengthen a company's competitiveness in meeting today's business challenges. Unlike the conventional "cost-plus" approach, Target Costing is an "open system" which links external and internal factors from the inception. The activities to optimise the key success factors (cost, quality, innovation, and time) of a product are carried out mainly at the development and design phases, involving a multi-functional team of a

[1] Bozemba et al, 1994
[2] Ibid
[3] Cooper et al1997

company's participating functions as well as other members of the value-chain, mainly the suppliers[4].

Since Target Costing has begun to be adopted and implemented by business organisations operating in other business environments than its original one, i.e. the Japanese environment, it can be assumed that something new about the approach can be learned by exploring what is happening in other business contexts. This study aims to investigate the core components of target costing, how its principles are being applied in firms and how it has developed in other places such as Sweden. The interest here is also to assess how it might be regarded as a fad due to this rapid expansion.

1.2 Sources of modern competition for Swedish firms.

Following World War II, many Swedish companies grew quickly because of increasing demands, such as the reconstruction of Europe and the Pacific Rim and rapid population growth. Strong demand and few competitors permitted these companies to remain profitable, though not competitive, and growing by offsetting cost increases with price increases. Unfortunately, cost based pricing does not foster strong cost management. Today, many Swedish companies, accustomed to strong demand, little competition and the ability to mark up costs to yield good profits, are experiencing a very different and more hostile marketplace, from those of emerging markets and other competitors.

South East Asia, led by Japan and particularly South Korea, Taiwan, Thailand, Singapore, Indonesia and recently China pose a real competitive threat to Swedish firms.[5] Copying from Japan, companies in this region have grown and become very competitive. From automobile manufacturing, ship building, chemical production, electronics and IT equipment to the provision of services, this region has witnessed a rapid growth in recent times. Firms such as LG (Household electronic equipments), Samsung (electronics and semiconductors) Automobile (Daewoo, Hyundai Motor, etc.) are becoming global at a very fast pace[6]. The reason is that this region has established strong technology, cost effective management, infiltrated by high quality, discrediting the traditional notion that "quality is price". With this in mind it means technology is spreading and no particular company or organisation has an edge over the

[4] Ansari et al 1997
[5] The Economist May 2003
[6] The Financial times, April 29 2003

other. In this light therefore, one can surmise that a proper confrontational cost management system would be a better way of challenging competitors.

Eastern Europe is also another area posing challenges to Swedish firms. According to recent IMF, and Euro Business Week magazine[7] reports, Poland, Hungary and the Czech Republic are Eastern Europe's biggest and most broadly based markets. Since the collapse of the Berlin wall and the transformation of these countries from communist centralised economies to more market oriented economies, investors have been benefiting from the presence of infrastructures established during communist times, to either start or expand on existing business. Therefore, these markets are now growing and even faster that the European Union[8i] and they are attracting more investment worldwide. These markets also serve as so-called "low cost" investment sites. Apparent today is an alternative move where by Swedish companies are dismantling their production structures at home and moving them to these "low cost" countries. They complain of high cost of production at home when compared to these "low cost" countries. While these countries appear attractive now, growing environmental and congestion concerns could pose a problem in the future. Macro-economic regulations will be imposed and those companies will be forced to migrate once more elsewhere. Such a trend is already being observed in Hungary[9] where some firms are beginning to leave for China because of high cost.[ii]

From the above illustration therefore, high competition, which ensures from this frontier less markets (globalisation) means many firms, which don't have the right strategy will leave the market place straight away[10].

The above points to the fact, that there is a growing contingency that requires confrontational policies, which is either not known by managers or not well applied. Target costing has been identified as a system that can provide the confrontational approach needed.

The concept of target costing known in Japanese as "Genkaki-kaku" is said to have originated from Toyota Motor Corporation in the 1960s.[11] Since that time

[7] Euro-Business Week. 31 Oct. 2003
[8] European Bank for Reconstruction and Development, April 2003, Even the Economist, Feb. 2001.
[9] Financial Times March 21 2003
[10] Cooper et al, 1997, Ansari et al 1997

it has been recognised as a dynamic comprehensive system of cost reduction and strategic profit planning[12]. This is also closely linked to Kaizen costing which means continuous improvement.

1.3 Problem discussion:

The long-term financial success of any business depends on whether its prices exceed its costs by enough to finance growth, provide for reinvestment and yields a satisfactory return to its stakeholders[13]. As competition increases, and supply exceeds demand, market forces influence prices more significantly. To achieve a sufficient margin over its costs, a company must manage those costs relative to the prices the market allows or, the price the company sets to achieve within certain market penetration objectives. In this context, the practice of target costing has evolved and would stand as a force to support this argument. The problems raised here in this thesis are:

1. The difficulty for modern company management to develop strategies that catches up with modern business trends. Instead they blame their failure to attain expected goals on other non-related issues such as high cost of production or political policies such as high taxation[14]. The inability to apply efficient Cost management therefore remains the major source of all business problems. Market sizes of firms have shrunk due to widespread technological advancement and, again, nobody can boast of exclusivity in technology today as before. If low cost environments can be technologically efficient, and can supply cost efficient products for the market, then companies' management nowadays, irrespective of location, has to consider more rigorous costing systems able to work in this competitive environment, such as target costing, so as to keep a tab on long term planning and production projection[15].

2. During periods of market depression, managers tend to conclude that the cost of production is unbearable. They may make rash decisions such as moving production to other locations which they deem are cheaper or they tend to cut cost through excessive layoffs[16]. This sequence is commonly observed today even here in Sweden, where firms are moving production to so called

[11] Hibbets 2003, Monden et al, 2000
[12] Ansari et al 1997, Cooper et al 1997, Hibbets et al 2003
[13] Blocher,Chen and Lin 2002
[14] Ansari et al 1997, Cooper et al 1997, Hibbets et al 2003
[15] Yee, 1994
[16] Alf et al, 1999

"low cost countries" abroad[17] and are laying off workers as a means to reduce cost. Of course, firms can lay off workers when they cannot be paid but some analyst see migration as a very short term solution because soon those countries will start regulating their own markets with higher taxes, for example. However, this study does not rule out the idea of out sourcing. To take a stand on that I have distinguished between two types of outsourcing; strategic and non-strategic outsourcing. These are explained in detail latter in this report. Some researchers propose that target costing when understood and well implemented can provide an alternative solution to the above problem.[18]

3. Cost management systems, as a company's strategic force ordinarily, should be designed to support a company's operations and strategy[19]. As opposed to this, cost management today provides misleading targets for managerial attention as they fail to provide the relevant sets of measures that appropriately reflect the technology, product processes and competitive environments in which the organisations operate. Traditional cost systems provide information that is distorted, too exaggerated, and too late to be used in reducing cost or providing productivity and market projection[20]. Management accounting systems in general and cost management in particular has to be re-examined and made in such a way that the risk of understanding projections are minimised so that long term production and product planning within this period of uncertainty can be projected with some amount of certainty. From evidence, Target costing provides this type of approach[21].

4. With globalisation and increasingly easy means of communication there has been effortless flow of information enabling markets to become easy to access from distant areas[22]. Consumers can compare quality, durability and prices of a product from one market with those of other markets[23]. Adding to that is that international expansion of companies, and educational programs such as International Graduate Programs (GBS), where lecturers, students, technicians, analysts etc., move from one part of the world to another spreading and learning latest technology and other strategic ideas. In this case Western

[17] Aftonbladet, 16 Sept. 2001
[18] Ansari et al 1997, Cooper 1997.
[19] Ansari et al 1997
[20] Kaplan et al 1987
[21] Roslender et al 2000
[22] Cooper et al 1997
[23] Ibid

Europe, the USA and Japan are not the owners of technology anymore. Other South East Asian countries as well as Eastern European countries are becoming technology holders effecting prices and therefore becoming price leaders[24] as a result. Therefore, conventional notion whereby the owner of technology or core competence would be considered a market leader and price giver is not longer fashionable. For an organisation to succeed consequently, and effect cost, structured systems have to be designed whereby expected profits can be assessed from what consumers are ready to pay and what quality they (consumers) want[25]. To attain this strategy target costing can be a viable solution as most of those mechanisms are contained in its principles.

5. In Sweden not much has been done in the research of target costing as a possible cost management practice by Swedish firms. Despite the need for a tool by Swedish managers to deal with the effect of competition, and the need to be educated about cost management practices as a strategic instrument, little has been done. The fact that most Swedish firms are exporters and that there is increasing competition at home suggests there is the need therefore to make a study on target costing in the Swedish environment. "*Products should also be able to be sold*" is what some researchers pointed out in the Swedish daily "Svenska Dagbladet" – 18th Nov. They proposed that the Swedish management / marketing research policy is ineffective and that what is happening now in the business world of the country is not improving the economy. The failure in Swedish management /marketing research is particularly that lots of focus is placed on how a new product can be developed but not how these products can be commercialised. *"Products don't sell themselves but if producers can understand market demand and consumer needs, after market research, it would be better to plan how to make the products get to them"*[26]. The researchers pointed out that in contrast, examples like H&M and IKEA are performing better just because they are using different techniques to get to customers. These firms are also said to have effective management systems that enable them know customer needs beforehand and know how to plug this cost into production and then to deliver cost efficient products to consumers at very affordable prices. There is the need to provide

[24] FT, Tuesday, 29 April 2003
[25] Ansari et al 1997
[26] Abstract written by Fredrick Bergström, Ekonomie doktor Handels Utredningsinstitut, HUI/Andreas Hedlund, Ekonomi licentiat, HUI for Svenska dagbladet, Nov. 18, 2003

meaningful a research path that will educate producers on how to manage their productivity and be able to sell their products. Target costing philosophy really holds such a line of thinking.

Therefore, the 5 main problems I have raised here in this thesis are that 1) the inability to develop strategy to deal with modern business shifts, 2) irresponsible outsourcing or the taking of rash decisions during periods of depression, 3) current costing information does not provide necessary information for managers but is instead very misleading, 4) the effect of globalisation and communication development and 5) lack of research on target costing in Sweden.

Despite the sluggish approach to target costing by Europeans and Swedish managers, there are indications that target costing has begun attracting their attention particularly as a powerful technique to manage product costs during the product design stage of a product's life. As such, it is important to know what target costing is all about and the part it in plays in Swedish management.

1.4 Aim and purpose.

The aim of this thesis is:

1. **To investigate and assess** how target costing can be used as an efficient cost management tool for managers and as such be an effective planning strategy in this changing business world. Learning from the Japanese, it has been observed that more than 80% of major manufacturing as well as of other levels of production have used target costing.[27] This has helped most Japanese firms' established abroad where they have been able to withstand turbulence and shock that have affected other exporters[28]. This seems to tie in with the idea that export oriented firms, such as most Japanese firms are, could use this type of costing system as a strategic tool.

2. **To diagnose the core concept** of target costing and, attempt to provide some understanding that might explain the degree of reliability of the system. Some of the shortcomings of the system will be identified and how they can be overcome. Through the exploration of examples of some successful users, I will define what a fad is, bring out some of its characteristics, and explain why target costing might be seen as a fad.

[27] Kato 1993a
[28] Banham 2000

3. **To investigate if Target costing is being used by Swedish** firms as a strategic cost management method and, if so, the intensity of its application. It is observed that the Swedish management system has similarities to the Japanese system except for some cultural differences[29]. With target costing spreading to other countries, like the USA and other European countries which are technology focussed, Sweden being a technology driven country too with big firms well planted aboard, probably would have a management system similar to Target costing, but which may be called differently.

In summary therefore, three points can be surmised form the above examined purposes; a description of target costing theory, to investigate the part played by fads in determining the importance of a better cost management systems and lastly, an investigation of the adoption of target costing in Sweden.

1.5 Expected contribution and limitations

By the conclusion of this thesis I will hope to have been able to provide an understanding of the target-costing instrument as a realistic and increasingly attractive cost management tool, and that despite its sluggish infiltration into the Western/Swedish Management system, it is in fact being used in particular by some Swedish firms. This thesis will also, hopefully, contribute to different dimensions in understanding modern competition from the Swedish perspective and how competitive forces of modern times can be understood and addressed. Among other things, this thesis should trigger aggressive research groundwork for more robust cost management research in the typically Swedish context.

However, in interpreting the results from the Swedish study it should not be generalised to be a mass revolutionary trend in the Swedish management system. It should be analysed in respect to the studied sample firms. Since all studies cannot be the same, other studies may show a different pattern than what I have shown here.

Chapter 2: Methodology

This chapter will provide a picture of how this study will be carried out and the processes involved in its attainment.

[29] Zenke, 1988

2.1 Thesis out line:

This thesis is divided into three parts. Each part is subsequently divided into chapters.

Parts and chapters:

Part ONE deals with the theoretical formulation of the thesis. It explores all these issues like the purpose, aim and other related questions that attempt to explain what this thesis is all about. I point out here the various methods used in the study and how the results will be attained.

In part TWO, supported by literature, target costing is described as being the force behind the success of the Japanese export industry, especially during periods of uncertainty and increasing competitive environment. As observed today, long term planning for Western firms in such contingencies can also be achieved through the application target costing[30]. A comparison is drawn with the Western management system known as "Cost plus". The concept of a fad is also raised in this section and a comparison is made to assess how fads occur and how one can identify them as well as its importance/relations to target costing and management as a whole. Other mechanics of the target costing system are examined here and an assessment is made on its effectiveness.

In part THREE, two empirical studies are made, one, a case study review of the adoption target costing in the USA and the other – a study of adoption of target costing in Sweden. The CAM-I GROUP and the University of Akron did the Americans study in the late 1990s funded by the American Instituted of certified Accountants. Inspiration was gathered from there launched the Swedish study – to find out if Swedish firms' were also adopting target costing.

2.2 Research method:

Normally the type of research method applied on a thesis such as this one depends on the magnitude of the research question and the expected results to be obtained from it. Therefore, research design is the logical sequence that connects the empirical findings to the research questions being asked and to the conclusions the researcher arrives at by analysing the data collected. In other words, it is the road map of getting from the initial set of questions to the conclusions[31]. In this case I have used some secondary materials to provide supporting credence to the study while opening the ground for further research.

[30] Tani, T 1995
[31] Yin 1994

In the third part, which I designed as an empirical study section, some 41 influential Swedish companies were contacted to assess their attitude towards target costing practice. A questionnaire was designed containing some 18 questions. These questions where modelled to provide single numerical indicators along the lines of the 7-point likert scale. Thus 1 represented an answer of "not at all" and 7 represented "very much". There were also open questions which where used to give more substance to the answers. Only Mode and medians were extracted when analysing the quantitative responses of the questionnaire. A copy of the questionnaire can be seen in the appendix. Therefore, both quantitative and qualitative methods were used.

2.3 Qualitative and quantitative methods:

Although some literature suggests the use of qualitative or quantitative methods in analysing questions pertaining to such research, I will try to illustrate here that both methods work hand in hand and that I have used them to some extent to provide the results in section 3.

A. Qualitative approach

Using the qualitative approach, which is the non-numerical examination and interpretation of observations, for the purpose of discovering underlying meaning of relationships[32] I was allowed to study selective issues in details without the predetermined constraints of "categorised" analysis. I was inspired to gather data from opened-ended questions in which direct quotations were considered as a major source of raw material. This is because they reveal the respondents depth of emotions. Therefore the following major steps were taken to attain this objective. They are

i) **Field research –** where the study and data collection was done outside natural settings or the library. By taking notes, observing the pattern of interaction, as well as keeping in line with observed rules and rituals, the main guiding principle where applied.

ii) **Qualitative interviews –** this is the method in which interested parties were contacted one way or the other and were requested to assist in providing necessary information. This was done in 3 main ways: 1) *informal conversation* in which I had chats with subjects providing spontaneous flow of questions in which the interviewee did not realise that he was being interviewed, 2) *general interview guide approach* in which predetermined set

[32] Patton 1990

of questions where set to be explored and 3) *standardised open-ended interviews* in which the interviewee pursued the subject through a set of fixed questions. Table 1 below summarises to what extent the above methods were used.

Table 1

Methods used in qualitative study

Type of contact	**Number of contacts used to gather qualitative information**
Informal conversation/ Standardised open- ended Interviews and questionnaire	4 Firms
Telephone interview only	5 Firms
Standardised open-ended Interviews/questionnaire	32 Firms

B. Quantitative method:

This is a method, which is mostly the numerical representation and manipulations of observations for the purpose of describing and explaining the phenomena that those observations reflect. Therefore, I was emphasising the measurement of relationships between variables, not processes. In this case, the responses from the Likert scale are express in terms of the range or inter quartile range (not through standard deviation). I have also displayed this variation and the distribution of observations on bar charts not preferring histograms, because the data is not continuous. Also I had to make use of the open question, which had to be analysed within the framework of the collected data. The features of the bars are separate since they can be used for nominal or ordinal data. Only the height of the bar is more relevant in the interpretation —, not the width

2.4 Choice of research—my choice of research area and question formulation:

I decided to research target costing in response to the great need for tools to deal with the continuing uncertain business climate of today.

a) From past academic explorations I observed that there is a lot of information in the corporate world that managers' can exploit to solve their

corporate management problems. However, I realised that some of this information available has lots of limitations.

b) Gurus spread trends that induce managers into applying them after a brief period of use with no positive response, they are dropped. Therefore, it is important for managers to know which information is right and which is wrong[33].

c) Sometimes important strategic ideas are not considered due to their simplicity or because managers lack the insight to understand how they might be good for their organisation[34]. While the idea of target costing is beginning to attract some Western managers for example, some of them are still sceptical about its usefulness and expected success. Some of them even see the system as another fad because its principles are very easy.[35] There is the need, therefore, to address these divergences here and provide some clarifications to that effect through this research, while perhaps encouraging further understanding and learning in future research.

d) Probably the most important reason for choosing this topic is that fact that little has been done about the research of target costing and /or similar costing practices in Sweden. This selection of the topic, therefore, is an attempt to join in the quest for research into the problems and solutions of cost management tools at these times of uncertainty. It also provide a means to contribute to the general area of strategic cost management accounting whereby one is called upon to bring in new ideas, techniques and thoughts linked to firm's strategy[36]. To attain those objectives therefore, through the examination of "Target costing in Swedish firms – Fiction fad or facts" in this thesis, I will try to provide a meaningful approach to the understanding of this modern trend in Cost management thinking.

2.5 Literature:

Much of the material used in this thesis has been found in two main sources. They are the primary and the secondary sources.

- Primary sources have been attained through my direct contact with companies through various means such as answered questionnaires which I sent to them, and through telephone and direct face to face conversations.

[33] Stacey D 1996
[34] Ansari et al 1997
[35] Ibid
[36] Hibbets et al 2003

- Secondary sources of data are obtained from textbooks, Journals, magazines, newspapers, company financial statements, and on web pages. Most of the books can be found in the University library and or search through Gunda, the database of the university library, google, AltaVista, etc. I have also visited companies’ websites (Ericsson, Samsung, Caterpillar, Komatsu) and all the companies interviewed as well as organisations (IMF, European development bank, Asian development bank, Svensk statistic central byrån, etc).

Some of the major examples used in the thesis are mostly base on other research materials, newspaper reports, magazine stories and business paper analysis. Therefore, they are from secondary sources and they are used to illustrate and better explain the divergences and the strength of the research area. From the spread of these examples it can be observed that I have used the Japanese examples to illustrate the background of target costing as a long-term strategy. I feel that it is necessary to provide a brief history of those behind the mechanics of the system and the extent to which it has been used and the results attained. It is customary to see the examples like Toyota, Komatsu and other Japanese firm mentioned here. The American examples such as Caterpillar and General Electric are examples of those firms which adopted the strategy from the Japanese or who developed structures that gave a springboard to the conception to the idea. I try to give an idea of how the strategy spread when it was beginning to be understood and those who used it in due course and the results they got from it. In Sweden I have used other local examples supported by various sources such as Newspapers and magazines, for example. Volvo and SKF are two Swedish companies which studies have shown use a sort of target costing technique.

However, literature on target costing is still very limited so a lot of effort has been made to gather materials from so numerous sources.

2.6 Criticism and data reliability

The limited established network between the school and companies or alumni involvement in the school’s link to organisations, was a major hindrance to contact between organisations and the researcher. Initially, it was really hard to get the right contact person in the companies and some contacts were very sensitive in how they provided information. Therefore, information provided by those who answered may be biased or “softened” to satisfy my curiosity only.

Again the section on the Sweden study, some company/contact persons' names will not be published for security reasons.

None the less, we cannot rule out the fact that modern Swedish firm management are being pressured to revolutionise their management systems, especially as competition intensifies both at home and abroad.

Part 2 Theoretical formulations.

Chapter 3 Uncertainty and strategy

This chapter ushers us into the notion of target costing and its evolution. This is a very broad area, which cannot be fully covered in this thesis, but I have selected three main theories, which are of great significance to this research. They are all based on the idea of generic competition strategy, which can be classified as cost leadership, differentiation, and confrontation strategies. Therefore those selected are the Porter's competition concept, Confrontational theory and the Contingency theory.

3.1 Strategic theories and target cost management.

The Oxford Reference Dictionary defines strategy as a plan for dealing with uncertain future circumstances. This is a set of rules by which the actions to be taken depend on the circumstances, including natural events and the actions of other people. It also defines management as the running of an organisation or part of it. Management has two main components: an organisational skill, including the ability to delegate, and an entrepreneurial sense. The organisational skills, involving principles and techniques of managers to take initiatives at critical moments to effect strategy affect its success and effectiveness[37]. Strategy is a game that managers or groups of managers play every day with other managers in their organisation or with their organisation with individuals both in and out of their organisation. The smallest players in the game are individual managers, single person households and one-person businesses. The largest players are powerful teams of top managers in global corporations and government organisations.[38] Some of the internal players are called departments, other are called units, yet others project teams. Some of the external players are called customers, others suppliers and yet others

[37] Oxford reference on line dictionary
[38] Stacey D 1996

competitors, regulators, or financiers.[39] To hypothesise upon the interaction, we can look into the Porter generic competition model.

