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The impact of accounting information on management's decision-making process

Wexiödisk

A Case Study

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Executive Summary

Wexiödisk AB is a producer of dishwashing machines for professional use. Its headquarter is located in Växjö and its products are present on the European, as well as the Japanese and Australian market. Currently the company is Scandinavian's leading supplier in its business field. Since 2004, Wexiödisk belongs to an Italian group, called the Ali Group.

For being a successful organisation, it is not only necessary to make decisions, but to implement the right ones. Wexiödisk's present success, as shown in its leading position, can be led back among other things to a number of beneficial decisions. A decision is concerned with the selection of an action often out of a number of alternatives. In order to choose the right one, decision-makers need some guidance, which is partially provided by information gathered by management accounting. Tools used in the management accounting area are consequently considered as a helpful support.

Also Wexiödisk focuses on some of these tools, including the costing system, profitability, costing tools and budgeting, which will be presented in this thesis. The costing system contributes to the available knowledge of costs, building the basis for several decisions, like determining prices. Profitability is used especially for decisions concerning discontinuing operations, whereas budgeting deals with the evaluation of investments.

These financial information supports decisions made in Wexiödisk. Various decision-making models have been identified in literature to examine this process of decision-making. Out of this pool a sequential model was chosen to illustrate the decision-making steps in Wexiödisk. This model divides the decision-making process into several stages that follow each other. However, it will be illustrated that the decision-making process in Wexiödisk is a bit more complex and cannot be easily squeezed into these steps. It will become apparent in this paper that this process is influenced by many people, making it difficult to determine one final decision-maker as well as a certain decision-making point. Besides, experiences, feelings, preferences and other qualitative factors can have an impact on decisions in Wexiödisk.

Nevertheless, financial information affects the decision-making process. In Wexiödisk the role of management accounting information is interwoven and integrated in the whole decision course, having the ability to influence the process at almost every stage.

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1 Introduction

1.1 Background

„One of the marks of the executive is the ability to decide. One of the obligations of free men is the willingness to decide. One of the qualities of effective people is the courage to decide.”¹

Making decisions is part of our every day's lives. Considering organisational life, it is often one of the main functions and tasks of management, as underlined also in the statement above. Indeed, management and decision-making are often regarded as belonging together, as management usually makes the major decisions of the organisation.²

Decision-making involves the selection of the best course of action.³ In order to decide on the best option, management has to judge the effectiveness of various alternatives. Therefore they need some guidance that is usually provided in form of data and information.⁴ For this reason they often rely on financial and economic information gathered by management accounting.⁵

Management accounting can be defined as “[...] the process of identification, measurement, accumulation, analysis, preparation, interpretation, and communication of information that assists executives in fulfilling organizational objectives [...] a formal mechanism for gathering and communicating data for the ends of aiding and coordinating collective decisions in light of the overall goals or objectives of an organization.”⁶

As can be derived from this definition, accountants play a crucial role in providing information for making economic and financial decisions. These decisions are an important element for the organisation. Implementing the wrong ones can affect the company in a very negative way and may sometimes also lead to its bankruptcy. Young, J.⁷ even goes so far to claim that “The road to bankruptcy is paved with poor decisions.” As the outcome of a decision cannot always be predicted with certainty, management often faces the risk of

¹ Evans, R. as quoted in Young, J. (1982), p.37

² Young, J. (1982), p. 45

³ Emmanuel, C. et al. (1990), p. 128

⁴ Bierman, H. et al. (1986), p. 4

⁵ <http://business.enotes.com/business-finance-encyclopedia/accounting>; 2006-05-13

⁶ Macintosh, N. (1995), p. 2

⁷ Young, J. (1982), p. 39

choosing the wrong ones. Hence, management always needs to have some courage as well when facing decisions.

Apparently, good decisions are important and ensure the wellbeing and also the survival of an organization. Also 'Wexiödisk AB', which is currently Scandinavia's leading supplier of dishwashing machines for professional users, has to assure its future by implementing the right decisions.

1.2 Problem discussion

In order to circumvent financial disasters through wrong and ineffective decisions, there is nowadays a vast pool of financial tools available which can be used to support the decision-making process. Nevertheless accounting tools applied vary from organisation to organisation. One tool that proved to be very effective in one organisation, might fail in another. Different information are required for these diverse purposes, therefore organizations have to focus on different accounting tools to support their decisions-making process.

Wexiödisk uses its own tools and techniques. At present, the company is operation quite successfully, as its position as Scandinavian's market leader shows. Hence, it can be assumed that without making the right decisions this position would hardly be possible. Management accounting tools applied in Wexiödisk might have contributed to some extent to these beneficial decisions.

1.3 Research question

Which accounting tools are used by Wexiödisk? How does the organisation use those in the decision-making process?

1.4 Purpose

The purpose of our paper is to find out which accounting tools are used in Wexiödisk and to inform the reader about how those affects the decisions made by the company.

In order to contribute to the attainment of the purpose the paper will pursue the following structure. As a start, the methodology will provide the reader with an insight into the process

of how the study was conducted. Afterwards, the chosen theories are introduced, which include ideas of various accounting tools as well as decision-making. Fieldwork data, collected during our study, will be eventually presented and then compared with the theories in use. This allows for drawing conclusions that will be shown in the final section.

1.5 Limitations

Due to a lack of time for our research, we could not conduct this study as deep as we wanted and so some questions that we had did not find any answer.

The most of the information we got come from interviews and questionnaires. During the interview we had sometimes the feeling that the interviewees are used to employ other words and vocabulary than we do. We couldn't choose other methods in addition as the research participants time was very limited. Indeed, such methods required more time than just a few months.

The managers did not have so much time to allocate to our study. With more interviews we could have also a more clear answer to our research question.

As there is a huge amount of accounting tools available, only some of them will be investigated. There are some tools that are said to allow for an examination of the relationship between accounting information and decision-making, as will become apparent later on. So the focus will be on these selected ones.

We have to underline also that no one of us has an experience before in conducting a study in this extent. For us it was hard to conduct this bachelor thesis, especially the analysis was very difficult to do. Fortunately we got some help and support. We hope that this work is pertinent.