3.2 Michael Porter's idea of generic competition strategy:

According to Porter much is being said about long term strategy today. In a bid to address it, managers and researchers have tended to dwell more on operational effectiveness than strategy per se[40]. Ideas that emerged in the late 1980s and early 1990s, such as total quality, just-in-time, and reengineering, for example, have taken the centre stage in research and adoption, since it is believed that some operational goal might be attained from it to make firms management more effective.[41] To develop this idea further, Porter's distinguish between strategy and operational effectiveness as follows:

- Strategy is about making choices, trade-offs; it is about deliberately choosing to be different from others mostly by taking a step forward and acting and reacting faster than rivals. A strategy is supposed to delineate the territory in which a company seeks to be unique.
- Operational effectiveness can be about what is good for everybody; what every business management should be doing to attain a sustainable performance in the firm.[42] This may include all the possibilities to apply best practice, organisational learning and efficient flow of resource to effect productivity. At least all firms apply some sort of operational effectiveness as opposed to strategy. The effect is that focusing on operational effectiveness alone tends to create mutual destructiveness in competition. If everyone is trying to do the same thing, it almost inevitably causes customers to choose on price[43]. An example can be seen in Sweden today where there have been reports of price wars between telephone operators in the past two years because every operation is trying to a supply similar product[44]. According to Porter, the idea that business is about change and being dynamic and reinventing of oneself has made the notion of strategy to have suffered. Three reasons for this can be identified[45].

[39] Ibid.
[40] Porter 1985
[41] Bayou et al 2003
[42] Porter speaking in an interview with "Fast company Magazine", March 2001
[43] Ibid
[44] Aftonbladet, Saturday July 12, 2003
[45] Porter 1985

a) In the 1970s and 1980s, people tried strategy, and they had problems with it. It was difficult. It seemed an artificial exercise.

b) The ascendance of Japan really focussed attention on implementation. Some analysts argued that strategy was not what was really important – you just had to produce a higher-quality product than your rival, at a lower cost, and then improve that product relentlessly.

c) The emergence of the notion that in a world of change, you really shouldn't have a strategy.

Even though pressures vary from industry to industry, Porter (1979) shows that pressures are similar enough to use a common analytical framework for competitive analysis. Therefore, his five-force model is used widely for this purpose. The competitive pressures contained in this model are:

- The intensity of rivalry among competing sellers,
- The threat of potential new entrants,
- The threat of substitutes,
- The power of key suppliers, and
- The power of key buyers.

Normally the stronger the competitive force the lower the collective profitability of participant firms.[46] Therefore, some critics have thought that though Porter's generic competition theory has greatly assisted research in developing the notion of the intensity and shift in modern competition, it does not provide a full understanding on how the modern competitive trend can be addressed. Its theory therefore is seen as suiting more of mass production ideology than this lean production era. The confrontation ideology has been identified as a good tool to deal with today's market situation[47].

3.3Confrontational theory:

Confrontation management thinking emerged in the latter 20th century as a result of the spread of lean production and the quest for a solution to the increasing modern day competition. It is a strategy in which firms operating internationally can adopt so as to brace themselves against competition. Lean production makes it easy for high quality products at low cost and in record time to be launched into the market. In order to survive in today's uncertain

[46] Cooper 1994
[47] Cooper et al 1997

business environment, confrontational strategy is the main tool[48] because *"firms that adopt confrontational strategy must become experts at developing low cost, high quality products that have the functionality customer demand. A firm that fails to reduce cost as rapidly as its competitors will see its profit margin squeezed and its existence threatened. Cost management like quantity has become a discipline practiced by virtually every body in the firm. Therefore overlapping systems that create intense downward pressure on all elements are required"*.[49] The Japanese for example developed and used techniques such as target costing, value engineering, inter-organisational cost management systems etc., to pursue this confrontation. Therefore, the main driver – target costing can be viewed from 3 main processes.

a) ***Market driven target costing***. This is also known as the allowable cost and it is the cost that a product must be produced if it is to attain its target profit at the expected target price.[50] (See factors influencing target costing for details 4.9)

b) ***Product level target costing***: This refers to the art of target cost management through which the cost is set at product level. (See factors influencing target costing for details 4.9)

c) ***Component level target costing***: This refers to the target cost management at component level. This is done when the target cost of the product is already known. The multi-functional product design teams break it up to determine component level cost. Cost reduction objective is allocated across the component and subassemblies that make up the product but which is not evenly spread across them[51]. Component level target costing has some basic characteristics, which can be best illustrated by studying the survival triplet and the product survival zone.

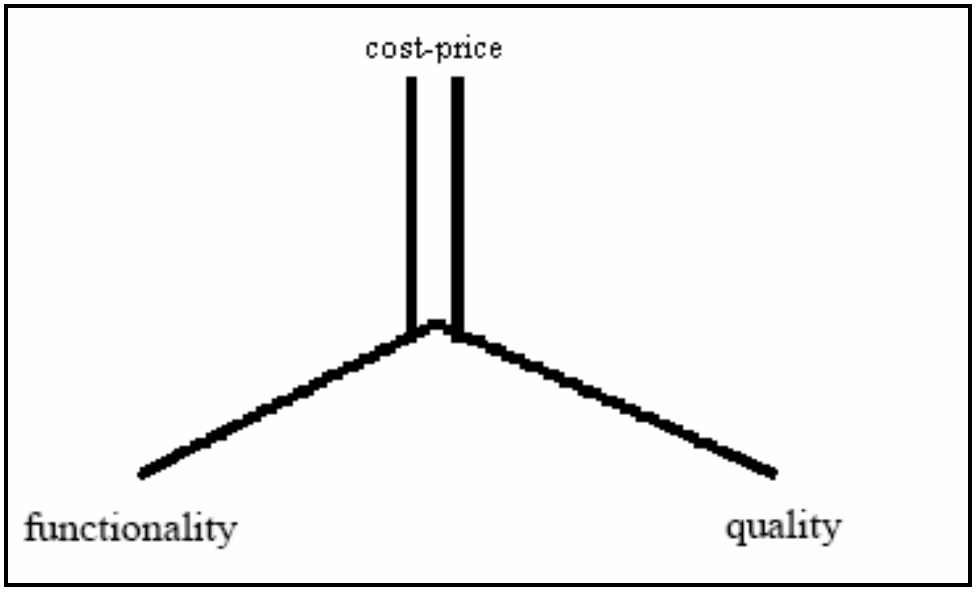
The survival triplet and the survival zone:

The three product characteristic known as survival triplet plays a vital role for the success of firms that adopts confrontation strategy. Survival triplet is different from producer perspective and customer perspective. For a customer; while the characteristics of survival triplet are product price, perceived quality and product functionality, for a producer, are product cost, quality and product

[48] Cooper 1994
[49] Cooper, 1997 page 7
[50] Cooper et al 1997
[51] Cooper et al 1997

functionality. Product cost can be independent from its cost as transitory[52]. In the long term however, firms aiming to become profitable have to adjust to cost price relationship carefully. Consequently, the characteristics of survival triplet can be determined as cost price, quality and functionality as shown below on fig. 1.

Fig 1 product survival zone



Source: Robin Cooper et al, 1997 page 34

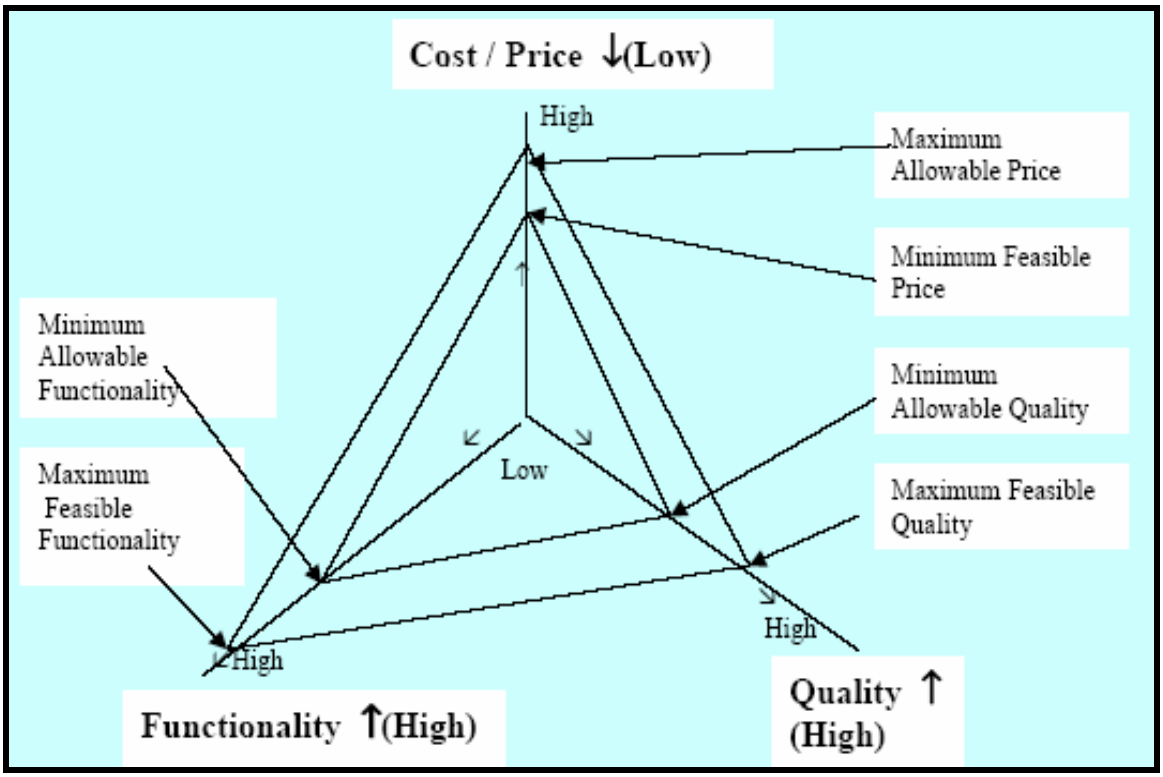
In the survival triplet approach, it is accepted that selling prices are determined by market conditions that are highly competitive. Its components are described as follows.

- Product cost is the value of the resources consumed to get the product into the hand of customer. Cost includes all investment costs such as research and development costs, all production costs and all marketing and selling costs. Therefore according to the figure,
- Quality is defined as the performance of product specifications. This definition renders an opportunity that quality and functionality can be seen as two different product characteristics.
- Functionality is the specifications of product. It is not a single dimension but rather is multidimensional. In this context, the firm may want to differentiate between the fundamental functionality of the product and service functionality. Such a differentiation may permit better understanding of competitive conditions that the firm face.

[52] Cooper 1994

Each product sold by the firm has different value related to the characteristics of the survival triplet. Only a product that fits well in the survival triplets' characteristics accepted by the consumer has a chance of being successful[53]. Consequently, for each product, it is useful to define a survival zone identified by the gaps between the feasible and allowable values of three dimensions of survival triplet as shown below.

Fig.2 changes in the survival triplet



Source: Robin Cooper et al 1997, page 31.

For quality and functionality, the minimum allowable level is the lowest value of each characteristic that the customer is willing to accept regardless of the values of the other two characteristics. Few customers are willing to buy a product no matter how low the price or no matter how high the quality[54].

For quality and functionality, maximum feasible level is the highest value that can be achieved by the firm without inducing significant penalties in other characteristics. Above a certain functionality level, quality problems related to products will happen and higher price will be demanded to earn sufficient profit.

[53] Cooper et al 1997
[54] Cooper 1994

Few customers will desire products that are low in quality and high in price. Because its maximum allowable level is determined by the customers and minimum feasible level is determined by the firm, price is different from other characteristics of survival triplet. The maximum allowable price is the highest price that customers are willing to pay regardless of the value of the other two characteristics. The minimum feasible price is the lowest price accepted by the firm at the allowable level.

a) **Managing of the survival triplet characteristics**

Firms adopting a confrontation strategy should be expert at offering products that have desired functionality by the customers, at low cost and high quality. Cost, quality and functionality expertise requires that this should be applied consistently to affect the strategy so as to meet the right quality and functionality and at the right price. The Confrontational competition approach requires the integration of cost, quality and functionality management systems. The fast reaction of the firm to economic conditions is ensured by the integration of the systems mentioned above[55]. Features concerning the cost, quality and functionality management systems in a confrontational environment are explained below.

a) Managing the product functionality

To shorten the time required to add new features to the product, to change the product differentiation and to change the nature of product features are the method that may be used for competing via product functionality.

b) Managing product quality

Quality is managed via total quality programs[56]. In most Japanese firms, total quality programs are so successful that additional improvements in quality do not possess any importance for the customers[57]. Consequently, the survival zone in most products is extremely narrow in terms of the quality characteristic.

c) Managing the product cost

The efficiency of offering the products at high quality and functionality at low price, enterprises competing in confrontational competition conditions have to manage the product costs effectively. Cost management techniques includes managing new product costs, managing existing product costs and harnessing entrepreneurial spirit of work force are used to control the life-cycle costs of products[58]. (Discussed latter in this study)

[55] Cooper et al 1997
[56] Tani, 1995
[57] Cooper 1994
[58] Manden et al 1994

While most lean producers of the West are accepting the confrontational theory, other researchers mostly the Japanese talk of the contingency theory. This is because the confrontational ideology and it associated target costing alone does not explain why and how firms can benefit from target costing and the effective instructional development that accompanies it[59]. Some managers interpret confrontation as a strategy of "just producing cheaper products and supplying them the quickest into the market"[60]. This is almost an impossible goal to attain. Consequently a firms' management must adopt a very strong learning culture to make it work in conjunction with confrontational strategy.

3.4 Contingency theory.

Contingency theory has been used to describe the environmental uncertainty which the Japanese considered a major influence to the adoption of target costing. This theory also shed some light on recent research on the subject and suggests that there are some similarities or overlaps with the confrontational strategy but that not all adopters of target costing benefit from its implementation if implemented as ascribed by confrontational ideology[61]. This means that other tools are required in conjunction with target costing principles to effect target costing implementation in an organisation. Four contingency variables, namely complexity and the uncertainty of the decision environment, corporate/business strategy, and organisational structure, i.e., degree of decentralisation, have been used to explain the efforts of the companies to make Target Costing systems adaptive to the decision environment, strategy, and organisational structure[62]. Based on this the theory is built on the assumptions supported by research in Japan that;

- The more customers' needs become diversified, the higher the influential power of sales managers, product planning managers and product managers, during the stage of product planning would be.
- The more intensive market competition becomes, the higher the influential power of sales managers, product planning managers and product managers during the stage of product planning would be.
- When the timely introduction of new products is a key success factor, the influential power of sales managers, product planning managers and product managers will be high during the stage of product planning.

[59] Kato 1998
[60] Ibid pg. 3
[61] Kato, 1998
[62] Tani et al. 1995, Kato 1998

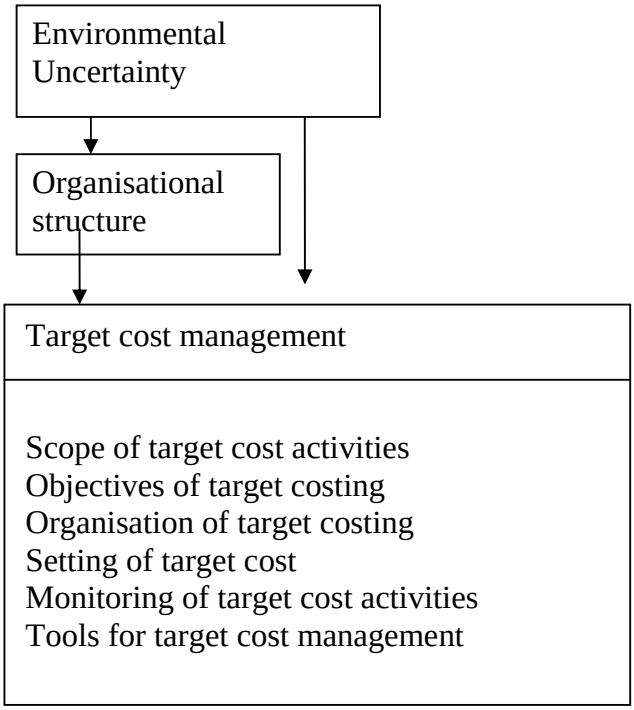
- The more customers' needs become diversified, the higher the influential power of purchasing and production engineering managers during the stage of development and/or detailed design would be.
- The more frequent is technological innovation, the higher the influential power of product and product-planning managers in the stage of product planning would be.
- The more frequent technological innovation is, the higher the influential power of purchasing and production engineering managers in the stages of development and/or detailed design would be.

Therefore, effective organisational learning is required for the success of target cost management in an organisation. This contingency type of theoretical observation can help increase our knowledge of target cost management applications. Companies operate in different business environments so that we could hypothesize the real applications of TCM may differ from each other. Studies such as the above can help gave a clear picture of TCM application in the real world setting, by testing the logically derived hypothesis[63]. However, there are some limitations to above theory.

Firstly, the contingency theory application cannot provide any insight for TCM contribution for performance; why do companies have significant performance differences even though they are operating under the same circumstances? Secondly, traditional contingency theory cannot capture all of the relevant contingency variables. For example, the substitute (diversity of product market and diversity of sales promotion) is used to represent "complexity of decision environment." There are, however, many other candidates of surrogate variables. Figure 3 below shows a two-view approach on the effect of environmental uncertainty, organisational structure and target cost implementation.

[63] Kato 1998

Fig 3 Contingency model of target cost management



Source: Tani, 1995, page 404

The figure above tries to contrast the traditional notion where it is traditionally hypothesised that environmental uncertainty leads to direct target costing implementation that it is enough to face contingencies (arrow on the right). The Contingency theory provided an alternative approach which indicated that for target costing to be efficient and beneficial its implementation has to be able to effect organisational efficiency (arrows/steps on the left).

3.5 Attaining efficient strategy under uncertain conditions

From the above theories therefore, despite the scope of the concept of strategy as applied to cost management, we can draw a conclusion that for firms to pursue efficient strategy, so as to create sustainable competitive advantage during periods of uncertainty, two alternatives can be considered.

1. Firms can choose to compete with low cost leadership strategy or can pursue a product differentiation strategy[64]. Following either of these strategies does not mean that little focus is placed on the other. However, the firm is not relying on the other factor to achieve a competitive advantage[65]. Therefore the product differentiation cannot ignore cost, but does not attempt to compete on the basis of cost or price. Rather, product differentiation competes on the basis of quality or functionality of the product it offers. Alternatively, the cost leader

[64] Porter 1985
[65] Hibberts et al 2003

cannot ignore product quality but instead produce products at the lowest possible cost for an acceptable level of quality and functionality.[66]

2. The next possible strategy could be that cost leaders may be more likely to implement target costing since they already are focused on reducing cost. [67] These firms may do all to they can effect cost reduction and adopt new programs as manager become aware of them. Alternatively, differentiators may tend to adopt target costing because according to strategy literature, differentiators are able to operate from a "customer perspective" and are better able to assess the desire of their customer market. In providing the features or quality a customer desires, they achieve a competitive advantage and increased customer loyalty.

3.6 Evolution in Target cost management.

There is a general agreement confirmed by research that target costing originated in Japan. Yet, the concept started emerging in Europe and the USA only in the late 1980s[68]. Toyota, for instance, was using target cost management as early as 1963. An even earlier user, however, dating back to 1947, was General Electric. GE's Lawrence Miles is commonly credited with inventing target cost management – though it was a streamlined version of today's highly evolved form[69]. According to Robin Cooper et al, (1997) target costing is not a new development, but has been in use since at least the mid 60s. In addition, there is subjective evidence of its use by Henry Ford, when developing the Model T[70]. Some authors have commented that target costing was not considered to be a "costing" technique, rather it was, and still is, a method for efficient cost management[71]. The name "target costing" originated later and is a rough translation of the Japanese word "genkaki-kaku" meaning the Japanese method of planning and cost management, which it represents. Toyota, the company that is also credited with developing just-in-time production systems, is said to be behind this creation, which was emulated by other Japanese car manufacturers in the 1960's after the first oil crisis. Unlike some car manufacturers Toyota weathered the oil crisis far better than its competitors to the extent that other companies wanted to copy its production management style. The result is that target costing has come to be used

[66] Ibid
[67] Cooper 1985
[68] Ansari et al 1996
[69] Adler et al 1999
[70] Cooper et al 1997
[71] Shimizu et al 1999

significantly in some larger Japanese companies since the 1960s and early 1970s[72].