2 Methodology

The purpose of this section is to explain how we carried out our study and how we analysed the data. The methodology will be started by presenting the research journey which enlists reasons for choosing the actual topic and criteria for picking a company. In the next section the approach of the chosen research method will be described. Under the headline case study an explanation of the research strategy will be given. The research tools introduce the reader to the data collecting methods in use that will be followed by a defence of the data collection methods. Finally, the last paragraph will deal with the value of the study.

2.1 Research Journey

When deciding on a topic of interest for our study, we were quite intimidated. We found ourselves confronted with a vast pool of possible research topics and it was quite difficult to choose one. By considering the interests of our team-members we narrowed the range of topics. Two of us are pursuing studies in the accounting field whereas one is mainly concentrating on the field of leadership. Hence, the decision was made to combine both areas and the final topic emerged.

In the next step, which consisted of choosing an organization we took several characteristics into consideration: company type, size and location.

Type – One criterion for our choice was its field of operation. It should be occupied in the private sector, because public companies have a different understanding of internal accounting, which often does not primarily aim at profits. We are more familiar with companies that are operating in the manufacturing sector. For writing a reliable paper we decided therefore to focus on this organisational type.

Size - Our tutor recommended us to take a middle-sized to a large company, as such organizations usually have own departments for internal accounting and a top management that is responsible for strategic decisions. In smaller organizations these tasks often flow together in one department and are interconnected. To meet the purpose of our paper, we need to clearly separate these organizational responsibilities.

Location – In order to get a deep insight into the company, it is necessary to work closely with the company and to meet organizational members personally. The company should be easy to reach in order to conduct some interviews to get a good impression of the internal processes and reliable results. A company nearby could limit our time and budget problems.

After having decided on some companies, we tried to establish contacts with them. This was done on the AMAR 2006, which is an information event organized by Växjö University on the 9th of March, where we got in touch with the representatives of Swedish companies. Unfortunately, most of them were not very familiar with the field of students' support and advised us to contact the firms via e-mails. Unfortunately, the companies either denied our request or did not reply at all.

Eventually, one of our group-members got the hint to contact the company "Wexiödisk AB" that will be presented in more detail in later chapters. It turned out that the financial manager was quite in favour of supporting students in their studies. So we made an appointment for a first meeting.

2.2 Preunderstanding

"The notion of preunderstanding refers to people's insights into a specific problem and social environment before they start a research program or consulting assignment; it is an input."⁸

Preunderstanding usually appears in form of theories, models, techniques, but mostly researchers do not have practical or institutional knowledge.⁹ It is determined by general knowledge of theories and techniques and specific knowledge of institutional conditions. Moreover, it can be affected by personal attributes, like intuition or creativity.¹⁰

During our university studies and our school education we developed knowledge in different fields, as mentioned above. Through this research we hope to expand and if necessary revise our knowledge. Knowledge cannot only be obtained through intermediaries, like in our case through teachers at universities and schools, but also through own personal experience.¹¹ Our

⁸ Gummesson, E. (2000), p. 15

⁹ Ibid., p. 15

¹⁰ Ibid., pp. 66 – 69

¹¹ Gummesson, E. (2000), p. 67

working experience in the studied fields is rather limited. One of us has worked two months in an accounting department of a big company. Another one has got some practical experience in the accounting field through a two week long internship organized by the school. The third one worked one month as a trainee in an accounting service of a small organization.

Our specific knowledge of institutional conditions is mainly reduced to the facts that we gained by studying Wexiödisk's homepage and conducting interviews. However, as we are not 'insiders' of the company itself, we do not experience its culture. Consequently, we do not know much about the people working there, their interactions, their contacts and attitudes and we only have a small insight into the organisational processes.

As stated above, also our attributes might influence our extent of preunderstanding and by this the outcome of this study. The more or less limited knowledge we gained until now might affect the way we interpret interviews and make sense of behaviours.

Preunderstanding can be seen as an input, as stated above. Understanding that contains the insights that one gains by doing an assignment is considered as output.¹² Hence, we are motivated to improve our understanding by conducting this work and we hope to become more experienced.

2.3 Approach

"Accounting theory can be developed by using several research methodologies."¹³ Schroeder et al. distinguish between five types; which include the deductive, inductive, pragmatic, ethical and behavioral approach. Among them only the chosen one, which is the deductive approach will be explained in the following.

As mentioned above, we had problems in finding a company in the beginning. In order to avoid getting under time-pressure we had to start writing. As it is hardly possible to write Field work data without a company we started with the theoretical part, which led to the application of the deductive approach. This approach starts with the more general information and narrows it down to the more specific one.¹⁴ Hence, its starting point can be found in

¹² Ibid., p. 15

¹³ Schroeder, R.G. et. al (2005), p. 102

¹⁴ Ibid., p. 102

existing theories and concepts. In other words, this research form mainly tests theories that do already exist.¹⁵

2.4 Case Study

The ideas of this paper are to a big extent based around one practical example, the organisation Wexiödisk. So a case study will be applied. Schramm¹⁶ as quoted in Yin describes the basic characteristic of a case study through its effort to “illuminate a decision or set of decisions: why they were taken, how they were implemented, and with what result”.

A case study is a good way to develop and increase understanding of a complex matter. It can add more experiences and opinions to the knowledge that was already gained in previous research.¹⁷ Hence, a case study research offers the chance of a holistic view. Various aspects are studied in relation to each other and within their context. So the holistic view sees more in the whole than just the sum of its parts.¹⁸ Because of these advantages this strategy is applied in this paper by using it in a descriptive mode, which illuminates an involvement and its context.¹⁹

Among the drawbacks are a lack of statistical reliability and validity, because case studies are often not based on a random number of observations and on a random selection of cases. Moreover, one cannot draw generalisations from one case. However, our aim is neither to depict generalisations nor to conduct this study by using several cases.²⁰ Rather we would like to observe one company, Wexiödisk and find out about the application of accounting tools in this particular organization.

Both, quantitative as well as qualitative data collection methods can be used within a case study.²¹ According to Yin,²² a case study can make use of different sources, like documentation, archival records, interviews, direct observations, participant observation and

¹⁵ Gummesson, E. (2000), pp. 63 – 64

¹⁶ Yin, R. (2003), p.12

¹⁷ <http://www.gslis.utexas.edu/~ssoy/usesusers/l391d1b.htm>; 2006-03-26

¹⁸ Gummesson, E. (2000), p. 86

¹⁹ Yin, R. (2003), pp. 12 – 15

²⁰ Gummesson, E. (2000), pp. 87 – 88

²¹ Ibid., p. 3

²² Yin, R. (2003), pp. 85 – 86

physical artefacts. The ones that are used in this study will be included in the research tools outlined below.

2.5 Research Tools

The research tools involved included a literature review, interviews and questionnaires which can be assigned to the following two categories.

2.5.1 Theoretical data collection

In order to increase our understanding of the research topic we reviewed various literatures such as books and articles. For this reason we went to the library of the University of Växjö and scanned the database called Electronic Library Information Navigator (ELIN). Some books are rather old, but we consider most basic principles to be still valid. Nevertheless, we decided to replenish them with the use of more up-to-date articles. The book “Management & Cost Accounting” by Colin Drury (2000) serves as a basic framework for this study.

2.5.2 Empirical data collection

The empirical data collection was primarily done by conducting two face to face interviews, one with the financial manager and another one with the managing director. An interview can be described as a sequence of questions that a researcher addresses personally to respondents.²³ As the information gained during an interview cannot be quantified (i.e. statistical analysis is difficult), it is described as a qualitative research method. When analyzing an interview we checked if all the answers from the interviewed person were inter-related or if and in how far they contradict or correspond to each other. The interview can further be seen as a hermeneutic method, as every small piece of information contributes to a big general picture about what the interviewee wants to say.²⁴

We consider interviews as a good and efficient way of data collection, because they give us insights in the stories, which the interviewee wants to tell. Besides, they are the most used way of collecting data.²⁵

²³ Macionis, J., Plummer, K. (1998), p. 44

²⁴ <http://www.rider.edu/~suler/interviews.html>; 2006-03-26

²⁵ Kociatkiewicz, J. (2006), lecture notes

Some of our prepared interview questions were asked to all interviewed persons, which is called a standardized interview. Other questions varied according to the positions of the interviewees, corresponding to a unstructured interview form. Thus, we combined different interview types. It is notable that standardized interviews allow an easy comparison of the answers, as opposed to non-standardized ones. The prepared questions served as a guide during the interviews. Nevertheless, we adjusted them to the way the interviewees were responding.

We consider it as important to draw attention to the danger of interviews, which is their risk of being subjective. In other words, we might be influenced by our personal impression of the interviewees. We tried to reduce this threat by discussions within the group.

Additional follow-up questions were asked via e-mail exchange with both parties. Further questionnaires have been sent to the production manager and to all employees of the financial department. Due to a lack of English skills only one person of the financial department answered. A questionnaire²⁶ is a succession of questions that are written down and are then supplied to subjects in order to get a response. It is anonymous, allows equal access to different people, gives the opportunity to compare data and get easy and fast information. However sometimes these standardized questions might frustrate users. Moreover, it should be taken into consideration that time pressure and different moods can modify the results of questionnaires.²⁷

A questionnaire allows asking both, open and closed questions. The latter ones are mainly just to tick and so they are easy to score. Nevertheless, some of these questions can have multiple meanings and may leave out significant responses. Due to this disadvantage, we chose open questions which might take more time to administer and might be difficult to score, but which offer the opportunity to convey more personalized opinions and a richness of feelings.²⁸

2.5.3 Defence of data collection methods

We consider literature review, interviews and questionnaires as the most relevant methods for our purpose. Those techniques allow getting a good insight within time restrictions. Further

²⁶ Macionis, J., Plummer, K. (1998), p. 44

²⁷ <http://en.wikipedia.org/wiki/Questionnaire>; 2006-03-26

²⁸ <http://edf5481-01.fa01.fsu.edu/Questionnaires.html>; 2006-03-26

we think that through the available data collecting methods we are able to gain sufficient information to conduct our study.

2.6 Value of the study

Yin²⁹ outlines four tests to guarantee good quality of any empirical social research:

2.6.1 Construct validity

Constructing validity is all about defining correct operational measures for the concepts being studied. This can be done by finding multiple sources of evidence and thus establishing chains of proof while gathering data. In this study the theoretical information has been collected by comparing it with different sources such as books, articles and the Internet. These information have been contrasted further with the empirical data gained in interviews, received documents, own observations and a questionnaire.

2.6.2 Internal validity

This is conducted by establishing a causal relationship where certain conditions lead to other conditions. As this test is more important for explanatory or causal and less for descriptive or exploratory studies, it will not be regarded within this study.

2.6.3 External validity

The external validity is about establishing the domain to which a study's findings can be generalised. As we examined only one company it might be risky to generalize the outcome of the study, although similar phenomena could be expected for companies of the same size and in the same organizational development. In order to generalize effectively more studies in this field are required.

2.6.4 Reliability

Yin³⁰ mentions that it should be demonstrated that the case study can be repeated with the same results. When using exactly the same literature and by interviewing exactly the same persons by asking the same questions as we did similar findings and conclusions can be predicted. Furthermore, we have taken care to present the interviewees' positions and ideas faithfully.

²⁹ Yin, R. (2003), pp. 33 - 39

³⁰ Ibid., pp. 37 - 39

3 Theory

Financial information provided by management accounting can help managers in making better decisions.³¹ In order to illuminate the interrelation between management accounting and decision-making, we are going to illustrate both concepts separately as a first step and combine them in the following.

Therefore we will start general by defining main characteristics of management accounting and giving an insight into a chosen decision-making model. As almost all traditional theories that try to examine the relationship between accounting information and decision-making use knowledge about costs, prices and competitors to develop their decision-making models,³² we will show tools concerned about these aspects later on.

3.1 Nature, scope and purpose of management accounting

The nature of management accounting³³ is to provide information that links the daily actions of managers to the strategic objectives of an organization. Besides, this information should enable managers to effectively involve the entire extended enterprise of customers, suppliers, dealers, and recyclers in achieving the strategic objectives. Further management accounting takes a long-term view of organizational strategies and actions.