3.7 Traditional "cost plus" method Vs Target Costing

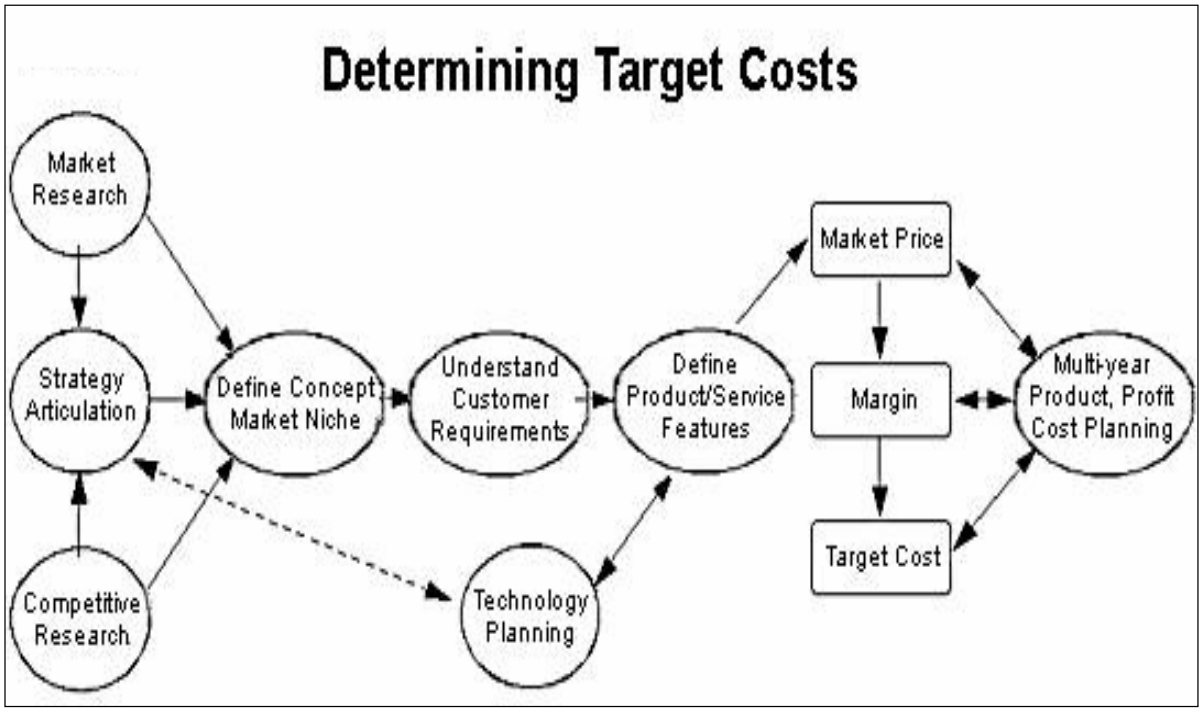
Traditionally, manufacturers would make use of the "cost-plus" approach to estimate the product price[73]. This is done by first conducting market research to determine its market segment's preferences and hence its product's characteristics that will meet the consumer's needs[74]. This is followed by the design of the product and subsequently the manufacturing process is determined. Vendors will then be contacted to identify the total costs of the components as required by the design and engineering departments. Finally, cost components are added up and a selling price is set based on the costs. If management and the marketing department think that the price and cost are too high, the product design and engineering process will be repeated until a suitable cost is attained, after which, production will begin[75.] This is known as "cost plus" method.

Conversely, target costing derives an "allowable" product cost by first carrying out market research to predict what the market division is willing to pay for the required product with definite features[76]. Subtracting the desired profit margin set by the management from the predicted selling price derives an implied maximum per-unit target cost[77]. This target cost is then compared to an expected product cost and if it is higher than the expected product cost, the company has several options.
One is to lower costs; the product design and/or the engineering process can be changed. All the members of the planning team will engage in this process.[78] They have the task of investigating the need for cost adjustment for each component. These members will work hand in hand, instead of going through various departments sequentially to reduce cost. When the target cost is reached, standards can be set and the product will then enter the manufacturing phase.
The other option might be that, the organisation may consider accepting a less-than-desired profit margin. This will depend on the numerical difference between expected cost and target cost. If the target cost is slightly highly than expected cost, a slightly lower profit margin will be sufficient.[79] However, if the difference

[72] Cooper et al 1997, Ansari and Bell 1997, Tani, 1995
[73] Yee 1994
[74] Ansari et al 1996
[75] Kroll 1997
[76] Ansari et al 1997
[77] Cooper et al 1997
[78] Yee 1994
[79] Cooper et al, 1997

is too great and there is no way for the company to earn the profit margin that it desires, its third alternative would be to abandon that particular product. A summary of this phenomenon can be seen on appendix 1. Figure 3 below show the determining of target cost

Figure 4: Determining target costing



Source: Vision Magazine July 1998, Target costing- strategic business methodology.

From the above diagram therefore, the use of target costing forces managers to change their way of thinking with regards to the relationship between cost, selling price, and profitability. The traditional mindset has been that a product is developed, production cost is identified and measured, a selling price is set, and either profits or losses will result. However, in target costing, a product is developed, a selling price and desired profit are determined, and maximum allowable costs are derived. This makes costs dependent on selling prices instead of selling prices dependent on costs. As a result, the incurrence of all costs must be justified which leads to the elimination of unnecessary costs without compromising the product quality.

The following summary gives vivid characteristics of target costing

1. Target costing is applied in the development and design stage and it is different from the standard cost control system which is applied in the production stage

2. Target costing is not a management method for cost control in a traditional sense, but it is one, which intends to reduce cost.
3. In the target costing process, many methods of management science are used, because the managerial objective of target costing includes the techniques of development and product design.
4. The co-operation of many departments is needed in the execution of target costing.
5. Target costing is more suitable to multi-product, small production run firms than in the few-product large production run firm.

3.8 Impact of Target Costing on Western firms.

The imbalance in regional business success of recent times has called for increased research into cost management. The continuous success of Japanese firms as opposed to Western firms has shifted the balance of business to the Japanese. Their success seems to lie in their costing system. This has, therefore, encouraged the study of the Japanese costing system.[80] This has been made easier by the increasing release of translated materials from Japanese to English.[81]

I. Evolution of Western cost management system and stagnation

Typically, Western strategic cost management systems developed around 1925 have persisted in their companies until today. These systems such as cost account for labour, material and overhead, budget for cash, income, and capital; flexible budgets, sales forecasts, standard cost, variance analysis, transfer prices and divisional performance measures are some of those systems largely in use[82]. These measures were developed and have evolved to serve the informational, control and projection or planning need of managers in an increasingly complex market place. However, this pace of innovation seemed to have stopped in the mid 1920's[83]. There was probably a lack of incentive for continuous innovation because cost management systems developed by Dupont and General Motors where satisfactory for many firms until today. With the absence of innovation in organisational form however, the diversity of products caused by varying consumer taste led to the complexity of manufacturing processes that continued to increase in the decade after 1920's. Thus, the need for accurate product cost and effective process control should have imposed new demands on organisation's cost management and management accounting system. Yet this management

[80] Financial Times 1991, p.12
[81] Ansari et al, 1997
[82] Kaplan et al, 1987
[83] Ibid

accounting system after the 1920's did not keep pace with the improvement in corporations' product and process technologies. The lag eventually led to today's problems characterised by distorted product cost, delayed and overly aggregated process control information, and short performance measures that do not reflect the increase or decreases in the organisations economic position among others[84].

Partly, this stagnation can be attributed to the heavy reliance of the accounting systems of the 1920's and stability of economies characterised by increased demand and faster economic growth. There was also more widespread public ownership of corporations' securities. Thus the demand for periodic, audited financial statements, verifiable and realised financial transactions, when measuring cost of goods sold and valuing inventory, meant that auditors insists on product cost, based on the historical transactions recorded in the firms' ledger account. Among other such related problems in the 20th century, managers did not yield the design of their cost management system such that they could have maintained a separate system for managerial and external reporting purposes. Strategy implementation became bogged down by these irregularities.

In leading Japanese businesses product functionality and quality are taken as a given and it is cost reduction that drives strategy implementation[85]. They differentiate between market driven and cost reduction common in Japan, and the process driven cost reduction common in the West. The market driven approach takes external factors and uses them to drive internal behaviour. The process driven approach is much more internally focused and generated. The Japanese cost reduction literature focuses upon target and Kaizan costing as their best practice while the West are more of Business Process re-engineering (BPR), downsizing, and variant of activity based costing[86]. Hence the differences. Thus one may ask the question – how has the Japanese costing system influenced Western businesses?

II. Desire for cost management change – the Japanese influence:

Japan a tiny Pacific island, is the world's second strongest economy after the USA. Its industries rely heavily on the export of finished or semi-finished products to the international market for survival. They also rely on the importation of large amount of raw – materials for production. They have a very small land

[84] Ibid
[85] Alf et al 1999
[86] Ibid

mass and limited resource which must be carefully managed. In a bid to "look for more", Japan ran into trouble in the 1930s when she wanted to forcefully expand into mainland China and other pacific countries so as to benefit from those resources she did not have. After the Second World War, she realised that she would never succeed through "primitive means" such as war to manage the future and to invest in "high thinking" and research instead. Strategic management economics became the solution to their export sector. With the help of the Americans who opened their doors to Japanese business, they gathered not only the American technology but also some aspects of systems developed by General Electric and General Motors. They modified some of these systems to become today's target costing system, which has helped them, even during periods of international crisis[87]. According to research more than 60% of 180 listed Japanese manufacturing firms in 1991 used target costing in their cost management system[88.] Research also found that with in eleven management accounting practices used by Japanese companies, 209 Japanese manufacturing companies took Target Costing in particular seriously[89]. Today, Western firms are gradually introducing target costing to discipline their product development processes as they are currently facing a similar market and environment as the Japanese firms did many years before[90.]

A. The Dutch application

Hence, according to research about 59.4% of 32 sampled Dutch listed manufacturing firms use target costing or a related cost management method[91]. These systems are called a variety of names and are used across industries, particularly assembly. They were adopted during times of heighten competition and increase contingency.

B. The British application

In the UK there is the talk of "Japanization"[92] of British industry, which has become a subject of interest in the UK, not only to management practitioners but also to academics in various fields since the 1980's. As a result of the interest in Japanese management practices and the range of ideas on the extent to which such practices might be imported to Britain, a debate on "Japanization" has been stimulated across a range of management and production areas. Researchers

[87] Beechler et al 1998
[88] Tani et al 1994
[89] Dekker et al 2003
[90] Dekker et al 2003
[91] Dekker et al 2003
[92] Shimizu et al1999

attribute Japanization to the desire of British industry to emulate the record of economic prosperity experienced by Japanese companies since the 1960's relative to the downturn in fortune of their British counterparts. To put it simply, Japanization means British companies attempt to adopt Japanese management practices believing that the same approaches will lead to improved efficiency and competitiveness or will at least change the attitudes of managers and contribute to the same positive outcomes. In this sense Japan is being promoted as an exemplary model.

However, a survey of British car manufacturers by Davies et al. (1991)[93], reported that in the previous five years "significant revisions to price and cost-management systems were cited by 68 per cent of respondents." The survey reported that many of these revisions "were traditional rather than "new" "cost-management techniques". The authors added that introducing advanced price and cost-management techniques might not be the best improvement for many producers. They were concerned that developing basic systems would not give a company the insights it requires, for if traditional practices provided what was needed, then the essential criticism levelled against these systems would not be widespread. But the impact of target costing could be observed as car manufacturers are paying greater attention to a whole range of improvements in quality, processes, inventory holdings, functionality and workforce policies basic components of target costing.

C. Other applicants

Other adopters are increasingly German and American firms. In Germany firms like Mercedes Benz, Daimler Chrysler, and Caterpillar etc.,[94] have also been identified as adopters of target costing.

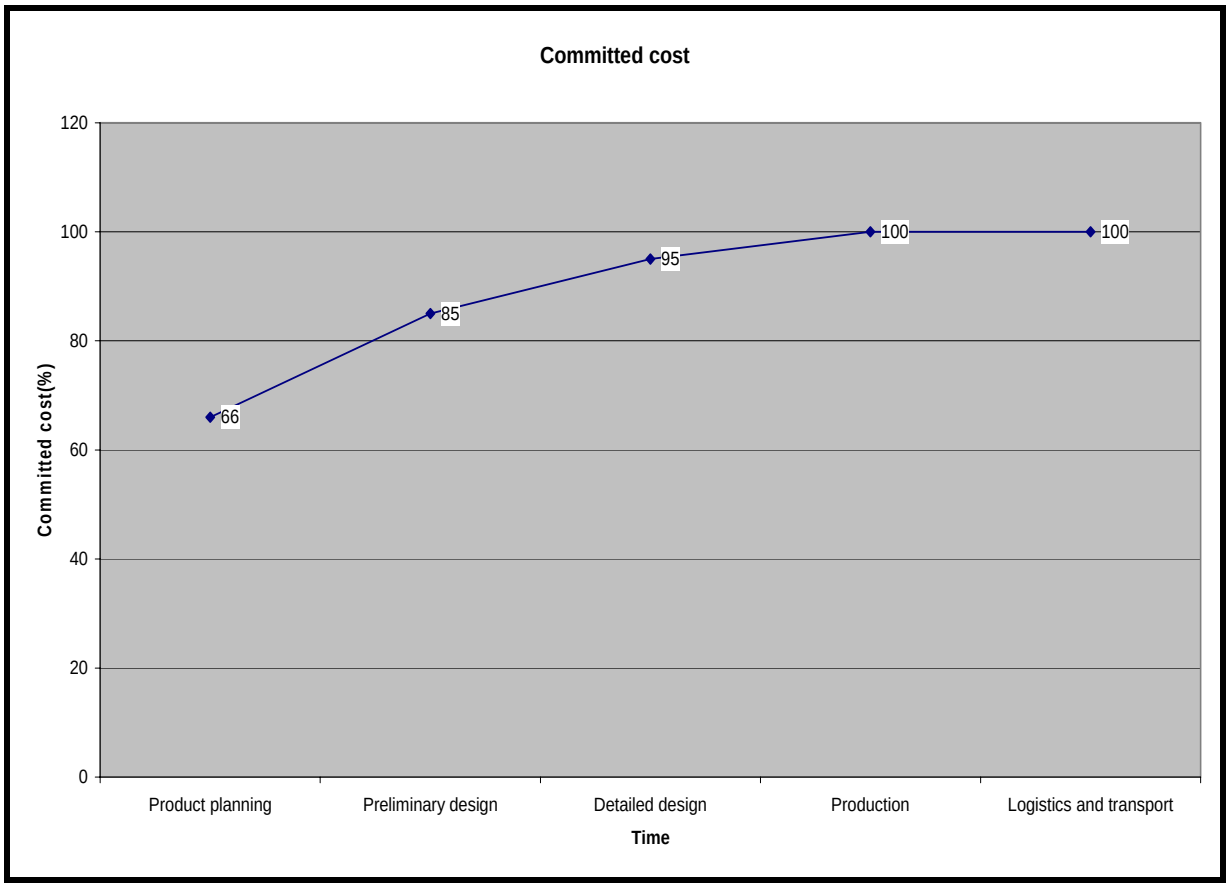
3.9 Importance of Target Costing to Western firms.

From the above analysis, there is the general contention that target costing is very important for today's business environment. Target costing therefore guarantees high quality products at competitive prices, at favourable market time. As it focuses on long term cost management efforts, target costing is considered to be a strategic cost management system[95]. As Western companies are trying to diversify their cost management strategies, the following point can explain why such a system would be preferable today.

[93] Ogenyi, 1997
[94] Ansai et al 1997
[95] Chenhall et al1998

It is very important in the planning stage of product development where up to 70 to 80 % of the production cost can be determined[96]. Through this the market price can be determined (market orientation)[97]. It becomes easy then to plan strategies as shown on figure 2 below.

Fig 2. Committed cost in target costing



Source: Cooper et al 1997, page 73

i. Most Western firms are technology driven with product characteristics such as shorter product life cycle, huge forward investment cost, high competition, functionality etc. Tying to the theory, therefore, they fall in the category of products that require target costing as their strategic guide.

ii. Through the use of target costing, factions are easily coordinated as target cost coordinates the activities of product designers.[98] When functions are well coordinated they become cheaper and easy to manage. Time and cost are well

[96] Banham 2000
[97] Dekker H 2003
[98] Dekker 2003

assessed to meet product requirements as ascribed by the market conditions. Some costs are really incurred due to slow and costly coordination.

iii. Consumers' taste today is very different from that of the 50s and 60s and this complexity is changing every day. Using a traditional costing system to plan production and supply to meet this change has been a great delimit to Western firms. The traditional "cost plus" system has proven hard to match consumer taste, product functionality and quality at the right market time within current velocity of change. The target costing process on the other best suits such a situation as consumers interests are put first and production processes designed to give room for continuous improvement and rapid response to consumer demand.[99]

3.10 Impact of target costing philosophy and evolution on Sweden:

In Sweden not much has been done to investigate the effect of target costing and the Japanese management approach in their corporate world. Accordingly some recent Swedish cost management studies mention the great use of the traditional full costing methods, which is based on standard costing. However, this research also points out that there is change on the horizon where these traditional systems will soon loose their dominant role. The greatest difference is that changes to or modifications to more modern cost management methods are mostly attained through improving the old methods rather than adopting new techniques all together.[100] But with many Swedish firms feeling the stress of global competition, alternative cost management has to be considered. Some cases in point are Ericsson, ABB, and SAS where the stress is most intense. With continuous losses, it is noted that these firms have been previously profitable but not competitive. High cost has been blamed for this failure. Little has been done to investigate cost management change in Sweden in recent times but there are signs that something is happening that can be seen as a "quest for change". However, the most common solution to this stress has been the migration of some firms or some of their units abroad while others have moved their headquarters out of the country. Others yet have just kept on laying-off workers in a bid to weather the high cost.

Sweden has similar characteristics to Japan in that it also has to "export or die". There is a great cluster of global companies for such a small country[101] and a very small home market. They also rely on huge imports of raw materials, power and suffer the effect of a harsh climate[102]. Despite cultural differences, there are also

[99] Ewert et al 1999
[100] Ax et al 1994
[101] Ask et al 1994.
[102] Zemke, 1988

some similarities in the management systems of Sweden and Japan. Swedish producers have a very strong passion for cost limits of competitive products and collective work style just like Japanese. At this point one should expect some relationship between the Japanese and the Sweden cost management systems.

Some forms of non-traditional Swedish costing methods have been reportedly identified in some companies. In a research conducted in 1994, ideas such as target costing, strategic costing and strategic cost management have been talked about[103] Companies like Volvo Car Corporation have used this system to plan the production of their products such as the 2002 version of the SUV cars while the Lidköping machine and tools, a subsidiary of SKF used the system for its product and profit planning as well.[104] However, a suggestion might be that more Swedish firms could be using target costing or some form of target costing without using the name or even realising they are doing it. Research shows that costing techniques with principles similar to activity based costing are used by some Swedish firms without them realising.[105] But cost management approaches such as target costing have yet to receive wide spread attention among academic practitioners and managers[106]. Given the position of most Swedish export industries, it is hoped more firms will want to learn more about the target costing technique. After all, those who use them like SKF, Volvo cars and Scania are successful and have been posting profits. There is more about the Swedish approach to target costing in section 3.

3.10 Weakness of the Target costing system

a. Despite all the above-mentioned importance associated with target costing today, some weaknesses have been identified with its use. Designed as a long-range technique, continuous use creates problems. With a good control system, Kaizen efforts throughout a company inevitably lead to fewer opportunities to cut cost[107].

b. A great weakness in target costing is that it places undue pressure on the labour force. Hitting the target cost with the reducing time schedule is becoming quite impossible[108]. Cost targets derived from the profit plan are extremely demanding. Hence if target costing functions are integrated sufficiently at

[103] Ask et al, 1994
[104] Nina, 1998
[105] Alnesting et al 1996
[106] Ask et al 1994 footnote pg. 21
[107] Tanaka 1993
[108] Kato 1993

different stages in a manufacturing company, the results of one can cancel out the other[109].

c. Lots of literature has glorified the successful history of target costing. However, based on Japanese research, one could still observe problems emerging from users. A simple question to ask is why do some companies out perform others in the same industry even though all of them are using the system.[110] This attempts therefore to explain that target costing alone might not provide the long-term strategy required by a firm to succeed. While the literature is very explicit in its approach, practical attainment of the intended objective might be far from the point.[111]

d. Beyond a certain point, comprehensiveness begins correlating positively with complexity and negatively with measurement precision. A system becomes more difficult to understand as its structures incorporate more variables and measurements.[112] The long-term continuity of cost reduction techniques suffers from the usual difficulties of predictability beyond one year. Waiting for more reliable predictions can cause such problems as acting too late to respond to market demands.[113]As the uncertainty of future demand increases, target costing becomes less effective. In an uncertain environment, target cost prices sales volume and profit appear as unclear notions of future objectives rather than concrete figures until more reliable economic forecasts become available[114].

e. Connecting target costing to normal profits is logical when the company operates profitably near normal levels. However, when operating beyond normal profits, especially in a series of losses, basing target costing on normal profits can lead to unrealistic goals[115]. During this time top management often welcomes any rational cost reduction methods.

In a comprehensive, integrated, and dynamic system concerned with long term cost reduction targets, secrecy often becomes an essential constraint. Some competitors would pay dearly to acquire a manufacturer's target cost development for the next period for a major product[116].

Whatever the above-mentioned weaknesses are, target costing has still been acclaimed more than most other modern costing methods. Of course there can

[109] Ibid
[110] Kato1998
[111] Ibid
[112] Bayou et al 1998
[113] Ibid
[114] Ibid
[115] Ibid
[116] Ibid

never be any management method without some weakness. Analysts see these weaknesses with target costing as "easy- to- correct" weaknesses compared with other costing methods. This makes target costing still attractive despite the above-mentioned weaknesses.

Chapter 4, Fads and Management concepts.

In this section I attempt to give a description of the concept of "fads" and I try to look at it in relation to modern business dynamics and academic discussion. It is true that lots of ideas have emerged today that attempt to assist company management to plan strategies and effect decisions. Some of these ideas or new concepts have been not as rewarding as would have been expected by adopters. As will be better discussed below, target costing falls in this group of new ideas with the main difference being that it has been existing for long in Japan and has just been recently realised by the west. Therefore it is spreading very fast. Since much is being talked about it today, it might be considered a fad, especially if some firms have attempted its' implementation and failed.

4.1 What are fads and what do they do?

A Fad, according to the American Heritage Dictionary, is a "fashion that is taken up with great enthusiasm for a brief period of time." The reason is that for an idea to be "fad less" it has to go through the entire trail and testing time period. Often, the time is not invested because the initiative did not have the staying power to begin with it or the major idea behind the concept was too easy for managers to believe in.[117] Just about every popular management tool in recent years such as reengineering, total quality management, emotional intelligence, virtual teams, the balanced scorecard, and so on has been deemed a fad, wrongly or rightly, by someone in the corporate world[118]

4.2. Assessing target costing as a fad.

Fads often fail to deliver on their promises, a factor that contributes to their short life cycles and rapid decline. The nature of popularised management approaches or fads is that they attract two kinds of people – those that have a keen interest in management issues, and have the time, inclination and commitment to understand

[117] Kroll 1997
[118] Caudron 2002

the techniques and approaches in their entirety. These are the people that can actually apply the approach and prosper[119]. But the second type of person is attracted to the management approach because it is popular, or, on the surface, it makes sense. And, almost all fads have superficial appeal[120]. These persons gather up enough of the key words and sound intelligent, but when it comes to making the approach work, they lack the depth of understanding to be able to apply it to a real workplace.