Meanwhile the scope of management accounting systems³⁴ is to report the results of operations using financial and non-financial measures, its purpose is to help the organization to reach its key strategic objectives.

We can also note the key difference between management accounting and financial accounting:³⁵ management accounting information is for internal purposes, helping managers to make decisions, whereas financial accounting provides information to parties outside the organization.

³¹ Drury, C. (2000), p. 233

³² Anderson, D.L., Raun, D.L. (1978), p. 59

³³ Ansari, S. et al. (1999), p. 8

³⁴ Ibid., p. 4

³⁵ <http://www.duncanwil.co.uk/manacc/trial/trial2.htm>; 2006-05-13

3.2 The decision-making process

Before explaining the term decision-making process it has to be clarified what a decision is: A decision is a “choice leading to a certain desired objective”.³⁶ Out of that the next question arises: who makes a decision?³⁷

An individual or multiple participants that are involved in decision-making can be called decision makers. Individual decisions can be made by a computer or a single person meanwhile the multiparticipant decision makers can be divided into unilateral and negotiated decisions. In the first one, which is also called team decisions, one of the participants has the power to decide. The others although, can highly influence how the decision will look like. In negotiated decisions the participants share the authority of making a decision. This type distinguishes between group decisions where the participants have nearly equal authorities and discuss their different viewpoints in various meeting and organization decisions. In the latter one the authority of making a decision is unequally shared according to the organizations hierarchy and the coordination between the decision participants is highly structured. The following table should give further information about the various types of decision makers:

<i>Distinguishing traits</i>	Individual	Team	Group	Organization
<i>Participants</i>	One	Multiple	Multiple	Multiple
<i>Authority</i>	Vested in one person	Vested in one person (deciding participant)	More or less equally shared by all participants	Can be distributed unequally among participants
<i>Formal communication among participations</i>	None	Relatively structured	Relatively few restrictions	Can be quite structured

Table 1: adapted from Holsapple, C.W., Whinston, A.B. (1996) p. 69

Sometimes decision just happen and no actual decision maker can be found. A large automobile company employed several consultants to find out who decided to introduce a new model – without being successful!³⁸

³⁶ Holsapple, C.W., Whinston, A.B. (1996), pp. 35 - 36

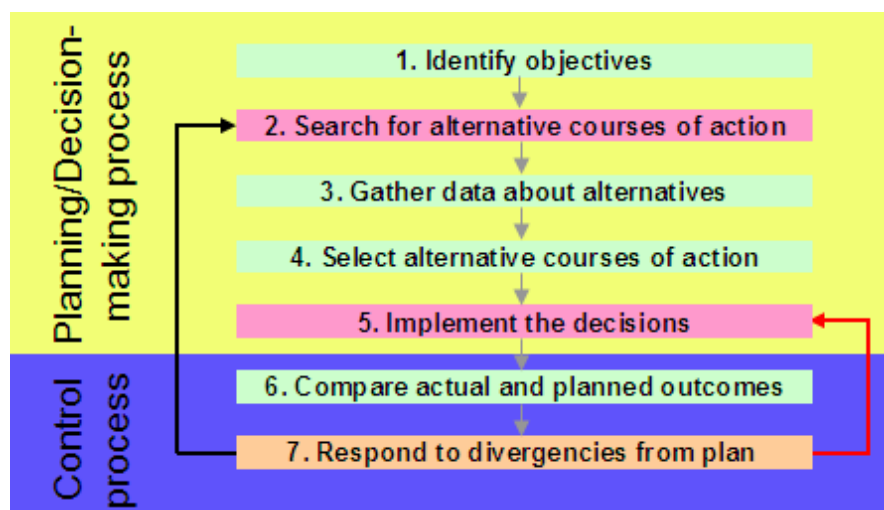
³⁷ Ibid., pp. 60 - 62

³⁸ Langley, A. et al. (1995), p. 265

Literature distinguishes mainly between three forms of decision-making theories,³⁹ sequential ones, where decision-making proceed step by step rationally, anarchical processes that treat decisions more as a chaotic process and a combination of both called the Iterative Sequence. In this assignment the decision-making model proposed by Drury⁴⁰ is chosen, which can be rather categorized in a sequential form.

Decision context and type can vary and the outcome depends often on the decision maker. Although in sequential models there are some common steps that can be found by making almost every decision. These steps that can be applied as a framework for the decision-making process are useful regardless of the decision's type, context and maker⁴¹.

Drury's model includes seven stages that follow each other. Five stages of this model belong to the decision-making process, also called planning process that is described as “making



Graph 1: Adapted from Drury C. (2000), p. 6

choices between alternatives”. At the end of the decision-making process he adds other two stages called the control process that should measure and correct the concrete performance of the alternatives chosen.

3.2.1 Planning Process⁴²

1. Identify objectives: As a first step in the planning process management needs to identify goals and objectives. They serve later as a guiding direction that enables the decision-makers to evaluate the desirability of a certain way of action compared to another. From an economic

³⁹ Ibid., pp. 261 – 262

⁴⁰ Drury, C. (2000), pp. 5 – 10

⁴¹ Holsapple, C.W., Whinston, A.B. (1996), p. 71

⁴² Drury, C. (2000), pp. 6 - 9

point of view profit maximization for the firm's owners or shareholder wealth should be the main objective.

2. Search for alternative courses of action: Afterwards management has to search for alternative courses of actions which make it possible to achieve the goals set. Therefore the organization has to scan its environment for potential threats and opportunities. In order not to be taken by surprise a company should focus on its own product and market development. This is the most important but also difficult step in the whole decision-making process. In most cases it is not possible for a company to consider the complete pool of possible alternatives.

3. Gather data about alternatives: Potential growth rates, areas of activities, gain in market share, cash flows and much more information is collected for every option. The decision makers further have to distinguish between certain, uncertain and factors that do not lie in their control such as inflation, competitions strength etc. Data is gathered for both, for long-term or strategic decisions and for short-term or operating decisions, as explained later on. The evaluation of these factors often depends on which length of time period a company regards as more important.

4. Select appropriate alternative courses of action: The alternative that "best satisfies the objectives of an organization"⁴³ will be chosen. If our main goal is profit maximization, all alternatives should be listed in terms on differences in profit. The alternative that seems to achieve the goal best should then be selected by the decision makers.

5. Implementation of the decision: Finally the decision will be implemented through the budgeting process. A budget is a financial plan and statement of the organizational expectations that tries helping to realize the management's decisions. It also communicates to everybody in the organization which role they play to achieve the aims of the company.

⁴³ Idem., p. 9

3.2.2 Control process

In order to guarantee the attainment of a firm's goals and plans, control is necessary. Therefore Drury adds the control process⁴⁴ after the decision-making process. He suggest to control in two steps:

6. Compare actual and planned outcomes: An accountant has to establish performance reports which provide feedback by comparing results with plans. Deviations from plans should be taken into closer consideration by managers. Both, budget and performance report are considered by managers. In this way accounting provides assistance to managers, especially by showing problem areas and by measuring actions.⁴⁵

7. Responding to divergencies from plan:

The black and the red arrow in Graph 1 want to point out that the alternatives chosen should be frequently reviewed and if the outcome of the decisions made differs from the planned one, corrective actions should be taken.

3.2.3 Limitations of Drury's model

Drury's model can be criticized for various reasons.⁴⁶ First of all, it assumes that the right decisions are easily and unambiguously identifiable. Secondly, it does not include factors, like emotions, imagination, memories, culture and mindset of the decision-makers. Last but not least, it is built upon the idea that each step can be clearly separated from the other which does not always correspond to the reality of decision-making.

3.2.4 Short-term decisions and long-term decisions

As stated above, decisions can be grouped into short- and long-term decisions. It is necessary to consider decisions from both perspectives.

The short-term⁴⁷ is usually defined as being one year or even less. In short-term decisions the importance of the time value of money is low. These decisions are mainly based on today's data. Short-term decisions can usually be changed easily as opposed to long term ones.⁴⁸

⁴⁴ Drury, C. (2000), p. 9

⁴⁵ Horngren, T. et al. (2002), p. 11

⁴⁶ Langley, A. et al. (1995), pp. 261 - 264

⁴⁷ Drury, C. (2000), p. 8

⁴⁸ Ibid., p. 233

Long-term decisions⁴⁹ have effects on longer periods of time. Consequently, such decisions demand a firm's resources for a longer episode of time. Such decisions can influence future decisions and can have an impact on long-term potentials. Examples might be capital investments, like the purchase of new machinery, which will be discussed later on.⁵⁰

3.3 Management accounting & decision-making

The role of financial and non-financial information for decision-making is emphasised in many definitions of accounting, as outlined below.

“Accounting can be seen as the process of identifying, measuring and communicating economic information to permit informed judgements and decisions by users of the information.”⁵¹

Also Horngren, Sundem and Stratton⁵² see the main function of accounting information in its aid in the decision-making process, as the understanding of accounting information contributes to better decisions. So, by reporting and collecting accounting information, controllers can influence management's decision-making and lead them towards decisions that are in accordance with the organization's objectives.⁵³

Emmanuel, Otley and Merchant⁵⁴ consider control as the primary purpose of accounting information. Management control includes both, strategic and operational matters and thus, planning and control are not separated issues. However, decision-making falls within this wider process of management control and is thus identified as a “vital aspect of the overall control process”.

William J. B. Jr.⁵⁵ states that the decision maker decides what information inputs he/she considers as relevant for his/her decision. If the proportion of input of accounting information compared to non-accounting information is more than zero, then the accounting data may

⁴⁹ Ibid., p. 8

⁵⁰ Ibid., p. 233

⁵¹ American Accounting Association as quoted in Drury, C. (2000), p. 3

⁵² Horngren, C. et al. (2002), pp. 18, 182

⁵³ Ibid., p.4

⁵⁴ Emmanuel, C. et al. (1990), pp. 7, 10, 128

⁵⁵ Anderson, D.L., Raun, D.L. (1978), pp. 59 - 74

affect the decision. This proportion or the use of accounting information varies from decision to decision and from the decision maker whose choice may be affected by experience, perceptions and objectives. Further the probability that accounting information is used for decision-making rises if the information provided is relevant for the decision, if the decision maker conceives the accounting information as reliable or if not adequate non-accounting information is available. However compared to non-accounting information, accounting information is much easier to grasp, to describe and to put in numbers.

As our study focuses on accounting tools the following section tries to inform the reader about the most important ones and how they can be calculated. First however to provide a better understanding we will define useful terms connected to costs and then proceed by presenting the most important decision-making tools.

3.4 Definitions of cost terms

A *cost*⁵⁶ can be defined as resources that are given up for fulfilling a special reason. It is very common to quantify costs in terms of money for getting goods and services.

A *cost object or objective*⁵⁷ is usually defined as “anything for which a separate measurement of costs is desired”. The costs of a product can be seen as a cost object, as well as costs of a department or service.

A *cost driver*⁵⁸ constitutes the allocation basis for allocating costs to cost objects (e.g. direct labour hours).

*Direct and indirect costs*⁵⁹ – Direct costs can be traced directly and accurately to a cost-objective as opposed to indirect cost that cannot be allocated directly and easily. Examples for the first type might be wood when producing furniture or wool when producing pullovers. Indirect costs, which are also called overhead, include wages of supervision personal. The more costs are identified as direct ones, the more exact is the calculation.

⁵⁶ Horngren, C. et al. (2002), p. 133

⁵⁷ Drury, C. (2000), p. 21; Horngren, C. et al. (2002), p.133

⁵⁸ Drury, C. (2000), p. 46

⁵⁹ Fleming, I., McKinstry, S. (1998), p. 50

*Fixed and variable costs*⁶⁰ – When considering the cost behaviour, costs can be characterized as either fixed or variable. This determination is especially relevant for decision-making as managers need to know how costs or revenues change with varying levels of activity. Variable costs change in direct proportion to the volume, whereas fixed costs stay the same when changing the activity level at least over a certain time period. However, different periods of time affect changes of costs in the following way. On the one hand, the longer the time considered, the higher the number of variable costs. On the other hand, in a short-term period more costs will be characterized as fixed.

*Relevant and Irrelevant Costs*⁶¹ – Relevant costs are those costs that can be affected by decisions whereas irrelevant costs cannot be changed through a certain decision. When considering only a short time span, all costs are relevant for decision-making.