Possibilities that firms may take target costing for fads are that:

1. Many companies mistake some elements of target costing systems such as affordable design criteria, design to cost, or design to manufacturability, for target costing. They fail to appreciate the breadth of target costing as a process for integrating strategic planning with profits and cost planning. This lulls many firms into thinking that they have arrived rather than that they are just beginning the journey. So when it fails they attribute it to be a fad.

2. Target costing is a relatively new and largely undocumented technique in English-language literature. The writing that exists fails to convey the strategic significance of target costing as a competitive weapon for today's global market place thereby seen as a fad.

3. The basic ideas of target costing are so simple and so intuitive that there is a tendency to underestimate their power or scope. Many companies even see target costing as another cost estimator or a reduction method like budgeting, regression analysis or learning curve application. They don't take it seriously as a useful tool.

4. Target costing requires cross-functional teams to take ownership and responsibility for costs. This key attributes typically is not a common part of today's engineering and marketing culture. Most engineers and sales people regard cost management to be a finance function. Finance, for its part, must provide cost data that supports the type of analysis that target cost system requires. The talk of target costing then becomes confusing and it is then placed under the fad category.

In order not to hypothesise on the fad theory and to lay credence to the importance of fads in modern learning, it is important that managers also know that management fads provoke thought and discussion. Management fads usually have substance and those who take the time to explore the possibilities usually come away from the experience as better managers. Those who do not take the time to

[119] Bacal and associates, 2003
[120] Ibid

learn, but adopt a management approach on only a superficial understanding of the techniques, become worse managers.

Second, management fads help produce change in the workplace, by encouraging organisations to question their existing approaches, and re-align them to fit the changing world. They highlight the idea that we *can* and *should* be looking for better ways to do things, rather than ride on management orthodoxy that is past its time.

Third, management fads create excitement. Since the proponents of management fads are almost always powerful speakers and writers, many who come in contact with them come away energise and motivated by the prospects of better ways of doing things.

Finally, if management techniques did not become popularised, most of us would never hear of them, since they would end up described only in journals on management with limited readership. Target costing should then be treated as a new and growing management technique whereby effective adoptive solution should call for its implementation rather than let it be seen as a fad.

4.3 Defining "target costing".

To provide a jigsaw definition of target costing is difficult because the Japanese companies where the system had been greatly used as a cost strategy vary and each one has its own unique approach to defining it. Common to most definitions is a process founded on a competitive market environment whereby market prices drive cost and investment decisions, cost planning, management and reduction occurring early in the design and development process, and cross functional team involvement. Below are some definitions of the target costing from different observations and viewpoints.

1. **Monden (2000)** defines target costing as the system to support the cost reduction process in the developing and designing phase of an entirely new model, a full model change or a minor model change. Target costing is called "Genkakikaku" in Japanese.

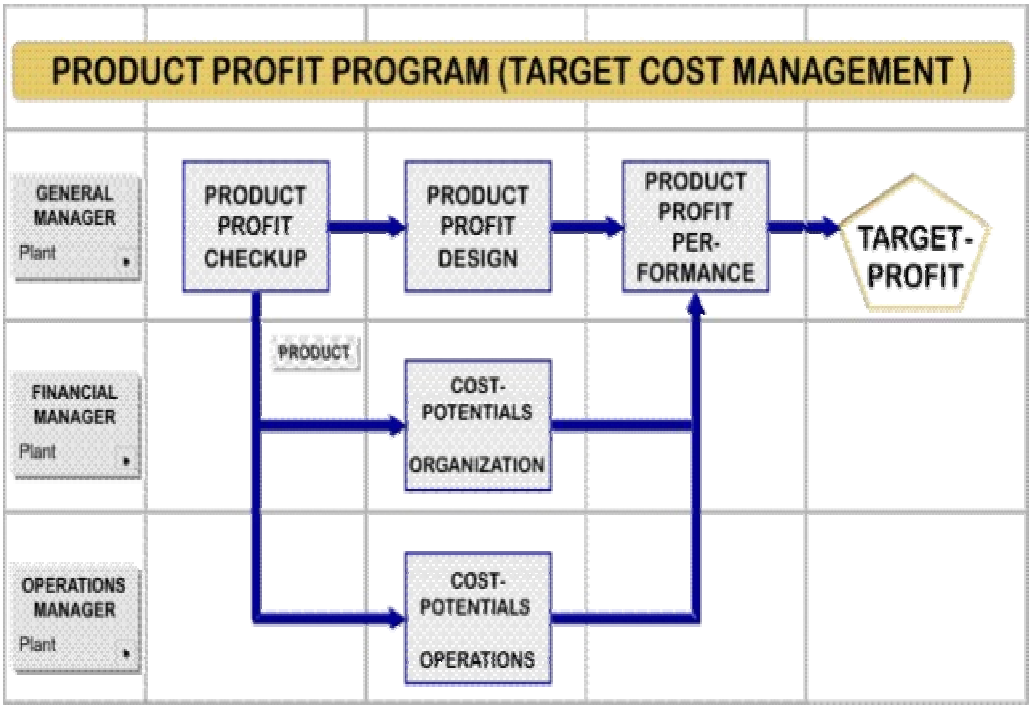
2. **Ansari et al (1999),** defines target costing as a system of profit planning and cost management that is price led, customer focused, designed centred, and cross-functional. Target costing initiates cost management at the earliest stage of product development and apply it through the product cycle by actively involving the entire value chain.

3. **Bonzemba and Okona (1998)** defines target costing as a strategic cost management approaches which is an "open system" which links external and

internal factors from the inception…the key success factors (cost, quality, innovation, and time) of a product are carried out mainly at the development and design phases

4. **Robin cooper et al (1997)** Target costing is a structured approach to determine the life cycle cost at which a proposed product with specified functionality and quality must be produced to generate the desired level of profitability over its life cycle when sold at its anticipated selling price. Therefore target costing is a "feed forward" system unlike the cost plus system, which is a "feed backward" system[121].

Figure 3 Product profit program-target costing



Source: Dr. Jörg Tautrim Engineering Vor den Mühlen 19 D-66701 Beckingen, vpk emgineering.de

4.4 Basis of target costing

There are six major principles that build the foundation of target costing[122]. Most costs are determined by early product and process design decisions. Trying to reduce costs once a product reaches production is very difficult. Therefore, focusing on costs during the early design stages to ensure that the target profit and cost can be realised is critical. That means product designs, material choices, specifications and tolerances, buy versus make decisions, process designs and investment decisions need to be thought through before product design and

[121]Cooper et al, 1997, Ansari et al, 1997
[122] Ansari et al 1997

development decisions are finalised. The foundation of target costing therefore will look as follows.

Price led costing: By this principle, target-costing system sets cost targets by subtracting the required profits margin from the competitive market price.

Customer focus: This focuses on customer requirements for quality, cost, and times, which are simultaneously incorporated in product and process decisions and guide cost analysis. The value (to the customer) of any features and functionality built into the product must be greater than the cost of providing those features and functionality[123].

Focus on design process: Within this context cost control is emphasised at the product and process design stage. Therefore, engineering changes must occur before production begins, resulting in lower costs and reduced "time-to-market" for new products[124].

Cross-functional teams: This relates to the facts that cross-functional team of producers and products and, members of the organisation are responsible for the whole process from inception, testing to finish. Cross functional team here refers to the interaction of the various departments, for example, the financial analyst who projects demand for supplies and sales, and interacts with designers to agree on a conclusive target cost.

Life cycle cost reduction: Total life cycle cost is minimised for both producers and customers. Life cycle cost includes purchase price, operating cost, maintenance and distribution cost[125]. Most products today are required to have a shorter life cycle in order to remain competitive.

Value chain involvement: This refers to the involvement of all the members of the value chain. All members in the supply, distribution, service providers and customers are included in the target costing process[126]. The value chain Integration (VCI) enables a coordinated, collective approach to resolving industry-level issues. VCI also facilitates opportunities between member companies to define a balanced set of supplier priorities, develop industry-unique solutions, and improve communications throughout the supply chain.

4.5 Establishing target costing:

In establishing target costing some major processes have been identified as vital. They are explained below.

[123] Ansari et al 2003
[124] Ibid
[125] Ansari et al 2003
[126] Ansari et al 2003

I. ***Market research:*** This helps provide information about customer needs or want that might not be recognised during product conception[127]. A market niche can be a best way to describe a core market such as high computer users, or fashion inclined people etc,.

II. ***Customer or market niche***: To study and understand the market core areas and competitors information so as to know how to attract them to buy a product. Factors may include their ages, family type and sizes and their incomes level etc,.

III. ***Competitive analysis:*** To understand the competitors and their products in the market and how they evaluate the products. This might give the company a glimpse of how their products might be received when launched.

IV. ***Customer requirement:*** this relates to what specifically customers want in their product specification. Initial product concept is set up to gather customers input so as to upgrade the product to the most satisfied level.

V. ***Market price:*** this to establish a price that is acceptable to customers and onewhich is capable of withstanding competition.[128] This can be done in several ways as discussed latter in this report.

VI. ***Required profits:*** This refers to the target profit that the product will yield if sold at a particular target price, usually expressed in returns on sales ratio (ROS). This ROS must take into account the long-term profit plans and the return on assets (ROA) for the company.

4.6 Target costing operation/ stages in target costing

Product development can be described as a continuous cycle divided into four phases; product planning, basic design, detailed design and process design[129]. Taken as a whole the four phases involve the determination of a target cost with the cycle being repeated in order to ensure attainment of the target cost.

1. In the product-planning phase, rough blue prints are drawn up based on a rough concept of the product under consideration. These blue prints are based on the product's expected performance, size, weight, shape, colour and a rough estimate of the target cost is made. This phase also assists in determining the new product's lead-time as well as helps plan the expected operational activities that will be needed.

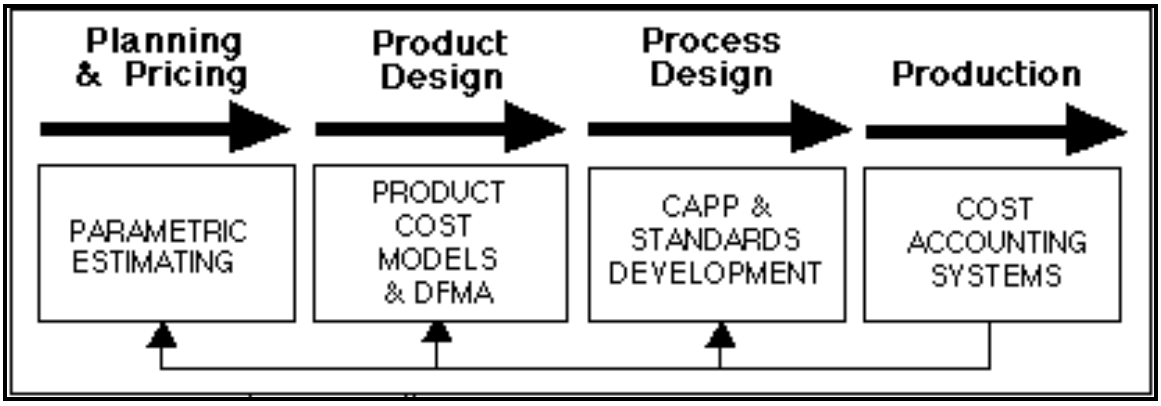
[127] Ibid
[128] Shimizu et al 1999
[129] Shimizu et al 1999

2. In the basic design phase additional basic plans for the product are prepared, including design ideas and potential cost reductions that can be achieved in due course.

3. The above stage 2 sets the basis for the creation of the components of the product at the detailed design phase. Blueprints for each component part are drawn up and comparisons made with the design of production, which is important for achieving cost reductions.

4. In the fourth phase of process design, blueprints are constructed for assembly of the components into the final product. The cycle is effectively repeated and any refinements necessary are made at each phase in order to move closer towards the attainment of the target cost.

Fig 4 Target costing operations/ stages



Source: DRM Associates, NDP solutions

4.7 Factors influencing Target Costing

Target costing is a very progressive cost management strategy that can bring long-term benefits to a firm if properly applied. But it is not in every case that it can be applied. Hence target costing, as the ultimate strategy, is worthy when applied in certain conditions. For this reason research shows that, it is best applied as follows; Market driven costing, product level and component level costing[130].

1. **Market driven factors:**

This refers to costing strategy that is influenced by the market forces. The most influential forces here are the power of competition and the nature of the customer.[131]

[130] Cooper et al 1997
[131] Ibid

a) Power of competition:

This determines the amount of attention the firm pays to the competitive offerings of target costing and the volatility of the "survival triplet". The survival triplet is identified as the strategic boundary for the target-costing firm to operate (see confrontation theory above). In such conditions, where the manager understands the survival triplet well, the benefits of target costing become realistic[132].

i. Nature of customer:

The nature of the customer with such qualities as sophistication, changes in requirements or taste and their degree of understanding their future product requirement will influence the use of target costing. From research, it is believed that these features will determine the benefits a firm will get from using target costing since they deal with the width, rate of change of location and ease of predicting the location of survival zones.

An example of such situation is the sophistication of the mobile phone industry where intense competition keeps on tightening the survival zone. Those who cannot adjust to consumer taste are being pushed to the rear of the industry. Therefore, it is suggested that target costing become really valuable where there is increased consumer sophistication. Products must be designed to meet consumer requirement as closely as possible[133].

ii. Rate of change in customer requirements:

The rate at which customer requirement changes, is another factor influencing the use of target costing. This is because it affects the structure of the survival zone as time passes and makes the zone change regularly. It is difficult to predict how to launch a new product under such circumstances. This inability to determine the centre point of the survival zone creates uncertainty and may warrant the use of target costing. In the motor industry, for example, changes vary between cars and heavy machines.

With automobiles, where sales is made directly to the consumer, the rate of change in customer expectations is relatively high and hence a sample of consumer preferences are made on a regular basis during the design process.

In contrast, when buyers are commercial ones and not direct users, there is a high degree of sophistication. They deal with products like bulldozers, excavators etc,. As they are well aware of their preferences, which they pass out to producers,

[132] Bayou et al, 1998
[133] Cooper et al 1997, Hibberts et al 2003

consumer requirements here change less[134]. Toyota, Volvo cars or Nissan spends more energy on target costing than Komatsu, Caterpillar or Volvo equipment. Therefore it is hypothesised that target costing is more beneficial in environments where consumer preferences change rapidly.

iii. Extent to which customers understand their future product requirements.

How much consumers understand of the future requirements of a product will determine the amount of energy and whether to apply target costing process or not. As the degree of understanding increases, it becomes more beneficial to rely upon adopted customer preferences to determine location of the survival point. Likewise, when consumers have less knowledge of their future product requirements, firms paying much attention to customers' risk, might launch products that fail because they are outside the survival zone[135]. For example, Volvo truck may rely on its customers to tell her where to improve on design and how much. Here target costing may be beneficial as the customer is very specific but in electronics such as mobile phones, consumers have very little knowledge of their future requirements. Therefore, it is easy for a firm to fail if the product is launched with attributes that don't appeal to the customer. Target costing, therefore, is less beneficial in environments were there is difficulty in predicting the next location of the survival zone and vice versa[136].

2. Product level target costing

This refers to structuring of cost management at the product level and it is largely influenced by product strategy and the characteristics of the product. These factors determine the current and historic future of the product.

a. Product strategy:

Firms with product strategy that create lots of uncertainty, such as consumer reaction to that product, will be more likely to use target costing in its production than otherwise. Production characteristics therefore will include issues such as number of products in the line, those that provide horizontal or vertical differentiation, the frequency of redesign and the degree of innovation, etc. Horizontal differentiated products are those sold at same price but deliver at different bundles and functionalities. Vertical differentiation refers to how products differ by degree of functionality and selling price.[137]

[134] Cooper et al 1997, Banham 2000.
[135] Cooper et al 1997
[136] Ibid
[137] Ibid

Products that are frequently redesigned are those where producers aim to achieve advancements in technology and increase in functionality e.g. mobile phones with radios, cameras, gps facilities, etc,. Therefore, the higher the rate of new product introduction, the greater the benefit derived from target costing.

Target costing has increased benefits in areas where the degree of innovation is relatively low and decrease benefits where it is high. Where innovation is low, the target costing system will rely more heavily upon historic information than in areas where the rate of innovation is higher.[138]

a) Characteristics of product:

This aspect encompasses product complexity, magnitude of up-front investment and duration of product development processes.

Product complexity relates to components that make up the product where, it captures a number of distinct inputs. Some of the components may be difficult to obtain, as well as the technology required to produce it. Target costing may become more important in such a situation because of high product complexity than otherwise. This is due to the high degree of cost associated ranging from the design to manufacturing stage[139]. Also it becomes difficult to manage the product design process and ensure that component level cost adds up to product level target cost[140]. Therefore, the more the complexity, the more the cost at component level and hence the need to target manage it. Research therefore postulates that target costing becomes more beneficial with increased product complexity[141].

Size of up front investment influences target costing in that the magnitude of upfront will influence the attitude of the firm towards target costing. This is because up-front investment will determine the rate at which products will be launched. It may decrease if the firm wants to adjust to risk. Consequently, firms that produce products that have high upfront investment will develop a small range of product each carefully design to satisfy market needs[142].

Duration of product development refers to the time it will take for a new product to be developed, as it will explain the benefits to be gained from the use of target costing. As the duration of the design gets longer, the probability that the market condition that used to validate this design might change is more possible[143]. Products with long development cycle such as automobiles, heavy machinery etc,

[138] Cooper et al 1997, Ansari et al 1997
[139] ibid
[140] ibid
[141] Cooper et al 1997, Monden 2000 and Kato1998
[142] Cooper et al 1997, Monden 2000 and Bayou et al 1998
[143] Cooper et al 1997

target – costing system need to have several stages to review market conditions unlike small consumer products that have a shorter market review period. As the length of product review cycle increases therefore, it becomes better to use target-costing methods since there is a very long tine between design and launch.

3. Component level target costing.

This portion of the factors influencing target costing deals with the costs associated with components that make up the product. It is important to know the cost of the components and cost charged by suppliers so as to project a long-term performance of the whole product when launched into the market. Therefore the strength of the suppliers is vital here. Firms that rely on imported raw materials or sourcing of component production must guard against the cost associated to such activity. Consequently, a very flexible supplier based strategy is necessary. This is synonymous to the degree of horizontal integration, power over major suppliers, and nature of suppliers' relations[144].

a) **Degree of horizontal integration**: As will be seen later, lean production, which is strongly associated with target costing, encourages large external supply of inputs such as raw materials and components. This makes it imperative those targets cost producers have efficient relations with suppliers to ensure a regular supply. Research that since greater percentages of products are externally sourced, there is a great potential to save because target cost can be developed for each of the externally acquired components and used it to create pressure on supplier to reduce their prices. This is in contrast to vertical integration where it is difficult to pressure each division to reduce prices.[145] Also, there might be greater returns from focusing on supplier's creativity. There will be motivation to provide a higher percentage of products as well as design. Such examples are seen even in Volvo where suppliers are asked to design their products instead of providing individual components.[146]Therefore, lean producers or firms operating with horizontal integration will reap benefits from target costing.

b) Power over major suppliers will determine how much energy will be used to determine purchase price of components and hence influence the use of target costing. When buyer power is high, it is considered that much energy will be used to develop component level target cost[147]. On the other hand, where

[144] Ibid
[145] Cooper et al 1997, Bayou 1998 and Monden 2000
[146] Volvo example is drawn from a classroom lectures that was given by a Volvo official in May 2003
[147] Cooper et al 1997

buyer's power is low, the firms will use less energy to develop target cost for purchased components. Therefore, it is postulated that the more power the firm has over its suppliers, the more benefit it can derive from target costing. This is because it will use its position to put cost pressure on the suppliers to reduce prices and vice versa.[148]

c) Nature of supplier relations also determines the use of target costing in that when firms become more co-operative target costing also becomes more beneficial especially at the component level. In the heart of this rich co-operation lies the potential of the firms to combine design initiative and other means to collectively reduce cost. Co-operative relation between suppliers and users will determine the use of Target costing.

4.8 Setting the Target cost.

The main theme in the whole target costing practice is "*what should be the new product cost?"* It is not "what does it cost?" Therefore, when the target sales price is established based on market research, the desired profits is subtracted to yield the *allowable cost*. This allowable cost is the management's top dream and it is also very hard to attain, usually impossible in the short run.[149] This allowable cost is computed thus:

Target sales price - target profits = allowable cost.

Or

Market driven selling price – desired profit = target cost.

The desired profit is set based on the company's desired return on sales (ROS)[iii], rather than return on investment (ROI)[iv]. Researchers identify that using ROS is reasonable for technical and strategic reasons.

The technical reason is that associated with the fast changing market of today where manufacturers need a wide variety of products in low volume to survive. It is impossible to use ROI to calculate the profitability of each of these products[150].

For strategic reasons, ROS is a better option in that to implement long-term strategies manufacturers need to focus on the profitability of portfolios of related products and the role played by each product in the product group. Through the ROS method the allowable cost is compared to the estimated cost, which is based on the current standard materials, labour and overhead cost. Meanwhile serious

[148] Ibid
[149] Yee, 1994, Monden 2000
[150] Yee 1994

studies are done on competitors' products and position. Then when all is assessed, the gap between allowable costs and estimated cost is reviewed from various perspectives. The target cost is then established as an attainable target, which will motivate all personnel to achieve. Now the struggle begins[151].

4.9 Setting target price

The main idea behind target cost system is to minimise the cost of the ownership and not just the price a customer pays at a time or purchase. Cost of ownership includes invoice cost plus transportation, repairs and maintenance, services and support and disposal cost[152]. The cost associated with the cost of ownership must be considered at the time the initial purchase is set for a product. Within this context therefore, unlike the old cost plus method, setting prices in a target-costing regime takes into consideration the following:

a) Consumer need, want or taste. This may refer to the physical and related function of the product that will influence the price.

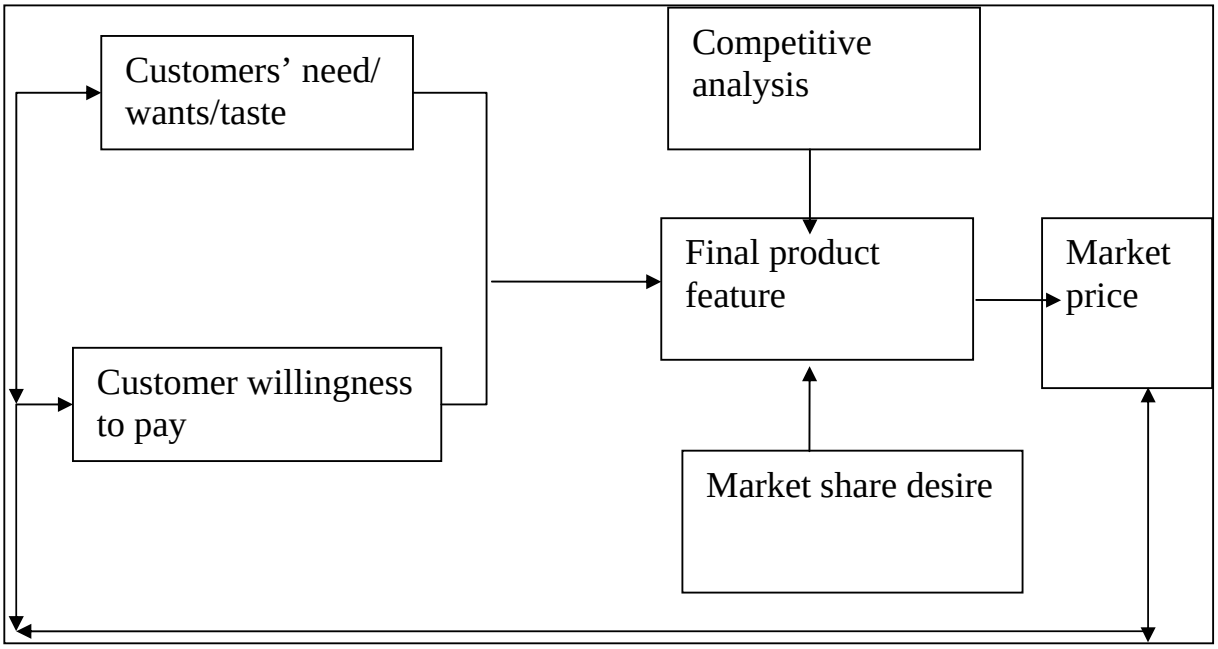
b) Satisfactory price. This is the price consumers are willing to pay for a desired function and feature.

c) Competitive position of competitors, their prices, range of products and product functionality.

d) Market share goal relating to the size of the market a company wants to attain. Research has shown that, most Japanese companies used this strategy to establish long-term projects. They set prices that give them a lead over their competitors.

[151] Yee 1994, Ansari et al 1997 and Monden 2000
[152] Ansari et al 1997

Fig 5 Setting prices in target costing



Source: Ansari et al 1997 pg., 33.

- **Setting Target prices for new products.**

Setting prices for new product is very difficult since the company does not yet have any historic cost information to estimate market evolution with. The most helpful strategy here is to do intensive market research, studying competitors' products and techniques etc, and to assess those factors that will help the producer to evaluate the production cost to selling price and assess the expected profit. However, setting prices when the product is going to the market for the second time might be less challenging.

- **Setting prices for exiting products.**

Setting allowable cost when the product has been in the market for some time is easier because the producer can assess the performance of that product in the market in relation to that of the competitors. Feed back on quality, functionality, new technology, new designs, environmental changes etc,, will help the producers to adjust and restructure the pricing system. The fact that there is some historic information about the performance of the last product makes it easier to draft a price plan. Ordinarily, current selling price would have been an adjustment to added functions and feature of the product[153]. This is known as function based adjustment.

[153] Formula for calculating all these elements can be found on the appendix

Functioned based adjustment: Here adding or subtracting the value of the function added or taken off from an existing product sets prices[154]. Toyota has been identified as the best example of this system where the price of the current year's car model starts with that of last years' and augmenting it with prices of added features e.g. airbag, CD player etc,[155].

Observing the above situation which supposes an increase in price with added features, critics argue that this might not be universally true. Prices of some products drop as technology improves e.g., computers, cameras, mobile phones, consumer electronics etc,. It is argued that the computer companies for example add new features at a planned target price reduction on the older model[156].

Physical attribute based adjustments: This relates to how prices are set influenced by the physical attributes attached to the product. This raises the idea of weight, horsepower, and influence to the environment etc,, in cars for example. This can be very highly thought of in times when functionality is tied to these physical attributes and where functionality changes very slowly. According to researchers, Caterpillar and Komatsu present a very good example[157].

Competitors based adjustments: Here the firm sets price with an eye on the competitors' prices and their product attributes. The main strategy here is just to estimate the differentials value that market places on a competitor's products based on functionality and attributes[158].

4.10 Setting target profits.

Marketing plays a crucial role in the determination of the target cost. The starting point for a target cost is the estimated selling price for the product determined by market analysis. Sales volume is also estimated and, from the total estimated sales revenue, the desired profit is subtracted. Management determines this desired profit margin in reference to the company's long – term strategy. Retail prices and sales volumes are proposed by the marketing function based on its research and the company's desired market share. Total sales revenue for each new product over its life can now be estimated. The target profit, usually determined by using return on sales, is subtracted from the total sales revenue. The target cost is now determined.

[154] Ansari et al, Cooper 1997, Bayou et al 1998.
[155] Ansari et al 1997
[156] Ibid
[157] Cooper et al 1997
[158] Albino et al 2003

4.11 Achieving Target costing and Target Costing Enablers.

Target Costing has been described, as being a largely quantitative process[159], whereby there are many tools and techniques that can be used in attaining it. Some examples of such techniques and tools include:

- Conjoint Analysis, Quality Function Deployment, Market Analysis, Competitor Analysis, Product Road mapping, Market-Feature Tables etc, helps to define the Product.
- Conjoint Analysis, Experience Curves, Price road mapping, Competitive Intelligence, Reverse Engineering helps in setting the target.
- Value Engineering & Analysis, Component road mapping, Cost Analysis Tools, ABC Practices, Simulation Tools, Supply-Chain Analysis achieve the Target.
- Cost-Reduction Methodology helps to maintain competitive cost[160].

It makes no sense to try to define each of these tools since they are numerous. I have just mentioned and identified them to underscore the fact that they are the most used. Some of them have been explained in the text.

The fundamental mechanism Japanese manufacturers use to achieve target cost, nevertheless, is value engineering (VE)[161].

Value Engineering (VE):

The idea behind VE is very similar to activity analysis, which was first developed and used by General Electric. GE's activity analysis was not, intended to be linked to corporate profit planning, target profit, and target costs as they are practiced in Japan today[162]. VE is a mechanism Japanese manufacturers use to enhance the value of products and services, which is measured by the relationship between the functions performed by products and services, and the costs incurred. Different companies define the functions in different ways. Some are geared toward process improvement while others are focused on satisfying the needs of customers[163].

The process of VE consists of describing the functions of each product, part, and service, and quantifying the components of those functions. In the design phase, management science techniques are employed on the various aspects of the operation to improve upon the current method[164]. VE has, therefore, been used by

[159] Ibid
[160] Albano et al 2003
[161] Yee, 1994, Ansari et al 2003
[162] Yee, 1994
[163] Yee, cooper et al. Ansari et al 1997, 2003, Monden 2000
[164] Yee 1994

the Japanese as a tool to assist in attaining the objectives behind target costing. VE has also been made efficient by that application of JIT.

Lean manufacturing or JIT:

This is a term used in the USA to describe the automobile manufacturing system developed by Toyota. Taiichi Ohno, has widely been ascribed as a key developer and promoter of the system. He stated that the main objective of it is cost reduction[165]. The Japanese management association says, "*All company wide improvement activities must directly contribute to the goal of cost reduction"*[166]. Lean production therefore has characteristics such as elimination of waste and inefficiency, redevelopment or R&D, customer satisfaction and their involvement in the process of designing, time management, inventory control etc,. Efficient implementation of lean production will lower cost of production and make the firm competitive. Therefore it becomes a very potential enabler of target costing[167].

Evolution in Information technology (IT):

The expansion of information technology on its own typically fosters production systems and boosts the coordination of the various production components and departments within the company and with its collaborators. The Japanese were among the first in the world to invest heavily in automated production systems and they are one of the most used IT in production in the world. This must have been the reason for their success in designing the JIT system. Probably this was due to the concurrent development of the target and the Kaizen costing systems. Effective application of IT components in production will positively correlate with most of the characteristics of the JIT system mentioned above.

This evolution of IT has greatly influenced the flexibility of the value chain and makes the market more opened and accessible. This makes producers able to position themselves as they find it easier to sample the market, check competitors' products and work directly with consumers in the means of understanding their taste, design etc,. The use of the IT system therefore has been considered a great facilitator to target costing.

Strategic Outsourcing.

One of the main futures of target costing is out sourcing. Here I introduce the concept of strategic outsourcing, which refers to the tendency where some components of a product may be allowed to be produced elsewhere. This maybe is

[165] Ohno 1988
[166] Japan Management Association 1989, p. 30
[167] Koening et al

due to cost factors or raw materials or related factors. Where transportation of raw material maybe expensive or tend to add unnecessary cost of finished product, it might be cheaper to outsource that component of production other cheaper locations e.g. to the source of raw material. For example timber processing to paper is better in the forest or the source of timber. Also production can be outsourced to other companies. This is very common in the automobile, engineering and other similar industries.

Conversely, other forms of outsourcing whereby management want to run away from purported high cost is not likely to be a long-term benefit to those firms. For example, recent research show that IT firms out-sourcing to India claiming that it is cheaper to produce there have still not been able to reduce the cost they intended to manage and which took them to those sites[168]. Outsourcing which is not typically strategic will not help in cutting cost, as most managers would want to convince stake /share holders.

Supply chain management:

Since its inception in the early 1990's, the field of supply chain management has become tremendously important to companies in an increasingly competitive global marketplace. The term supply chain refers to the entire network of companies that work together to design, produce, deliver, and service products. In the past, companies focused primarily on manufacturing and quality improvements within their four walls; now their efforts extend beyond those walls to encompass the entire supply chain.

Effective supply chain management helps the firm achieve the following; appropriate inventory levels**,** and the ability to predict and react to shifts in demand, shortened cycle times and faster delivery, real-time visibility into order and inventory status, pricing, and availability of product and material automated alerts about order or shipment problems, rapid response to market opportunities, increased free cash flow from increased effectiveness and effective target costing.

Kaizen philosophy:

Some authors have tended to define this concept separately from target costing. This is not correct because the major viewpoint behind the Kaizen philosophy is the Japanese cost control system, which is practiced outside the traditional cost accounting system. This is because Kaizen costing is set to meet cost reduction

[168] Business week 10th October, 2003

activities, which require changes in the way the company operates[169]. This is attained through continuous improvement which is an integral part of target costing.

4.12 Suitable industry for Target costing application.

It can be said that whenever a management approach is developed, question arises as to which firm such a system may fit appropriately. However, consistent with many new financial or operational approaches, target costing may not be for everyone. Some companies, which seem to benefit most from target costing, are those, which maintain the following criteria[170]:

1. Assembly – oriented industries, as opposed to repetitive-process industries that produce homogeneous products;
2. Involved heavily with the diversification of the product lines;
3. Use technologies of factory automation, including computer – aided design, flexible manufacturing systems, office automation, and computer-aided manufacturing;
4. Have experienced shorter product life cycles where the pay-back for factory automation typically must be achieved in a short time;
5. Must develop systems for reducing costs during the planning, design and development stages of a product's life cycle;
6. Are implementing management methods such as just-in-time, value engineering, and total quality control.

4.13 Target costing in service industries

Target costing is still an evolutionary process and it has not been fully institutionalised in most service organisations. But some literatures suggest that it is currently being applied by firms for outsourced services that they provide to their customers. Some service firms use a modified approach to target costing, in which the targets are not related directly to the target-selling price for a good or service. For those organisations, target costing is currently more of a supply management tool than an organisational process, although some of those firms seem to be working toward instituting target costing as an organisational process[171].

[169] Monden 2000
[170] Ellram 1999
[171] Ellram, 1999

Some barriers to implementing target costing in service organisations are that, in general, purchase costs in the service sector are a much smaller percentage of total cost than they are in the manufacturing sector[172]. This may make the importance and potential contribution of target costing less apparent to functions outside supply management. In addition, it may be more difficult to tie the purchase price of an item directly to the target price to customers in the service sector, because the impact of individual items is basically services that will be sold to customers.
Again the demand for services are not easily determined as can't be projected. Unlike normal products, services don't have regular changes to functionality and value added.

Part Three: Empirical investigation

In a bid to provide a practical face to this study this section summarily examines a study of target costing adoption in the USA. The reasons for this are that the USA is the major source of most management fads and a major market for most of the Swedish exporters and other competitors. Many US and Swedish company officials and analysts agree that competition is growing and that proper strategies to combat it are not yet well understood. Therefore, the cases I present below of US and Swedish companies are based on research carried out on the field. The only differences are the scope of the various researches. The American study was done by the CAM-I group, which studied target-costing adoption in the USA. The case of Sweden is a research conducted by me as part of this thesis project. The basic constituent of the two studies is that I will be finding answers to the fate of target costing practicalities. While it is known that target costing is already being practiced in the USA, it is not clear whether it is the case of Sweden. As mentioned earlier, some few users are known but they do not provide any satisfactory rationalisation that the system is popular in Sweden.

[172] Ibid

Chapter 5 Case study review: Best practices in target costing: A study Target costing adoption in the USA.

5.1 Background:

To begin with a "Best Practice" could be described to be a practice with positive qualities and attributes that has been proven through implementation and would be beneficial for others to use. The term however might not mean the best of all similar practices. A best practice is really any improvement over existing systems, though some consultants prefer to confine the definition to those few high-end and very advanced improvements, which have been successfully installed by a few world-class companies. Therefore one can go further than describing best practices as an excellent contributor to the fulfilment of a company's strategy, and even state that a strategy does not have much chance of success unless best practices are involved.

The following review therefore is based on research carried out by The Consortium for Advanced Manufacturing-International (CAM-I) and The University of Akron in the USA, who studied to what extend target costing was being adopted by American firms. It concluded a period of examination, scrutiny and analysis, which also helped to develop more knowledge about Target Costing practices. The project brought together academics and industry practitioners who put their heads together, and established a forum to study how and why companies implement Target Costing.

It will be important to assess to what extent target costing is adopted in U.S., and to assess the number of companies that use it. Therefore to understand factors that differentiates adopters from non-adopters. Also to understand the reasons for non-adoption and the barriers for improvement and, non the less to make a comparison of the adoption of target costing in the USA and Japan, especially its long term strategic management importance in the company as a whole or not.

5.2 Design of this section of the study

In January 1998, representatives from over 24 companies met and agreed on the basic components of the study. They developed and approved necessary survey tools of analysis to use. Under the guidance of the project's research team,[173] an extensive survey instrument was developed and mailed to 1,977 potential

[173] Shahid Ansari – California State University Northridge, Jan Bell – California State University Northridge, Il-Woon Kim – University of Akron and Dan Swenson – University of Idaho

respondents. This report is reflecting an analysis of 120 survey responses received and assessment of field from five Japanese and four North American site visits.

Each company hosting a site visit provided attendees with detailed information about their Target Costing initiatives as well as general information about their projects, manufacturing processes and general business issues. Site visits to hosting companies lasted on average about six hours and included presentations, multi-functional discussions, questions and answer sessions and at most locations a plant tour. The site visits also provided participants with extensive networking opportunities and created an environment conducive to extensive learning and sharing of ideas and experiences.

In the first part of the survey companies were served with questions designed to test hypotheses about the differences between adopters and non-adopters and impediments to adoption. It was found out that adopters and non-adopters differ in some extents such as:

Early adopters of target costing in the U.S. have the propensity to be in manufacturing and assembly industries that depend on skilled and trained workforce for production, just as in Japan. However, the research shows that there are some adopters in the process and service industries at this early stage too.

Those who adopted target costing faced customers who are considerably more sophisticated and knowledgeable about what exists in the market and what their needs are. Therefore more emphasis was placed on beating their competitors in the market with new products, providing more and better features, reliable longer-lasting services at lower prices.

There were cultural variations between adopters and non-adopters. Adopters value teamwork and continuous improvement vis à vis the willingness to solicit and implement employee suggestions. They also are more likely to use innovative, strategic management processes, activities and tools than non-adopters.

Adopters use tools theoretically associated with target cost such as Multi-year Product and Profit Planning, Design to Cost, Design for Manufacturability, Total Quality Management, Benchmarking, Value Engineering, Competitor Cost Analysis and Quality Function Deployment…in that order.

Adopters make significant use of cross-functional teams and closer working relationships with their internal and external value chain and seek more input from dealers, sellers and coordinate product and process design with suppliers.

Adopters develop systematic cost estimates during product conception and design stages and also include more of the life cycle cost elements in their estimates.

Adopters are appreciably more customer-focused than non-adopters. They seek more customers input during the product design phase, collect data using formal methods analyse customer needs and make the information available widely throughout the organisation.

On the other side of the story, three main reasons for not adopting target costing by non-adopters were that:

I. Non-adopters are facing more pressing business problems that make them not put much emphasis on target costing implementation.
II. They lack familiarity with target costing principles though some of them know of its existence.
III. They perceive target costing as irrelevant.

Adopters on their part report the biggest impediments to improving target costing as:

I. Lack of sufficient resources to implement it. They consider target-costing implementation to be very expensive.
II. Some adopters have not yet reaped the rewards for implementing targets. Here target costing is perceived as not rewarding and might be considered a fad.

5.3 Manifestation of questionnaire and results attained

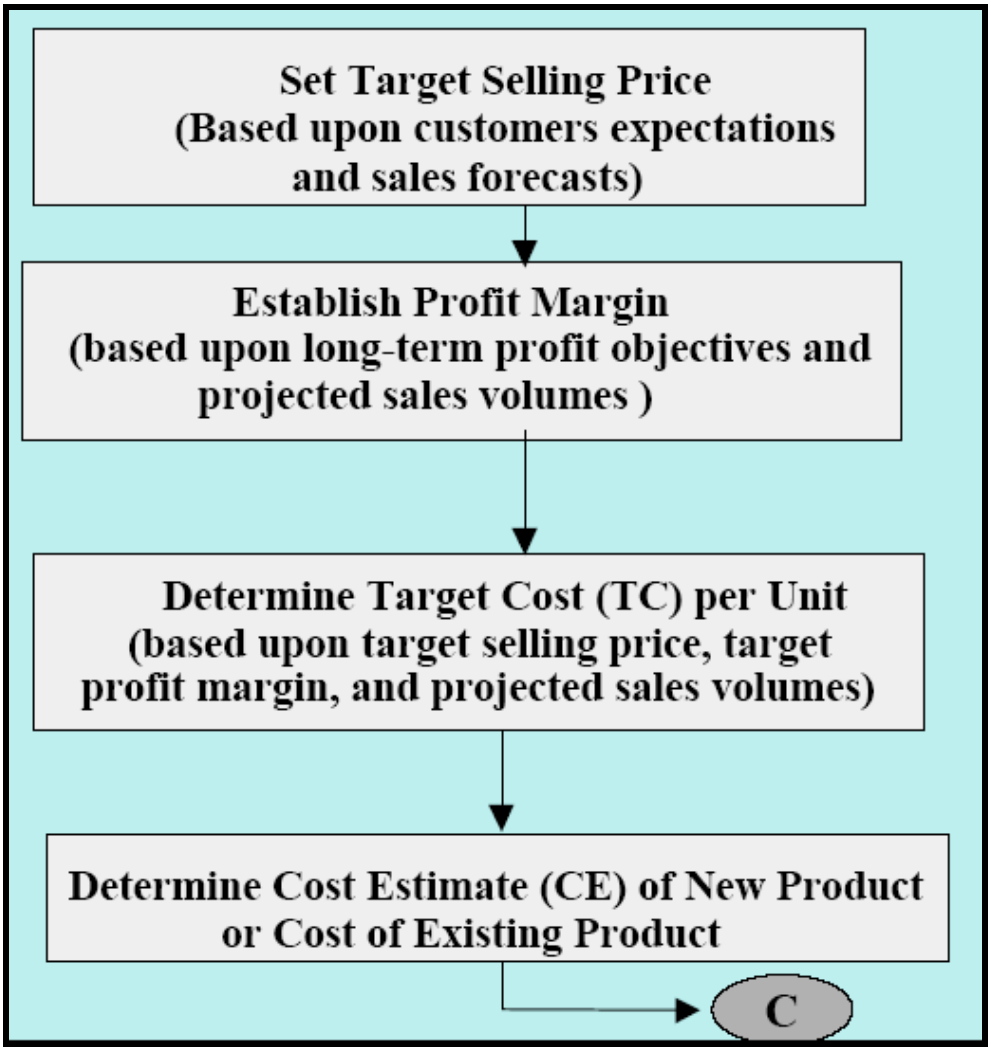
Research sites were selected in the USA based on the survey findings using five criteria; (I) maturity of implementation; (ii) use of key target costing doctrine; (iii) cross-functional participation; (iv) successful results; and (v) willingness to participate in a site visit.