3.5 Tools for decision-making

Management needs to possess knowledge about the costs that arise in an organisation. For this reason, the cost accounting system determines the costs of the goods produced in a company.⁶² Hence, it is considered as the most fundamental tool in guiding decisions, and it will be explained first.⁶³ Without this information about costs, management would not be able to set prices or do investment decisions. Consequently, further management accounting concepts used for decision-making are built upon this cost foundation. Some of these tools to be discussed include the ideas of target costing and cost plus pricing, profitability and capital budgeting.

However, decision makers sometimes rely on the less rational but often equally valid bases for making decisions: experience, intuition, moral conviction and the more trivial reasons in business politics – turf wars, power struggles, personal self-aggrandizement and the like. So, it shall be emphasized that it is not always possible to base decisions only on quantitative factors. There remain almost in every case some aspects that cannot be translated into

⁶⁰ Drury, C. (2000), pp. 24 – 29

⁶¹ Ibid., pp. 29 – 30

⁶² <http://www.referenceforbusiness.com/management/Comp-DE/Cost-Accounting.html>; 2006-05-17

⁶³ Horngren, C. et al. (2002), p. 131

numbers and hence, management needs to consider these qualitative elements as well in their decision-processes.⁶⁴

3.5.1 Cost accounting system

A cost accounting system⁶⁵ includes in general two steps, the cost accumulation by classifying costs into categories and the assignment of costs to cost objects. The first one refers to the collection of costs by using classification criteria, like the relevance of costs or the cost behaviour. Different decisions require the consideration of different types of costs.⁶⁶ Hence, as a first step, it is very helpful for decision-making to categorize costs as fixed or variable, relevant or irrelevant and direct or indirect. For example, the make-or-buy decisions⁶⁷ should focus on relevant costs in a particular decision situation.

The classification method of direct and indirect costs, in particular, is important for the cost accounting system, which becomes apparent in the latter step that deals with the assignment and allocation of costs to its cost objectives.⁶⁸ Cost allocation deals only with indirect costs that are allocated to a cost object. On the contrary, the assignment of direct costs to a cost driver is called cost tracing.⁶⁹

In general, two main methods of allocating indirect costs can be identified. The wide-spread *Traditional Accounting System*, which is rather old, and *Activity Based Costing (ABC)*, a method developed in the late 1980s in the United States, although its basic thought roots back into the middle of the 19th century in Germany.⁷⁰ The first one is based on the idea of arbitrary allocation, for example direct labour hours are used as a foundation to allocate costs of materials to a cost object. Thus, the proportion of total indirect resource costs that is assigned to a cost object depends on the proportion of a volume-based cost driver. Often only one cost-driver is used, like e.g. machine hours.⁷¹ Nevertheless, this allocation basis is often not a

⁶⁴ Drury, C. (2000), p. 280

⁶⁵ Ibid., p. 22

⁶⁶ Horngren, C. et al. (2002), p. 132

⁶⁷ Ibid., p. 234

⁶⁸ Ibid., p. 131

⁶⁹ Drury, C. (2000), p. 46

⁷⁰ Anders Jerreling, Tutoring notes; 2005-05-12

⁷¹ Horngren, C. et al. (2002), p. 140

significant determinant of the cost” as opposed to ABC, which builds on cause-and-effect-allocations. Hence, the cost driver determines the costs considerably.⁷²

Often it is not possible to use actual overhead costs, because accountants would need to postpone the cost assignment process and the calculations until these actual data is available. To overcome this problem, standard costs⁷³ are used, which are foreseeable overhead. This implies that at the end of the accounting period it is likely that there will be either a under- or an over-recovery of overheads, which constitute the difference between the planned and the actual overhead. It is common to treat this difference as periodic cost and to add or delete it from the profit or loss of the period.⁷⁴ Organizations that are occupied with lots of similar activities and repetitive production steps frequently use these standard costs.⁷⁵

The function of both allocation systems can be described by using a two-step framework as proposed by Drury.⁷⁶ The first step consists of allocating the indirect costs to cost centres, which constitute places, function etc. to which indirect costs can be allocated. Examples might be types of service departments that provide services to other units. Usually ABC identifies more cost centres than traditional costing methods. In the second step costs are allocated to cost objectives with the help of cost drivers. Also in this case, ABC has more cost drivers.