In Japan, companies’ sites were identified with the assistance of Alpha Brain, which is a Japanese corporation that has extensive contacts with Japanese companies using target costing in Japan. Some important attributes shared by target costing best practice companies were then isolated for examination. They are:

1. Support of top management is a vital factor for success in implementing target costing and target costing is part of a company’s culture. The exception to this was at Boeing where it was part of the project team’s culture, but not the overall company culture.

2. The companies reviewed have a high level of accountability and monitoring of target cost achievement. Targets are taken seriously and best practice sites have reporting structures for monitoring progress against targets. Many maintain discipline by not letting teams cross-subsidise targets.

3. The process by which cost targets are set is relatively consistent among the best practice companies. The targets are heavily influenced by market conditions and some variation of the following formula:
(Market price – profit margin = target cost.) Shown on the figure 7 below
Fig 7 setting target cost in the USA



.
Source: Target costing: New Frontier/Cost management in Lean Enterprise.

4. The companies have a systematic process for decomposing higher-level targets to the various functions, processes, parts and teams. All of them set targets that are achievable at a reasonable “stretch”. One company reportedly described this as setting targets that provide “equal challenge” to all participants.

5. Targets are never ignored or explained away. Generally, when targets cannot be met, companies revisit material composition, customer requirements,

current production processes, supply chain options, product redesign, or as a last option, product abandonment.

6. The best practice sites, in general, have close supplier relations. In Japan, purchasing is often where target costing begins. U.S. companies are working on supplier integration. They seem more reserved about sharing cost data or cost savings with suppliers. Cross-functional teams are critical to the success of target costing. They must be independent and empowered to acquire resources from functions.

7. There is no unique implementation path. In Japan, the typical implementation starts in purchasing and process Kaizen in the plant. It is later moved to product design. In the U.S., there has been greater effort to do concurrent product and process design early in the implementation.

8. A key enabler of target costing is the use of sophisticated cost estimation models. These models convert the old static cost tables into a dynamic cost-planning tool by using sophisticated cost analysis (CA) codes. CA codes allow companies to organise cost data by parts, units and products according to name, function, shape, size, weight, assembly method and type of raw materials. Japanese companies are again ahead of their U.S. counterparts in this area. Another critical enabler is a solid understanding of cost concepts by all employees. Most engineers and designers are not trained in cost accounting. Best practice sites make costs visible and understandable to product designers and engineers through internal training and education.

To conclude, target costing is basically new to the U.S. It is mainly adopted in response to tremendous pressure on profit margins. Accordingly none of the best practice site visits implemented target costing as a necessary “best practice” project. Something to note also is that the U.S. companies that reportedly implement target costing are not really following the major doctrine of target costing or using many of its essential components. Companies that have used target costing well have reaped significant benefits. In Japan, it was observed that target-costing yielding was as much as 13-17% savings per year. In the U.S., DaimlerChrysler and Caterpillar, for example, achieved a remarkable financial comeback. Even companies that have partial implementation of target costing report benefits such as improved profits, more customer focus, better cost planning and control and better teamwork in their value chain.

It is extremely difficult to integrate target costing into corporate culture from the bottom of the organisation. Because of its strategic importance, resource requirements and its dynamic nature, target costing must have top-level management support. As target costing expands across the entire organisation, it must have high-level visibility and support. In this light in the U.S. many adopters confuse target costing with tools or partial applications such as Design to Cost, Design for Manufacturability and Cost plus Pricing. Further, U.S. companies lack target costing discipline i.e., targets are relaxed, features are reduced and products are often not dropped.

A structured information system and discipline are critical to the success of target costing. In this the Japanese companies are disciplined. The discipline provided by the reporting structure has a dominant impact on the achievement of targets. The structure provides continual assessment of the target costing process. If it becomes apparent that a target will not be achieved, Japanese monitoring systems provide a mechanism for an appropriate response. The Japanese sites visited report varying courses of action in response to missed targets; however, the common link is that each company investigates the reasons a target could not be accomplished. Once analysed, specific actions are reviewed and a new direction initiated.

Sampled companies report that even partial execution has yielded benefits. However, there is no general facsimile which has been observed for companies to follow when implementing target costing. Non the less the following key points best help foster and make better use of target costing efforts:

- High pressure on performance margins
- Top management support
- Active supply chain participation
- Empowered cross-functional teams which are actively involved in the target setting process
- The existence of a structural reporting system which monitors target achievements and failures
- Performance rewards and evaluations based on target performance.

Even though target costing is relatively new to the U.S., there are several companies with mature, productive practices, for the most part. It is in its infancy that there is a lack of many of the key critical success factors. Some of these shortcomings include:

- Mistaking partial applications of target costing for a fully implemented system

- Insufficient supply chain involvement
- Immaturity of process
- Organisational structures which do not support cross-functional teams
- Poor adherence to planned targets
- Lack of appropriate performance monitoring systems.

Chapter 6 Assessment of the use of Target Costing in Sweden

6.1 A study of some Swedish Companies.

Following the American example, a study was launched to find out if target costing was being used in Sweden. Swedish company managers have an attitude of modifying their management accounting structures to fit the changing business environment, especially since the 1990’s financial crisis. Even though there is generally an aggregated Swedish management model which sees into long term planning, group or team work, budgeting, market survey, continuous research and development and well as organised value net work, much of the traditional management “cost plus” methods have been in use for the past decade. Pragmatically also is the assumption that, there is a great amount of outside influence in Swedish management system. The homogeneity and the internationalisation of Swedish companies will mean that one can expect to see some sort of “non traditional management” practises intermixing with the typical Swedish style. However, no direct market oriented costing system similar to the Japanese target costing system of Swedish origin has been fully investigated. Maybe there exists some but none have been pointed out yet.

A few studies have been carried out which form a narrow base, on current costing practice in the country and as at 1994 two types of costing methods were identified as being popular—the full and variable costing methods[174]. However, these are just accounting schemes and not costing techniques that incorporate feed forward costing systems whereby cost sensitive production techniques like target costing are involved. Therefore such a system works in isolation and would not provide an effective approach in understanding market, product and production change. On the route to post modernism however, some Swedish researchers agree that “the increasing international competition is explicitly stated as a major

[174] Ax et al 1994, page 10

pressure for change"[175] It is therefore important that Swedish firms become informed about the necessity to change from their existing "traditional" practices, because companies resisting change will not survive with the current global competition[176]. However, it might be determined to a limited extent that some companies have started adhering to the target costing trend as the alternative to that change while others have not. In this light I decided to study whether Swedish companies have started attempting the application of target costing practice and if so, what led to and with what results?

6.2 Design

Some 41 selected companies from various industries were contacted first by telephone and, when the right contact people were found, questionnaires were emailed to them. Addresses of these companies were collected from the catalogue "biggest Swedish Companies 2002/2003", the Stockholm Stock exchange website and from the internet site "Sunset's web index-companies". Criteria for selecting the firms were as follows.

- They should be exporters irrespective of size but bigger ones with comparatives sizes where preferred.
- Type of products companies dealt with. Mostly I was interested in products that where more sensitive in the markets – especially in the international markets. I also selected from services such as banks and insurance companies so as to assess whether service companies too use the method.
- Listed companies on the Stockholm Stock market (Stockholm Börsen) where preferred but I relied on those who where willing to participate in the study.
- Signs that they may be using the system and that they might be willing to co-operate—form Scandinavian best practice companies' sources.

6.3 Some explanation of the selected criteria

The first important criterion was that firms should be exporters. This is because it would be expected that such exporters would be exposed to contingency factors abroad more than in the home market. In due course, and as a protection against contingencies, they might want to adopt confrontational policies such as target costing. Of course I do not suppose that home competition is not growing and that it should not be treated with equal importance. But the small size of the Swedish

[175] Ax et al, 1994 pg. 17
[176] Ibid

market makes it easier for home firms to easily understand and quickly make improvements than abroad. Exporters are expected to confront more different types of consumers with different needs abroad than at home. They also are expected to meet different types of competitors, some of which are very powerful. For example Volvo cars would not have that much problem selling their cars in Sweden where the company is based but might face problems in Australia and South Africa or the USA because changes in tastes and environmental concerns might not be the same as those in Sweden. In those markets they meet other big producers like Nissan, Toyota, and Mitsubishi who are comparatively bigger and have more resources to promote their products than Volvo. Therefore, size of the selected company does not very much matter here but that the firm should be an exporter and of relatively recognisable the size is a realistic requirement.

Another criterion was the types of products that the companies deal with. Some types of products are very sensitive to competition because of their functionality and the production requirements. Examples of such products are IT/communication equipment, automobiles, household appliances, entertainment equipment, apparel, surgical appliances etc,. Today, there has been much of evolution in design, functionality and cost. Samsung, for example, became more popular through its well-designed mobile phones with several functionalities and Nokia has remained strong in Sweden and global for similar reasons. Volvo, Saab, and Scania, have greatly evolved in providing products with improved design, functionality and service. What is common here also is not only the design, functionality or services but also the up front investment that has to be managed to meet changing production techniques so as to catch up with consumer’s changing needs.

Services firms have also been added to the survey criteria to test the hypothesis that service companies may be using the target costing system.

Another important aspect worth highlighting in the selection criteria is where selection was drawn from listed companies. The noteworthy aspect here is that it helps clarify the question of company size. Most of the listed companies are of a size we can call large in the Swedish context, and again, they are mostly exporters. Some of their major worries are that they live under pressure to meet both stakeholders and shareholders need. Since the definition of company size varies from market to market, in the case of Sweden, one can call all listed companies as large ones since they have a certain degree of “big corporate components” such as market share size or capitalisation. Comparatively, Japanese listed companies may

be twice the size of the biggest Swedish company. Hence one might be compelled to the argue that the big Swedish firms exhibiting the above mentioned characteristics might want to maintain market positions and tend to adopt similar features of the Japanese cost management systems.

6.4 Selection category

On table 3 below I present the category or industries in which the surveyed companies where selected. I was largely influenced in that selection arrangement by similar method used by Henrick Dekker and Perter Smidt[177], who did a similar study on Dutch firms. A similar category can also be observed in the catalogue "Biggest Swedish companies 2002-2003" as well as the "Sunet-Swedish company" website. Through this category placement, one might easily understand the reasons for the adoption of target costing if any, per industry and to match them to other correlating factors such as competition, current cost management systems, planning etc,. It might also help us to understand which industries are likely to show aspects of managerial uncertainty due to changing business environment or environmental uncertainty.

6.5 Manifestation of the questionnaire

In mid October, a total of 41 companies were selected, some from the Stockholm stock exchange and some from other sources mentioned above, and positioned in the category shown on table 3 below. A questionnaire was designed along the lines of the 7-point Likert scale using single indicators, so as to limit the length of the questionnaire and, as a means to increase the response rate. The questionnaire was emailed to the firms in their various categories. In the case of Holding companies with several subsidiaries, I contacted the companies' head offices where I interviewed the main persons. I hoped that, those individuals would have good knowledge about the use of the system in the entire organisation, or even in the other branches and subsidiaries.

Even though I found some two past theses about target costing in individual firms and very limitation literature on cost management evolution in Sweden, those materials, did not provide me a possible clue on how I could contact the Swedish firms. However, using the core features of target costing principles, I decided that engineers, financial officials or accountants, designers and people in related positions as well as CEO, and other decision makers and strategists could provide a good source of information to that effect. Hence I identified the company's key contact addresses and approached them first by phone to identify suitable contact

[177] Dekker et al 2003

persons. I told them my problem and asked them if I could send them a questionnaire. If they agreed, I emailed the questionnaire to them. Some officials preferred to be interviewed via telephone since most of them were based in Stockholm. Some Göteborg based individuals however, agreed on a face-to-face interview. On the whole, I had contacts with finance "chefs", accountants, chief executives, marketing officials, company strategists and engineers. As shown on the table 3 below, contacts for each industry were as follows.

Table 3 contacts as per industries

Industry contacted	Number of contacts per Industry
Food	4
Textile and design	4
Wood and building manufacturing	4
Chemicals and pharmaceuticals	4
Machine and transport equipment	8
Instrument and optical	3
Electronics and communication equipments	6
Steel and related	2
Construction	4
Banking and Insurance	3
Others	1
Total contact	**41**

6.6 The results and analysis

The responses were analysed using the 7-point liker scale[v] in which company officials where asked about target costing and the effect of target costing in their companies. The answer to the questions ranged on a scale of 1 to 7 whereby 1 represented "not at all" and 7 represented "very much". However, there was great use of "open questions" which allowed the respondents to further shed more light on the answers, or provide some detailed explanation. Open questions also helped to underscore some of the weaknesses of the likert scale such as the mid point response options, increasing the level of cognitive noise caused by negative

worded items[178] among others, and the fact that I needed the response for analysis only. In analysing the responses therefore, as suggested in the literature, mode or median was computed to determine the highs and lows of the result or frequencies of responses. This is because the data collected is ordinal and has an intrinsic order or sequence. One cannot assume that the respondent meant that the difference between agreeing and strongly agreeing is the same as between agreeing and being undecided. Also, since I have a wealth of open answers, no amount of other methods could provide me with a satisfactory approach on how I could possibly assess whether Swedish firms are adopting the target costing and related costing system or not. Therefore most contacts that replied gave ample explanations for their answers and went beyond my normal expectations of one word answer requested on the likert scale questionnaire.

6.7 Adopting Target costing?

When I approached the companies by phone and on the questionnaire that was later emailed to them, target costing was defined as a cost management system whereby *"maximum allowable cost price was calculated by subtracting a required profit margin from the expected selling price"*. I had a deadline to get in all responses by the 30th of October 2003. Therefore, by that date I had contacted 41 companies, many of them listed (table 4). In all, 31 companies responded giving a total response rate of 75, 6%. I believe this to be a very high response rate.[vi] Within those who responded, 16 companies indicated that they use target costing or something similar to it. In the same vain, 15 companies indicated that they don't use it. Below I present table 4, which shows the adoption rate chargeable through industries and the general response to the questionnaire.

[178] Hodge et al 2003

Table 4 Target costing adoption chargeable per industry

Industry	**Target costing**							
	Total contacts	**Total Responses**		**Use**		**No use**	**Total**	**% use**
				TC+	**TC-**			
		No.	**%**					
Food	4	4	100	0	0	4	4	**0**
Textile and design	4	4	100	0	1	3	4	**75**
Wood and building manufacturing	2	2	100	1	1	0	2	**100**
Chemicals and pharmaceuticals	4	4	100	0	2	2	4	**50**
Machine and transport equipment	8	7	87	2	2	3	7	**75**
Instrument and optical	3	1	25	0	1	0	1	**25**
Electronics and communication equipments	6	4	67	2	1	1	4	**75**
Steel and related	2	1	50	1	0	0	1	**50**
Construction & Eng.	4	2	50	0	2	0	2	**50**
Banking and Insurance	3	2	75	0	0	2	2	**0**
Others	1	0	0	0	0	0	0	**0**
Total contact	**41**	**31**	**75,6**	**6**	**10**	**15**	**31**	**52**

Note: TC+= Use Target Costing as described on the questionnaire

TC- = Use Target Costing but not as described on the questionnaire. Used something similar.

Therefore (TC+ plus TC-) =Total adopters which is 16

From the above table 4, a pattern of respondent and reaction to Target costing and related system can be seen. On the whole, contingency or uncertain business environment factors, which influence the adoption of target costing, were more present in international exporters than in regional exporters and producers. International exporters here refer to those firms who export out of the Scandinavia and regional exporters are those who are strong within the Scandinavia. International exporters face more contingency problems than regional producers/exporters who feel that they are a strong force in the area. A contact at an adopter wood and building manufacturer said

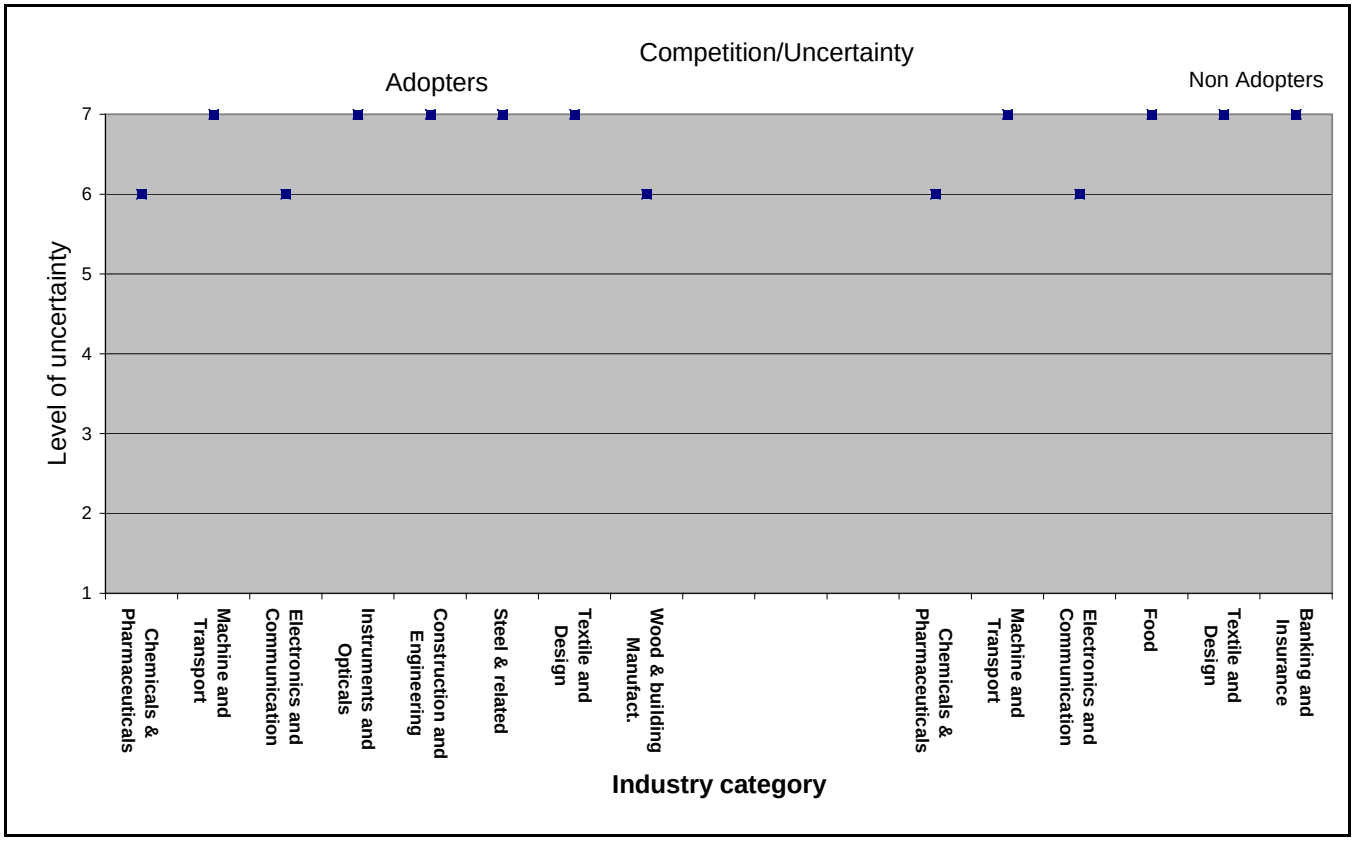
"Yes, there is competition on the one hand, and highly demanding customers and dwindling life cycle of products on the other. We find ou selves in the midst of a revolutionary transformation whereby we strive to offer customers maximum value at minimum possible price since we have more control over cost than price.

We feel that this has been done better through our adoption of target costing…when we compare to when the system was not used in our company".

But a non-adopter Insurance Company mentioned that they have a very strong market position in the Scandinavia, which is their main market, and, that they are the market leader so they are satisfied with their management system. However, I could not clearly say for certain whether the notion that target costing might not be attractive to service sector seems to hold in this case since the sample and responses in that area was very limited. Another non manufacturer—a bank was nonetheless interested in understanding how the target costing system could be applied in an industry such as theirs.

"It sounds interesting because with the environment so competitive, the inefficiency of one is becoming an opportunity for the other. I feel that most of this inefficiency is in terms of non-value added activities present in the system and to understand this one has to be able to measure it..." said that contact of the bank.

Figure 9: Uncertainty in Target Cost adopters as well as non adopters.



Uncertainty factors as shown on the figure above are those factors that usually drive firms to embrace target costing[179]. These factors led Japanese firms to adopt

[179] Cooper et al 1997, Ansari & Bell 1997, Kato 1998

target costing. Similar factors apply to the increasingly more common adoption of target costing in Britain, Germany, Holland and the USA. However, according to this study, the 16 Swedish adopters confirm that they have been driven into this and similar systems thanks to the uncertainties mentioned above and more. Surprisingly, non-adopters (15) indicated that they also face similar contingency problems. The non-adopters indicated that they meet their objectives through other means or methods, which were not specified. I could imagine drawing from their responses that they use methods similar to "market leadership", "benchmarking of cost structure of competitors", "mergers and take-overs or buy – over", "direct cost feasibility study", and "prior market research" to manage their affairs. Some of these methods are tools related to target costing. In conclusion, I observed that they might be using the target costing system without really calling it that or even knowing it.