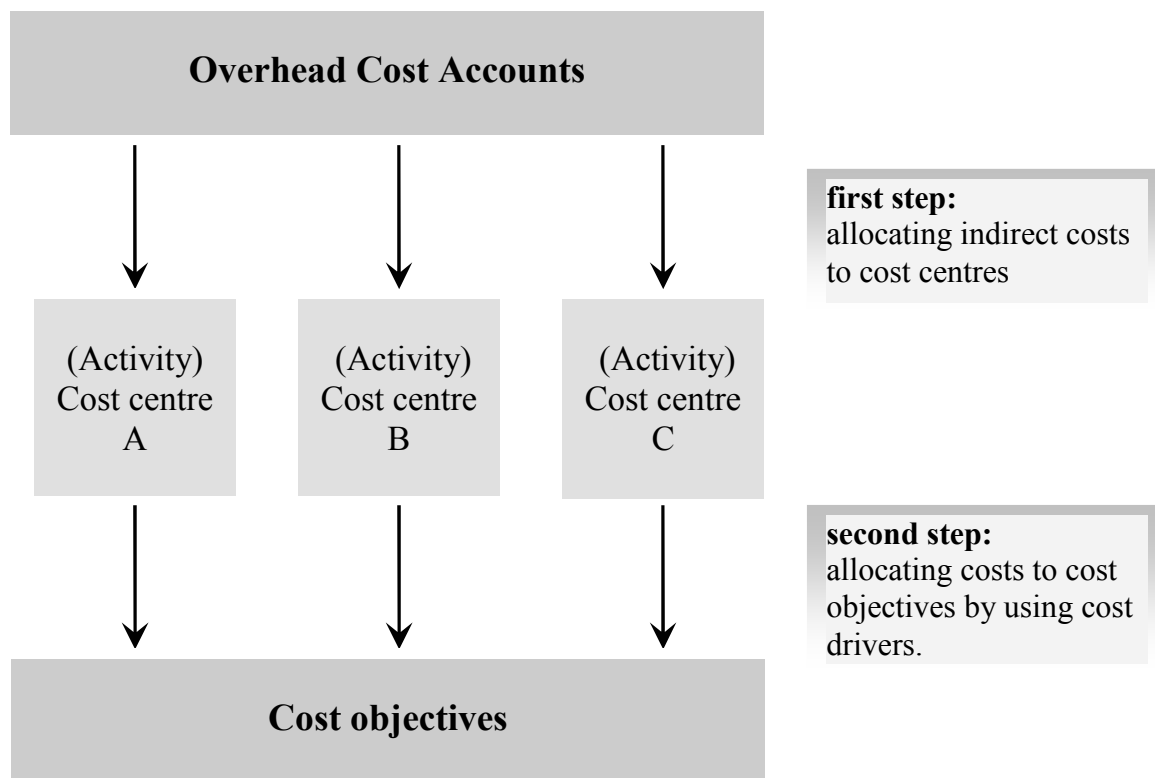
⁷² Drury, C. (2000), p. 46

⁷³ Ibid., p. 64

⁷⁴ Ibid., p. 65

⁷⁵ Ibid., p. 66

⁷⁶ Ibid., pp. 52 – 53



Graph 2: Adapted from: Drury, C. (2000), p. 53.

When applying the Traditional Accounting System there should be a reasonable and consistent relationship between the cost driver and the sum of the indirect costs. This system is usually good when the production process is rather simple and transparent. Besides, it is reasonable to apply this system when the ABC-method would be too expensive and the benefits too low. Nevertheless, this case might be rather seldom, because today the environment tends to be very complex what makes ABC usually beneficial.⁷⁷ It is also notable, that companies show a tendency towards not replacing an already operating system.⁷⁸ Hence, when using the Traditional Accounting System, organisations might refuse to switch to ABC or any other system.

3.5.2 Further decision-making tools

Next to the main tool, the cost accounting system, further tools are used for supporting and helping managers in making various decisions. Out of this vast pool of tools some will be illustrated. The concepts of target costing and cost plus pricing are applied for pricing

⁷⁷ Horngren, C. et al. (2002), p. 140

⁷⁸ Lambert, S.J. et al. (1996), not paged

decisions. The idea of profitability supports discontinuation decisions. Last but not least, the tool capital budgeting will be explained to determine long-term investment decisions.

3.5.2.1 Pricing and competition

Pricing decisions can be short term and/or long term oriented. Horngren et al.⁷⁹ state that pricing decisions are one of the major decisions managers have to face. The outcome of pricing decisions for new products or responses to competitor prices are crucial because if the price is not able to cover the costs in the long run a company can be thrown out of business easily.

As already mentioned the main aim of the price is to cover all costs in the long run and if possible to create revenue. There although are other factors that influence pricing decisions like legal requirements, competitors actions and customer demands.⁸⁰ If pricing decisions are constrained by influencing factors on the market such as dominant market leaders, the company can be defined as a *price taker*. The decision is therefore more based on if the company is able to accept the price. Companies who are market leaders and who offer products or services that are highly customized or differentiated can be described as *price setters*. In such companies cost information has a high impact on their pricing decision.⁸¹

There are two common tools for pricing: target costing and cost-plus pricing. The latter plays a crucial role in pricing decisions. Cost-plus pricing is done by calculating an average cost and then adding up a markup (desired difference between price and costs) in order to achieve a desired return on investment (money that an investor gets in return for his/her investment). The special thing in Cost-plus pricing is that there is no fixed markup, because it depends on customer demands and on costs how the price will look like. Maximum price would then be the price that attracts customer to buy from the competition. Another guideline for setting prices is that in the short run it should cover the variable costs; meanwhile in the long run it should also cover also the fixed costs.⁸²

Target costing is an effective tool to keep customer value while reducing costs. Before the product is designed a target cost is set that is based on the product's expected price and the

⁷⁹ Horngren, C. et al. (2002), p.194

⁸⁰ Ibid., (2002), pp. 197 - 198

⁸¹ Drury C. (2000), pp. 390, 378

⁸² Horngren C. et al. (2002), p. 198

company's required profit. The manager's task is it then to control costs in order that they do not exceed the target costs.⁸³

Competition is a common used word for company rivals producing similar products or services. Companies usually use a kind of espionage, also called benchmarking, to find out what competitors are up to. Benchmarking,⁸⁴ defined as the "process of comparing oneself against the best competition", is also used as a goal setting tool in order to become or remain competitive. Thus benchmarking has also motivating factors for example to find competitive goals and to learn new ideas. This is also important for a company's continued progress in order to work towards an organization's vision of becoming excellent in almost all its undertakings. A danger of benchmarking is to become a "copy cat", which means duplicating other's ideas or ways of doing things.

3.5.2.2 Profitability

It should be regularly checked if the products produced are profitable. If not, management also has to make discontinuation decisions and drop unprofitable ones.⁸⁵ *Profitability*⁸⁶ can easily be defined by the ability to make a profit meanwhile profit can be defined as a positive gain out of a business operation after subtracting all expenses. Profit planning is often done during the budgeting process. Profitability has to be achieved and hence, it is more a result of right decisions and of a cost conscious management.⁸⁷

Some other accounting tools close to profitability are:

*Gross profit*⁸⁸, which is also called gross margin, is defined as the amount of money that the sales price exceeds the cost of the goods sold.

Operating profit – can be defined as "the excess of current revenue over the current replacement cost of services used in producing the revenue."⁸⁹ This calculation is carried out before the interests and taxes are paid.

⁸³ Ibid., pp. 203 - 204

⁸⁴ Balm, G.J. (1996), pp. 28 - 29

⁸⁵ Drury, C. (2000), p. 295

⁸⁶ <http://www.investorwords.com/3881/profitability.html> and <http://www.investorwords.com/3880/profit.html>; 2006-05-13

⁸⁷ Anderson, D., Raun, D. (1978), p. 76

⁸⁸ Horngren C. et al. (2002), p. 59

*Working capital*⁹⁰ – is the current property of a company minus its current debts. The outcome of this calculation can be positive or negative depending on how much liabilities a company has.