For the 16 adopters, 6 actually indicated that their system is really called target costing and that they use the traditional target costing principles.
"Target costing is actually bringing the trial of the market place into our organisation." said a motor part manufacturer. The other 10 companies claim to use systems closely linked to target costing. Although they did not mention the names of the systems, I can draw from their responses that stringent cost management, long-term planning, organisational efficiency, competent supply network, overhauling of current production process and even negotiating with suppliers are within their main focus. A steel manufacturer mentioned that if there were an effective value network and effective organisational structure, it would be easy to know when some sectors of the organisation have weaknesses or those sectors that try to promote inefficiency. *"Those are the areas that kill cost and if we can make them robust, I think our objectives will always be easily attained and the firm as a whole unit will perform as expected."*

6.8 Adopters of target costing and similar practices.

These are those companies who claimed to use target costing and similar systems. From the computation of the total response forms the questionnaire and assessment of direct interviews, 16 companies in different industries fell in this category. For easy analysis, Target cost users will be viewed from the combination of (TC+ & TC-) as shown on the graph (fig.9) above. Target and similar costing methods transcend the functional area of the companies and from the preliminary observation, there is great integration in the form of cross functional team,

comprising engineers, product design, production, purchasing, sales, finance, cost accounting, customers and suppliers. Shown on table below is a singling out of firms, which confirmed that they used a target and similar costing method.

Table 4 adopters of Target Costing

Adopters by industry	**Total adopters (n)**
Chemicals and pharmaceuticals	2
Machine and transport	4
Electronics and communication	3
Instruments and optical	1
Construction and Engineering	2
Steel & related	1
Textile and design	1
Wood & building Manufacture.	2
Total adopters /industry	**16**

From the above industry perspective, as shown on table 4, one can observe that these are mostly complex firms with very strong international presence who consider target costing and similar methods as very important. With highly uncertain environments, the system is used as a form of confrontational strategy.

Some of them have very close ties to ardent target costing users, such as Japanese and American firms. For example, Volvo cars is associated with Ford, Mitsubishi and the other PAG family members are users, Saab is associated with General Motors who is also an ardent user, Ericsson with Sony – Ericsson is also an ardent user, among others. The company philosophies of those ardent users are easily transmitted into the management philosophy of the Swedish companies.

Again due to severe competition, many companies have little flexibility in setting prices. *"When market conditions are very competitive, the price may be driven by the market"* said a Stockholm based telecom operator. *"Where selling price and profit margins are fixed by competitive pressure and management policies, respectively, reducing the production cost is the only way to increase earnings"* he concluded. Another communication equipment and mobile phone maker says they use target costing and that it will be extended to its partners and collaborators. A motor part manufacturer, which has lots of business relations with Japanese and Asian firms, also indicated that they use the system. Some heavy machine and transport equipment makers are thinking of breaking into the Japanese market and are therefore aligning themselves with some Japanese firms

to attain that aim. A contact in the firm said that what they use is the real target costing *"as defined on your questionnaire"*. The contact said that their greatest problem is that since they produce and supply parts to automobile industries, they do not have the prices and cost of competitors components parts. *"Reverse engineering – analysing the details of our competitors, sometimes help us know how to manage our product planning and cost"* he said. *"We'll also do a tear down of our competitor's product to assess their cost versus what we are paying"* he added.

As motioned earlier, the Swedish adopters or users are international exporters facing very strong competition, which is raging both at home and aboard. On average, the rate of competition is up between 70 to 75% both at home and even higher aboard. 60% of adopters indicated that though they feel that they are market leaders, that does not mean that cheaper producers are not growing and penetrating the home market, as well as challenging them abroad. A telecommunication leader pointed that, *"We had always been the market leader and our technological advancement made us to sit with our legs on the table. But we were overwhelmed by the design of competitors' products"*. *"Have you seen the rate of competition in the market now – right here in Sweden?"* he asked. *"This is another reason that our company is undergoing thorough restructuring so as to be cost effective along the line of what you have described on your questionnaire – we want to be working backward… from customers no,"* he concluded.

From the assessment of the respondent results, the automobile and transport, machines, and electronic sectors seem to be forced to use the method or similar ones because they are seriously competing with the Japanese who are traditional adopters and their strong competitors. They are also facing US producers, who have got into the system too very strongly. Increasingly too in Europe, strong competitors and adopters are Renault for France, Mercedes Benz of Germany, Daimler-Chrysler of Germany/USA, British Aerospace, and

Nokia of Finland, among others.[180] Others adopters are the Dutch and UK companies which are also strong export markets for Swedish manufacturers consequently, they are progressively putting more pressure on the Swedish exporters to review their cost management techniques. These European adopters are also showing improved performance.

[180] CAM-I Institute

A household appliance manufacturer and two other companies indicated that they don't use Target costing. But two heavy equipment makers claimed that they use target costing or features similar to it. One particular heavy equipment maker claims that to make a cost effective product "*acceptable to our market you have to make sure that you are not failing where your competitors failed. We are small but also one of the leaders in the world. We hope that despite market turbulence we can make sure that our customers don't feel discouraged. How can we do that…through our cost control which we do very well" "Our core competence and efficient technology let us know how to add value to our products, such as improved designs, at a very limited extra cost and this is one of our core strategies"* said the boss. *"Our main dream now is to enter the Japanese market and you cannot compete in Japan when they sell cheaper than you. You pass through one of them …and you have to use some parts of their cost models…which is not bad at all or, you do it all the way"* he added.

In the same line, a luxury car brand contact mentioned that their market is fairly different than other automakers. She said that *"the car industry obviously includes a lot of car manufacturers, which can be seen as competitors, but as a Premium brand we position ourselves in the P5 Segment (Premium Five Segments) which means Saab, Audi, BMW, Volvo and Mercedes. These premium car manufacturers are the one's we consider to be our main competitors"*. With four main competitors, she said of target costing that *"…to a certain degree this technique is used but not to its full extent. It is far more complex than just using this technique."* The Company's performance however has improved as compared to past years[181]. This is probably due to a stringent cost control system similar to Target Costing. They have also scored very high on its design[182].

6.9 Reasons for adopting and expected achievement:

In a bid to understand the reasons for adopting target costing results, form responses where analysed and presented on table 6.

[181] Contact at the company
[182] Ibid

Table 6 main reasons for adopting Target Costing**.**

Reasons for adopting target/similar systems	**Total (n)**	Mode of total contacts
Cost reduction	16	6
Customer satisfaction	16	6
Quality control	16	5
Timely Introduction	16	5
Improve profits & organ. Perform.	16	5

What the above results mean

Most of the contacted companies indicated that cost reduction and customer satisfaction are their main reason implementing the system. These two set of factors could be closely correlated to the searching questions asked of Swedish companies today. Some Swedish companies have shown a sort of increased poor corporate performance in the past years.

"At first, we thought that we were different from our competitors because we use high quality raw materials for our products. We also offered options such as delivery and outsourced customer service so as to attract them. Customers were attracted but they were not willing to pay our price. This was very hard for us as we were loosing money and business. One key factor was that the market determined the price of our product and if we followed it we would never make money. We needed to archive a return of between 9 to 11% on sales and so we had to seriously control our cost. All other options were tight hard to expel… we could not lay off any worker or out source abroad. Target costing was then introduced and adopted. It has worked very well…though we lost money in the short run…the pay off now is good" said a steel producer and adopter.

Cost reduction therefore will bring some value or profits to the companies, which will in turn satisfy the shareholders/stakeholders. Customer satisfaction will increase consumer confidence for the product through acceptable prices and quality and this will increase sales, which is the core source of revenue. Looking from behind, the use of target costing helped Japanese firms break through this barrier and other users in the USA have also indicated similar success. A telecom boss contacted said that in their study, they realised that through this system, rivals have been able to improve on core areas such as cost cutting, design and

increasing incentives to customers at less disputable cost. These two factors then scored higher values on the likert scale as shown on table 6.

The next set of factors that scored well for the reasons for implantation is quality control, timely introduction of products into the market and improved profits and organisational performance. Drawing from Japanese adopters, such as Toyota, target costing helped them plan when and how to meet the above objectives. Probably this is where JIT and kanban became important. Most of these Swedish firms agreed that quality control and timely introduction play vital roles in their companies' and its products. This can be achieved properly with the use of target or related cost systems. "*Customers have become more sophisticated and they want to see new things everyday and if you don't plan well with systems such as these, you will not be building factories and buying new machines any time customers choices change"* said an auto production executive. "*You have to build systems that will manage the cost of the quality that people want to pay and how you can get it to them. The design process is where you can really leverage your cost and this is where this system comes in"* a telecom expert added. *"You have to be in the market quickly and regularly with something new…this is hard for us but this method makes it easier to collaborate and targets are always met"* said a heavy transport vehicle producer.

In drawing a conclusion on above, it would be fair to assume that the adoption and application of effective value network or supply chain network is the key to the success. It simply shows and explains the connectivity between a firm and its collaborators as well as within itself – its organisation "forward" and "backward". It contains so many questions such as how a product development can be planned and executed as well as strategies that are associated with it. For example, a steel manufacturer mentioned that in "*deciding whether an activity should be outsourced to another member of the supply chain, we assess whether that activity is 'strategic' to us or not…especially in cost terms"*. In other words, is it essential to perform the activity within the firm in order to sustain a competitive advantage, or would it be more appropriate to have another member of the supply chain perform that activity? One of the apparel producer – adopters mentioned that the above is closely related to what they do and that they have outsourced many of their production units. Also the relationship between the supplier and market players is also very important and closely associated with the value/supply network. *"When our suppliers are time conscious, it greatly helps us to be regular with our quality and speed to the market"* said an apparel chief financial official.

"When they are delayed, we will also be delayed and that is not good business – target costing helps us to ensure that such things don't happen…" she concluded. *"In many cases we rely on suppliers to either design a product or assist us in the designing of a particular component"* said a heavy transport/ construction equipment maker. Therefore time and regular delivery is what is mentioned here as the key factors. According to the target costing principles, higher quality products have to be delivered in the market at regular intervals so as to withstand other lean producers. Since this works as a network, timely supply of components and deliveries will guarantee consumer loyalty and maintenance of the company's market segment. Target costing adopters therefore take it as a challenge to plan regular suppliers and alternatives suppliers if the main supply route were to be affected[183].

Improved profits and organisational performance are other factors most adopter thought might work effectively via target costing and similar practice. The system makes it such that the organisation could be planned and the corporation operate properly to control losses, which in most cases the non-effective coordination of this sector leads to increased cost. Adopters inveterate that to add more impetus to the Swedish traditional organisation system, the use of target costing and related features help to strengthen the various departments and increase co-operation and coordination of the various sectors. *"This system is a matter of organisation and if you have a high organisation performance, you expect to detect loose ends that need to be better"* said an official in multinational holding company. *"By working together as a team or through partnership, you are more buoyant to support the process, by coming up with ideas to lower cost. The targets are hard but our ideas are treated reasonably"* said the boss. Given the flexibility of target costing practice, firms indicated that once the system is fully implemented and working, it also assists in coordination as little energy and resources are used to manage productivity. *"Contrary to popular believe, the system assists in coordinating the various factions"* mentioned a steel producer. Therefore, the contacted firms show that some of the intended achievement for implementing this system is actually attained and that target costing and related costing practices can be very useful in both cost management, product planning and organisation efficiency.

6.10 Departmental involvement in target cost implementation

From the computed responses, I ran the mode of all respondents and found that target costing is deemed most important in certain departments. Accordingly,

[183] Bayou et al 2003

product development and manufacturing takes much of the time of target costing application. This might hold with the theory, which suggests that target costing is best at the early stage of the product life cycle. Consequently, such an indication will not come as a coincidence. Followed by the product design and planning sectors where the target seems to be important according to the theory. The finance and accounting and the sales department use a limited amount though still significant amount of time in adopting the practice. According to the questionnaires and interviews, little target costing practice is carried out in the sales department. The probability is that this department surely is largely involved in sales and the conduction of market research at the same time. This is why it has only a limited amount of involvement. The table 7 below present the departments most involved with the target and related costing procedures.

Table 7 Target/related Costing in various departments.

Areas or periods where target costing/similar practises are best applied	**Total (n)**	**Mode of entire response**
Product development	16	7
Manufacturing	16	7
Product planning	16	6
Product design	16	6
Finance and accounting	16	5
Sales	16	5
Marketing	16	4

Adopters implemented the system more though the use of teamwork and consultative inters-departmental or inter-disciplinary teams systems than through other means. Just a few of them did it through separate functions or the accounting department and procedures. Ranking the organisation of target costing according to how it is implemented; the table 8 below shed some more light on the findings.

Table 8 Organising Target Costing

Method through which it is applied	**Total firms (ranked from the most to the least)**	
Through inter disciplinary teams	9	1st
Special department application	4	2nd
Separate functions	1	3rd
Accounting department	1	4th
Role and procedures	0	---
Others	0	---

By ranking the implementation as done above, I intended to find out which form companies deemed important to use in implementing the system since there is no particular role on the mode of target costing implementation. From the table above, 9 firms apply target costing thorough inter-disciplinary teams, more than any other methods. Inter disciplinary teams here refers to the interaction within the other components of the organisation. This means that in seeking a cost saving solution at the design and manufacturing stage of production, engineers, for example, will plan the product after the market research department have given them their findings. After assessing the quality and functionality of that product, they pass it to the finance/accounting department for them to analyse the costs that might be involved in the production. If the expected production cost is high, all the departments involved again will meet to work on further cost cutting solutions and to decide whether to produce that product or not. This ties with the principles of target costing which attributes the success of target costing to cross functional team involvement. It is not also strange to see such a result from Swedish firms as cross-functional work style and group work is part of most companies' management culture.

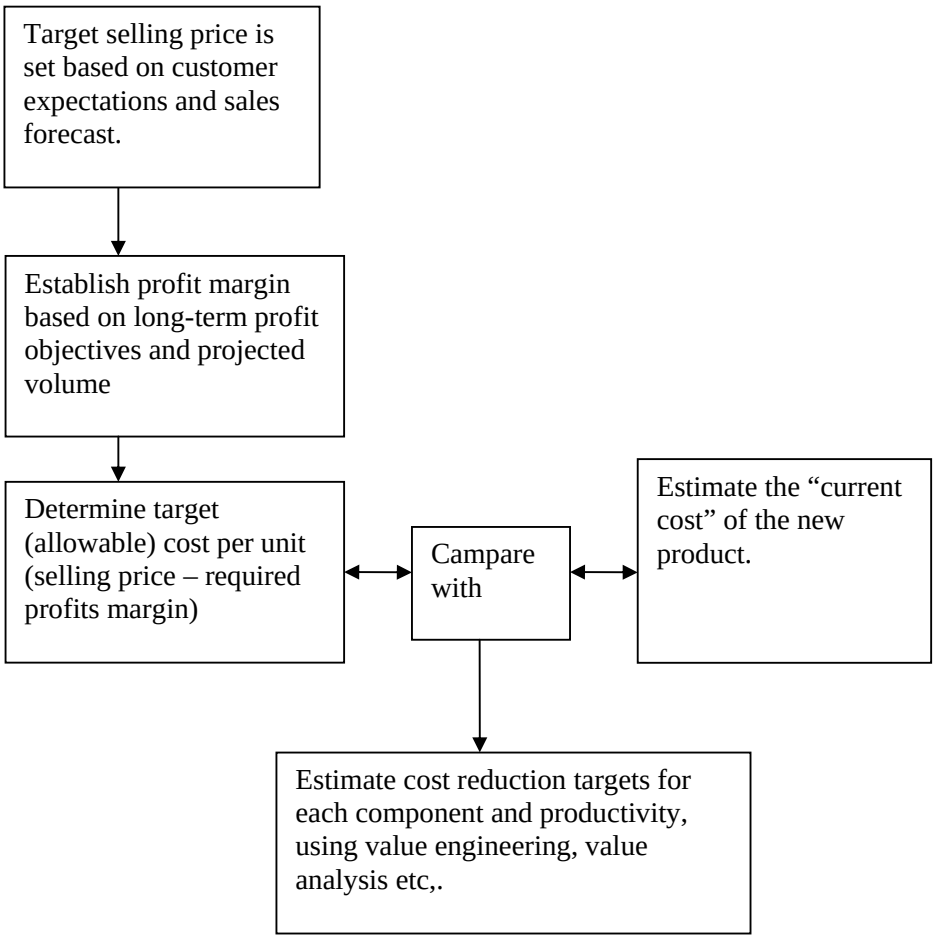
In the second part, more of target costing responsibilities are carried out by special department application. According to the responses to the questionnaires, it is mostly the supply/purchasing departments finance and sales that do this. These are very sensitive departments that work to assist in structuring the reduction of cost. They are like a cost "watch dog". For example, the supply/purchasing department assesses the cost or supplies and also assures that the time matches with the desired requirement for production. Time is also very important so as to guarantee planning and quality control to meet consumer expectations. This department also

act as a tool to look for other cheaper suppliers or to lecture suppliers on how to cut cost and maintain regularity of supplies.

The finance and the sales departments were also mentioned as departments where target costing is used as a department application. That is, the system is used in some special departments. Sampling the results, most of the adopters through special department said that they did that so as to analyse, projects and control the cost as they might occur in the course of production. They include areas such as purchases, supplies, organisation and cost management as a whole. They also assess the costs that might be involved in production and cost of materials and other supplies. The sales department is mainly involved in sales, and in conducting market research and other marketing related activities such as promotion.

From analysing target costing users and judging from responses to the questionnaire, it can be inferred that Swedish target cost adopters’ use the following steps in adopting the system. Figure 9 below attempts to explain this phenomenon.

Figure 9: Aggregated steps used by Swedish Target cost adopters.



Other reasons for adopting:

To round up this session of assessing the reason for adopting target and similar costing, some other points were identified as probable reasons for adopting the system. Some of them are as follows

- **As a crisis response:**

Most of those firms which confirmed that they use the system did so in reaction to a crisis that had rocked them or was likely to occur in their future business environment. Such crises are those, which could also be said to have affected the pattern of Swedish exporters today as opposed to what it was in the past. For example, post world war two Swedish firms controlled the European market due to the limited destruction of their production facilities during the war period. In this case, "traditional cost plus" methods worked with limited challenge. After reconstruction, many similar producers emerged from those markets in the European mainland, which the Swedish firms used to dominate. These challenges to the Swedish exporters have persisted up till today and have been intensified with the strength of nationalism in these markets. Therefore Swedish firms have seen their market shares here drop. These firms have tried to maintain their positions by forming mergers or takeovers in these markets so as to maintain a strong market position. Those who cannot apply these strategies have diverted to other markets and adopted costing systems similar to target costing that make their products more attractive even with the growth of cheaper home producers.

"It is not only very high competition the E.U market but also lots of bottlenecks in the system. We have decided to put a lot of focus on other markets. Our main markets now are the North American, Scandinavian countries, the UK and we are now also growing in Asia…however, we still own a significant amount of market share in the EU but it is not as attractive as it used to be" said an adopter chemical producer.

From the home front there is also an observed approach towards crisis response. There is a very high rate of competition at home and many firms lost strategy on the grounds that "home produced goods will also be appealing to the home market". Hence I asked the questions, why are Nokia's mobile phones and other electronic appliances selling better in Sweden than similar home made ones? Why did Swedish establishments have to import lots of computer hardware during the IT boom when just on the eve of that era a leading producer of computer hardware sold the right of production to another firm? The problem might have been due to cost. From the analysis, target costing adopters seem to sell well in Sweden

because cost of production is relatively high and consumers are highly educated on what they want in terms quality and the nature of the functionality of their products.

"The Swedish market is very challenging because consumers are very informed and educated about what they want. Their taste is very dynamic and we have observed that the Swedish market is very fashion oriented…they want the latest… best… in a product…and we are just trying to meet those expectations. It is an everyday challenge…" said a machine and transport equipment producer. Therefore, to assume a confrontational policy, adopters feel that target costing will enable them meet the home market challenge.

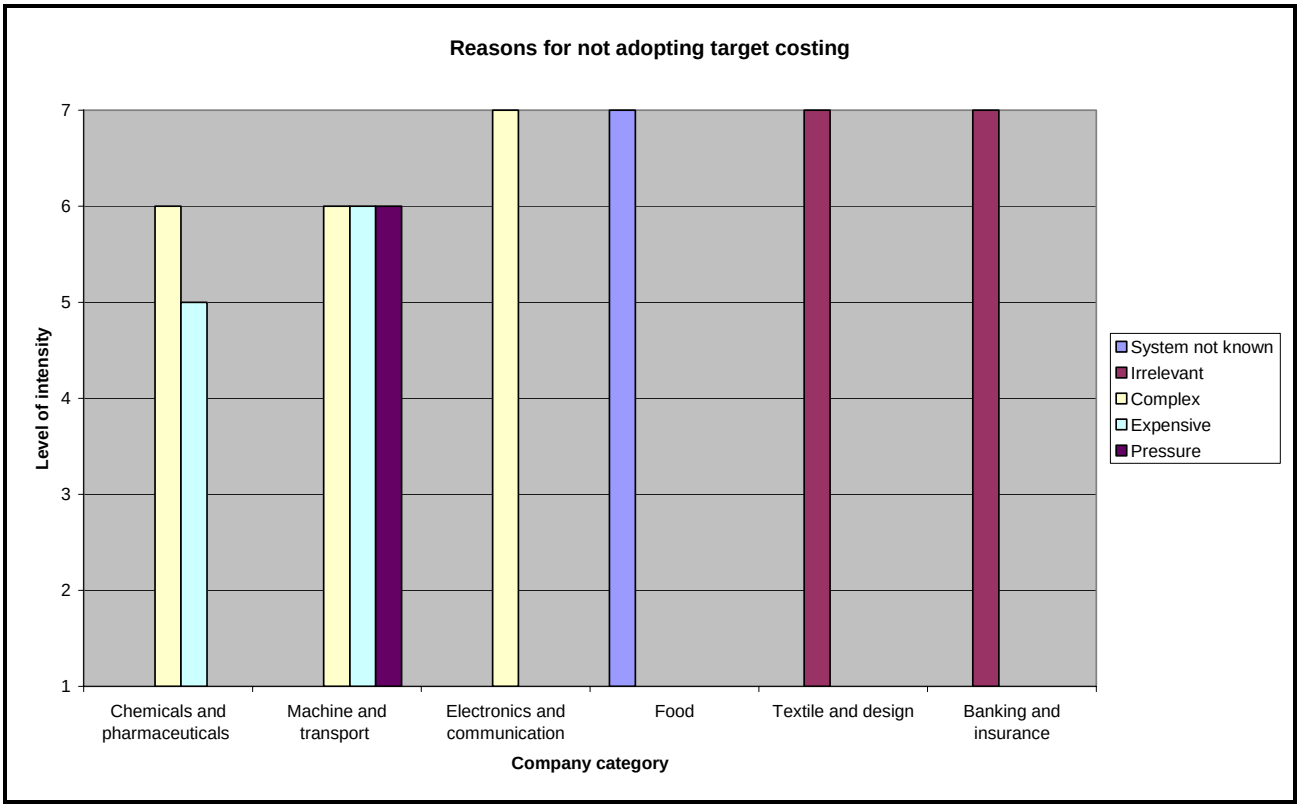
Influence of the USA and increased Internationalisation of Ownership.

The USA usually plays an incredibly important role in influencing the Swedish management accounting system. Proof of this is the great use of many American management models in Swedish firms such as the Balanced score card, activity based costing, cost driver analysis etc,. These are just however, independent management and costing tools and not costing systems like target costing. Most of the contacted firms with very strong pro American and global inclination tend to adopt costing methods/systems such as target costing. Some of them have been induced to do so due to the influence of the USA adopters or because the USA adopters now own part of the firms. The so called "best practice models" usually come from the USA and with the target costing idea growing there so much that, either the Swedish adopters are just "joining the wind of change" or have been persuaded to do so by the parent or subsidiary company. For example most major American subsidiaries (both firms and suppliers) in Sweden contacted use some sort of target costing. For example those firms directly controlled by Ford, General Motors, Dell, and IBM.

6.11 Non adopters:

These are those who indicated that they use other methods than target costing. They were also questioned as to why they did not use the system. Their response was also run on the 7-point likert scale and the analysis below is a reflection of their response. There were 15 in total from all those who replied The graph below provides a summary of why they don't use target costing.

Figure 10, Reasons for not adopting target costing



6.12The reasons for not adopting

The graph above shows why non-adopters do not adopt target costing or similar practices and the various industries they represent. The main reasons for not adopting target costing as shown above are:

Complexity of the system:

Complexity here refers to the difficulties in understanding all the components that are combined to comprehend and assist in the implementation of target costing. Three major non-adopter industries indicated that they did not apply the system because the system was very complex.

System is expensive:

This refers to the amount of resources involved in implementing target costing systems in the company. This cost of implementation is perceived very high than the expected returns. Therefore, it is seen as a less value creating activity for the firm. Two of them; machine and transport equipment and chemicals and pharmaceuticals indicated that they do not adopt the system because it is too

expensive. They thought that cost management could be achieved through other more efficient and cheaper means.

Too much pressure on workers:

Too much pressure here is attributed to the fact that for targets to be achieved, worker would be expected to work at longer hours and at faster pace so as to reach targets. Therefore, some machine and transport equipment company non adopters felt that the system put lots of pressure on workers. "*We have a lot of pressure from trade union organisations and the like…which makes it difficult to meet the requirement on any extra labour cost…At normal working hours workers complain of pressure and if we are to implement such a system….we cannot meet demands"* said an agricultural equipment manufacturer.

System not known

In which target costing system is not known to them and is perceived strange when it was presented it to them. The food industries contacted indicated that they do not know about it. This may tie to reality because the some Swedish agricultural firms or food producing companies have been performing very well and there are signs that the sector might grow.

"There is high competition but we still do good business using our traditional methods" said a food producer. However, there are some firms in the sector which been have accused of dumping in some foreign markets (Arla), others have been sold out to foreign firms (Findus) and some are being merged so as to gain access to foreign markets (Arla)[184]. Other firms felt that the system was not relevant to their operations. *"The nature of our operations doesn't require us to go into such systems"* said the marketing manager of a chemical producer. They may also maintain such a stance because of limited pressure from the economies of their firms. Even though they claim that they have strong competition, they are still able to operate profitably at their current management systems.

- **Other impediments for adoption**

To make a final assessment to the reasons for not adopting this system, other impediments to the adoption of target cost were observed as follows.

Cultural factors in which people tend to build fences around their responsibilities and believe that their management system is the best [185]. Henceforth, inefficiency is seen as a normal aspect of a company life and solutions to that can be found through reviewing those inefficiencies. Some firms contacted also mentioned that

[184] DI 24th Sept. 2003/Oresund Food Excellence Denmark.
[185] Roslender et al 2000

they do effective market research before producing and launching a product. They also may consider this as a sort of target costing which is not the case. Target costing is more than just some market research.

Another major hindrance to the application of target costing and or similar system is the lack of effective literature or guidelines on how the system works and limited research into the system from the Swedish perspective. Even though there is some similarities between the Swedish and Japanese management systems, technical aspects of financial/ cost management differs. It is true that the Japanese techniques in implementing target costing are tied in their language (Japanese) with limited translation into English. But recently more external research has been coming up where firms and researchers can draw a foundation on and start similar studies. If this is done we will be able to understand clearly if the non-adopters adopt something similar. But there is also this feeling that if the non adopters were adopting a system similar and called it differently, one would have been able to come across it, given that most Swedish researchers publish in English.

From the questionnaires answered and open questions as well as telephone interviews, I did not however, come across a situation where target costing would have been considered a fad. This was probably due to the small size of the population sampled. Thus if a larger study would be conducted, such a situation where some firms may call it a fad may be encountered. At the moment either firms do not apply the system due to its complexity, cost associated with its structures or the stress it puts on workers or that they do not know about its existence by “name” or that the contacted companies’ structures do not warrant such a system.

Chapter 7

7.1 Concluding remarks

In conclusion to this study, strategic cost management is taking a more central role in companies’ management plans today than it was before and target costing is one of those components in cost management that most companies are trying to use. The Japanese have excelled in international commerce with lots of success thanks to their adoption of the system. It is not that the system has to be implemented by all firms in every industry and at any stage. As indicated in the text above, some factors have to be taken into consideration when assessing whether to employ it or not.

Target cost management has been described as involving the systematic process of planning product and service offerings; determining their sales prices; establishing a continuously adjusting set tool to target costs; and motivating employees to be ever observant of cost reduction opportunities. The goal of target costing is to balance quality and functionality with prices that meet both the organisation’s profitability requirements and the customer’s value-added needs.

Target costing is much more than a cost reduction tool. Although the reduction of cost and the maximisation of profits are connected, the first is in fact a subset of the latter. The history of target costing was somewhat traced. Following this history, a discussion of the stages of target cost management was presented. Therefore, I have tried to explore the core components that make up target costing and have pointed out that according to research the system is growing in the USA and in Europe. I have also pointed out reasons why it is important for lagging Western as well as Swedish firms to adjust their management practices such that similar systems can be applied.

A contrast and assessment is made on traditional cost management systems such as outward migration of production units. However, a distinction is made between outward migration to escape high cost and strategic migration. Mention is also made on the main part of this thesis that old “cost plus” methods have fallen out of fashion and should be avoided since they are very complicated, out dated and have limited weight and strength to withstand this fast changing business world. With the presence of globalisation, where the market sizes of companies have reduced and with technology spreading former notion of technological power, market leadership, and core competence does not hold today on their own. They have to be accompanies with strong cost management systems such as target costing.

Some weaknesses of target costing were also mentioned. Research indicate that those weaknesses are too minimal to make target costing look like a fad as it might have been labelled by some authorities who may have tried the system and failed. It is suggested that when the system is properly installed as recommended, it could be a very important tool to foster cost management strategy.

Attempts to examine the spread of target costing into non-traditional areas of practice were also part of this study. A case study review was conducted to analyse and put forward the idea that American firms were considering target costing. The results suggested that target costing was new in the USA and that some major exporters and others operating in uncertain environments had started considering the use of target costing as a strategic tool to manage not only cost but

also strengthen their organisation's philosophy. The study showed that there was a possibility that the system was gaining momentum. This inspired my surveys of the Swedish firms.

My study of Swedish firms indicated that Swedish firms are also in the league of target costing users. But it did not indicate that those users copied from Japan for the simple reason that Swedish and Japanese have a similar management style. However, the simple fact that there is increased interaction with foreign firms might have influenced the management systems. They believe in long term planning just as indicated by the target costing philosophy, they also believe in quality and consumer satisfaction as their main driving force to success.

The Swedish firms who claimed to use the system probably designed it themselves and or strengthen it with their involvement with the Japanese perhaps it was just a co-incidence that their self designed system became known as target costing. For a further study one may find that non-users might still have structures similar to target costing but don't call it target costing. That might have been why they said they don't use it in the questionnaire.

Finally, the Swedish survey was a challenge to managers to consider whether they use target costing or not and to evaluate the extent to which their firms matched the profile of target costing adopters. In some cases it was difficult for firms to be clear about whether their adoption was due to the growing popularity of the system or that it was due to the hostile business environment. All companies that responded indicated that they face very hostile business environment both at home and abroad. Therefore, this supports further research into how other non users can be encouraged to use the system or to know their own cost management system too, so as determine the limitation of target costing and other modern strategic cost management and other long term planning tools.

I hope this study will contribute to the general knowledge of strategic cost management, especially in Sweden where little seems to have been done in this particular path. According to literature, strategic cost management encourages researchers to develop thoughts and techniques linked to firm's strategy.[186]This impels managers to revise their current strategies and rethink and re-evaluate their steps thereby impacting their organisation. The result here I believe, will contribute explicitly to some extent the investigative link between company strategy, dynamic operating environment, new management concept and long term

[186] Hibberts et al 2003

planning. However, the results were limited by sample size of firms under consideration and may not be generalised to all contacted firms. The data may be biased my managers feeling insecure about the background of the person requesting information about their firms. Hence, this study provides less insight into the precise details of these costing systems and the organisational processes and actions that precede or are limited by this target costing.

7.2 Recommendations for future research

- A larger study into the application of target costing in Swedish firm.
- Similarities and differences between the Swedish cost management system and the Japanese systems of target costing application in some leading Swedish firms.
- For non-users, what their main costing strategies are in these times of heightened competition and market uncertainty.

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Appendix

Appendix 1

Comparison of target costing and cost plus approaches

Cost plus	**Target costing**
Market consideration not part of cost planning	Competitive market considerations drive cost planning
Costs determine price	Prices determine costs
Waste and inefficiency is the focus of cost reduction	Design is key to cost reduction
Cost reduction is not customer driven	Design is key to cost reduction
Cost accountants are responsible for cost reduction	Cross functional teams manage cost
Cost reduction is not customer driven	Customer input guides cost reduction
Suppliers are involved after products are design	Suppliers are involved early
Minimises initial price paid to customers	Minimises cost of ownership to costumers
Little or no involvement of the value chain in cost planning.	Involves the value chain in cost planning.

Source: Ansari et al 1996 page 16

Appendix 2

Upstream cost **Down stream cost**

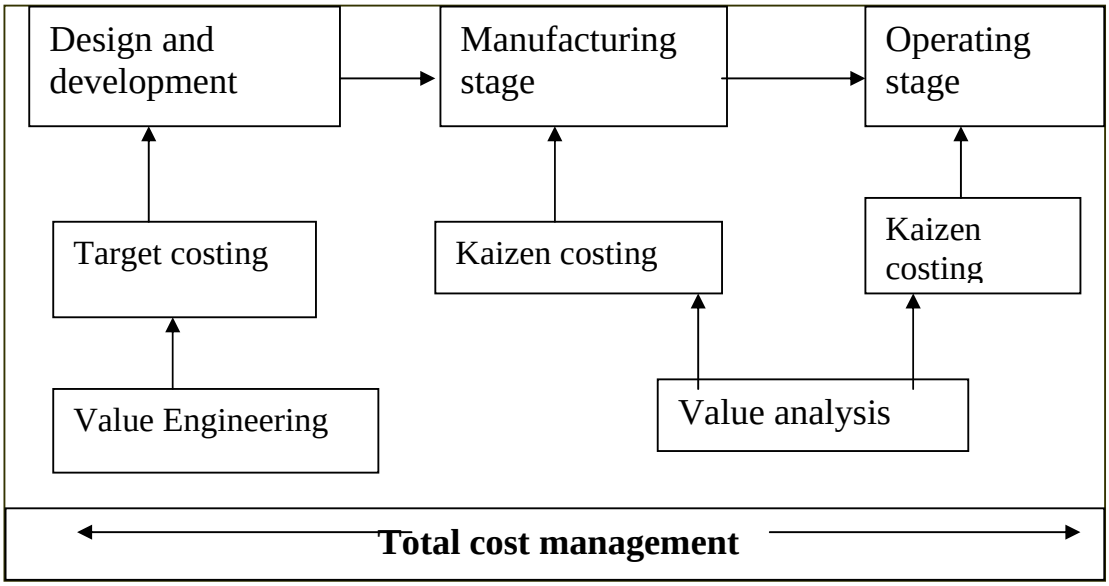

Fig 1 Appendix 2 Positioning total cost management within a manufacturing Company

Source: Bayou, E., Three routes Target Costing 1998 pg, 30

Appendix 3

The following equations explain this relationship between profits, sales and target cost.

Target cost	=	Target Revenue	-	Target Profits
C	=	R	-	P
Target Revenue	=	Target sales Vol.	-	Target price
R	=	Q	-	P
Target profits	=	Target returns	-	Profit margin
I	=	R	-	M

Profit margin = (Target price – target variable cost-target none variable cost)/target price.

M = (P-VC-NVC)/P

Target variable cost + Target non variable cost = target cost

VC + NVC =C

Target unit cost = Target cost /target sales volume

Cu = C/Q

Sources and inspiration from Bayou, Ansari et al and Yee.

Appendix 4

Some formulas used in the thesis

- Price led costing formula

$C = P - \pi$

Where C = target cost

P = completive market price

π = Target profits.[187]

- Target profit P can be shown as follows:

$P = S * p'$

Where:

S=Target sale

P' = Sales to profit ratio

- Target Sales (S) = $\sum_{i=1}$ Ui x Qi

Qi = estimated sales volume

Ui – unit price for the model[188].

- Function based formula (example the Toyota's formula is written thus)

$Pn = Pc + (F1+F2+F3+\ldots Fn)$

Where Pn = new market price

Pc = Current price

Fn = Value placed by market on a function.

- Physical attributes based adjustments calculation formula.

$Pn = Pc + (a^1+a^2+a^3+\ldots a\eta)$

Where

Pn = new market price

Pc= Current price

an= measures or physical attributes of the product.

- A typical formula for competitive based adjustment is written thus

$Pc = Po * (Xc / Xo)\ n$

Pc = competitor's market price

[187] Ansari et al 1997

[188] Tanaka 1994

P_o = our product's price

Xc = measure of attribute of competitor's products

X_o = Measure of attributes of our products.

n= coefficient of the core product rating. This is the coefficient that assists us in being able to know the difference between our core products attribute and that of competitors. From here it will be easy to know how to add an additional component that might increase the level of attractiveness towards our products compared to those of our competitors.

Company case example: The case of Caterpillar Corp. in the 1980s.

[189]*A more specific example of the influence of target costing in the West was that observed in Caterpillar Inc. in the mid 1980s. Caterpillar Inc. prior to the 1980's was the worlds leading producer of tractors and excavators with limited competitors and a robust international market exposure. But tides in the international market changed leading to weaker global demand for her products. The company experienced increased cost pressure that led to a drop in profits amounting of about one billion dollars over three years. However, her Japanese rival Komatsu Company Limited was performing well, penetrating into Caterpillars market niche. Financial analysts at Caterpillar Inc. in a bid to turn the company around used a system called "reverse engineering" where caterpillars engineers purchased, tore apart and rebuild Kumatsu's products so as to determine their manufacturing process. They also studied Kumatsu's financial structure and products so as to point out its cost effects and configuration of their components and part build up. The methods yielded interesting news to Caterpillar Inc. and showed that the firms operated with a 30% cost premium over Kumatsu. Caterpillar then immediately adopted target-costing system and immediately invested $18billion in plant modernisation around the world. This helped to eliminate non-value added processes, examine product sourcing procedure, move to a just in time inventory schedule and cut the parts used in it product. The results thereafter showed the company making profits and in 1996 net income was $1, 3 billion on revenue of $16.5 billion. Target costing is the seen as the company long-term strategy, helping to plan both profits and production.*

[189] Industry week

Questionnaire

Introduction

1. In which of the following industries are the core activities of your company positioned?

- Food
- Textile and design
- Wood and building manufacturing
- Chemicals and pharmaceutical
- Machine and transport equipment
- Instruments and optical
- Electronics and communication equipment
- Steel and related
- Construction and engineering
- Banking and insurance
- Others.

2. How many competitors does your company have?

- Very many (7-1)
- None.

3. If many or few, where do you think your competitors come from? (Number in %)

- Home
- Abroad
- E-markets

4. How do you perceive the intensity of competition?

- Very low
- Very high. (1-7)

5. How comfortable is your company positioned on the brink of competition, if any?

Very comfortable

Less comfortable (7-1)

6. Why do you think your answer (5) above is the best at this time?

- Because you are a market leader
- Because of your strategies
- Because your company has the best product

- Other

7. What factors do you think is/have an important role when positioning a product in the market?

- Sales price
- Required profit margin
- Others,
- Cost price (Unimportant-Very important-1-7)

Target costing…a brief description,

It is a cost management technique used in the beginning of the life cycle of a product. Research shows that most product cost is fixed in the development phase. The starting point of target costing is the price that seems attainable in the market. A required profit margin is then subtracted from the market price, which results in the maximum allowable cost price.

Therefore we have Maximum allowable cost price = attainable selling price minus required profit margin

8. Does your company use the above-described method in its product development phase…or something similar?

- Yes, we do as described
- Yes, but something similar
- No, we use other methods.

9. If "yes" how long has your company been using the technique?

(Time period in months or years)

10. What can you assess from using the technique as a long term planning tool?

- Very efficient
- Very difficult to understand and use
- Manageable
- Other

(Important less- important (7-1))

11. If "no" what do you think are the likely reason for not using it?

- Method unknown
- Method too complex
- Too expensive to collect information
- Too costly in time and money to collect analysis and reports
- Not applicable to the company

- It put too much pressure on workers
- Other reasons

(Less important-Very important -1-7)

12. Follow up on question 11 above; do you think your company might one day use this technique?

- Maybe
- Yes
- No

For those who adopt the Target costing technique

13. What was the main goal your company aimed to achieve through target costing?

- Cost reduction
- Customer satisfaction
- Quality
- Timely introduction of new products
- Others (Less important-Very Important) (1-7)

14. What are the main benefits of the current use of target costing?

- Cost reduction
- Customer satisfaction
- Quality control
- Timely introduction of new products into the market
- Improved organisational control and improved profits.

(Very important-Less important) (7-1)

15. Which department in your company do you think has the most important need for target costing?

- Product development
- Product design
- Product planning
- Manufacturing
- Finance and accounting
- Purchasing
- Sales
- Marketing
- Others

(Unimportant -Very important-1-7)

16. In which form does the activities for implementing target costing take place in your company?

- Through special departmental applications
- Through interdisciplinary teams
- Through separate functions
- Through the accounting department
- Through rules and procedures
- Others.

(Important-unimportant)(7-1)

17. Are you satisfied with the result you have got so far with the use to this Target costing as a strategic management system? Your comment!

[i] European Bank for Reconstruction and Development, April 2003 and the United Nations Economics Commission for Europe December 2002.

[ii] Cautious Optimism following boom and gloom-Financial Times Thursday April 29 2003: Székesfehérvár and Gyois are towns in Hungary which were termed investment miracles in the early 1990s, at the collapse of communism in Hungary and most of Eastern Europe. Companies such as IBM, Ford, Philips etc,, planted their roots into the economic life of the region. This example is just one of similar moves in this Eastern Europe region where Western investors had been moving in, at a fast pace to benefit from cheap labour, lower wages, competitive prices, and generally lower cost of production. American IBM for example was the biggest investor in Székesfehérvár where it manufactured hard disc drives while German Audi became the biggest investor in Gyor where it manufactured almost all its engines in that town as well as the Audi TT sport car and other models.

By the height of the World economic boom of 2000, much of Western Hungary faced severe labour shortage consequently companies in Székesfehérvár and Gyois had to import labour from Slovakia at a significantly higher cost. This labour shortage started deterring future investors from moving to this area. The expected effect started falling in place-labour cost started rising and the currency forint appreciated significantly 23% in dollar terms. In the entirety general cost issues, which made some companies to move to this area started rising.
In October 2001 IBM announced closure of it factory in Székesfehérvár, Japans Kenwood also announced the closure of its last year in the same town. Investors have been moving from Hungary to cheaper China and other Eastern European countries. The government's response to the rise in unemployment caused by the closure of these factories is that they have relied too much on foreign investors and too little to encourage strong domestically owned companies.

[iii] Returns on sales (ROS) - a widely used ratio that detects operational efficiency. It is calculated by dividing net income before interest and tax by the sales. It measures a company's profitability, equals to a fiscal year's pre-tax income divided by total sales

[iv]Return on Investment as indicated in most finance literature is summarised thus: a measure of a corporation's profitability, equal to a fiscal year's income divided by common stock and preferred stock equity plus long-term debt. ROI measures how effectively the firm uses its capital to generate profit; the higher the ROI, the better.

[v]Hodge et al, 2003. The Likert scale introduced by Rensis Likert in 1970, is a method of measuring attitudes that asks respondents to indicate their degree of agreement or disagreement with statements, according to a three-or five-or seven-point scoring system, e.g., "strongly agree" "no opinion" or "strongly disagree".

[vivi]Dekker et al 2003, quoting Guilding et al 2000, to point out that note should be taken that the non response bias could result in an over statement of the real option rate. There could be relatively more non-adopters among the non-respondents for example because "it is not "relevant to them". I also observed that at the time of this survey, most of the companies officials where busy computing their company 3rd quarter financial reports. So it was normal that some could not respond due to pressure at work.