3.5.2.3 Capital budgeting

“By far the most important economic decisions are those that involve investments in real assets.”⁹¹ These decisions, like investing in a new machine, building a new plant or launching a new product, determine the economic future. The investment decisions made today determine how much additional capital the organisation will add to its current stock of capital, which can then be used in the future to produce goods and services for the society.

Here comes the capital budgeting⁹² into play, which is the process of analysing potential capital expenses and deciding which investments the firm should undertake.

Capital budgeting⁹³ is a vital activity in business. A company can lose a lot of money if the investment turns out to be wrong or uneconomic. Decisions on investment, which take time to mature have to be based on the returns which that investment will make. If the investment is unprofitable in the long run, it is unwise to invest in it now, unless the project is for social reasons only.

All capital investment proposals⁹⁴ need to be evaluated in order to assess the net benefit to the business of undertaking the investment. A variety of methods of evaluation are available, among them are the payback, net present value, return on investment, and internal rate of return method. Following the payback method will be described as it is very important within Wexiödisk.

The payback method⁹⁵ is the simplest method of evaluating a capital investment proposal. Research has shown, however, that it is the one of the most frequently used methods in the

⁸⁹ Prakash, P., Sunder S. (1979), p. 2

⁹⁰ http://www.investorwords.com/5334/working_capital.html; 2006-05-26

⁹¹ Buckley, A., et al. (1998), p. 68

⁹² Brigham, E.F., Gapenski, L.C. (1993), p. 411

⁹³ <http://www.fao.org/docrep/W4343E/w4343e07.htm>; 2006-05-13

⁹⁴ Crowther, D. (2004), p. 254

⁹⁵ Ibid., p. 255

UK for capital investment appraisal. The payback period⁹⁶ is defined as the expected number of years required to recover the original investment. The decision rule⁹⁷ is to rank order projects under consideration from the shortest to the longest period in which the initial investment is paid back with net receipts.

Choosing the method of evaluation

We have mentioned four potential capital budgeting decision methods. The idea that a company would use only one method in the decision process could be probably assumed. However, with the technologies of today it is easy to calculate and list all the relevant decision measure.⁹⁸ And as stated by David Crowther,⁹⁹ research by Cooper et al shows that all firms use several methods to appraise investment alternatives before making a decision. The probable reason for the use of multiple methods of appraisal is that investment decisions tend to be so significant, or a firm that its managers are reluctant to base any decision solely upon one evaluation. Another reason for the use of several methods is that the different measures provide different elements of information and that all the different type of information which should be considered in the decision process.¹⁰⁰

Making investment decisions

The methods to evaluate projects of investment¹⁰¹ are based on quantitative information alone and provide only quantitative indicators. Yet most decisions are made on the basis of consideration of both quantitative and qualitative factors. Therefore, although capital investment will not normally be undertaken without an evaluation using some methods, the decision between alternatives will not be made solely on the basis of this evaluation.

Other factors¹⁰² which need to be considered are the objectives of the business, the availability of financial resources, the cash flow effects and their incorporation into the overall cash budget and qualitative factors and non-quantifiable costs and benefits.

⁹⁶ Brigham, E.F., Gapenski, L.C. (1993), p. 411

⁹⁷ Crowther, D. (2004), p. 255

⁹⁸ Brigham, E.F., Gapenski, L.C. (1993), p. 409

⁹⁹ Crowther, D. (2004), p. 266

¹⁰⁰ Brigham, E.F., Gapenski, L.C. (1993), pp. 410 - 412

¹⁰¹ Crowther, D. (2004), p. 266

¹⁰² Crowther, D. (2004), p. 266

4 Field Study

This section will introduce the chosen company first, proceeding further with a presentation of the research participants and a description of the interviews' surroundings. Then the contents of the interviews will be given, starting with general information and decision-making; and then moving on to specific tools for decision-making.

4.1 Company Presentation

Wexiödisk AB produces dishwashing machines for professional users and is currently Scandinavia's leading supplier in this field. The company has its headquarter in the South of Sweden, exactly in the town of Växjö.¹⁰³ In order to get an impression about its development and its business idea, a short overview will be given.

4.1.1 Strategy and mission

Wexiödisk aims at customer satisfaction by offering “operation safety, low operation costs and also a good working environment rather than focusing on low price” and by “having a competitive and technically advanced product range”.¹⁰⁴ Its products are produced to support the environment through minimizing the consumption of water, energy and chemicals. Hence, its strategic focus is strongly oriented towards the sustainable development of products.¹⁰⁵

4.1.2 History¹⁰⁶

The company was founded in 1972. Six years later, in 1978, it started doing business in the in-flight catering sector. Its present factory in Växjö was built in 1985. The three foundation members, which had relevant background knowledge in the fields of production of catering equipment, were keen to introduce high-quality machines. Due to the high quality, the demand for the products was not only reduced to Sweden, but arose abroad as well. Consequently, Wexiödisk established distribution networks in Europe, but also for example in Japan or Australia.

¹⁰³ <http://www.wexiodisk.com>; 2006-04-06

¹⁰⁴ http://www.wexiodisk.com/frameAbout_EN.htm; 2006-04-06

¹⁰⁵ Information material provided directly by Wexiödisk; 2006-04-05

¹⁰⁶ Information material provided directly by Wexiödisk; 2006-04-05

Wexiödisk was awarded for being the company of the year 1991 in Sweden by the Swedish magazine 'Weekly Business', because the company showed excellent growth, profitability and a good way of handling people.

In 1993, the company acquired the ACS license, which stands for automatic cutlery sorting system. That is a system that can be connected directly to dishwashing machines, which sorts spoons, forks and knives are automatically separated from each other.

In 1995, Hackman Metos acquired 40 % of the organisation and finally, four years later 100 % were obtained. Metos, which is a Finnish Group that produces foodservice equipment, was bought by the Ali Group in 2004 and belongs to them up to now.

4.1.3 The Ali Group

The Ali Group¹⁰⁷ is a supplier of all kind of equipment for the foodservice industry and is the largest European Group operating in this industry. In 1963, the original company, called "Comenda di Luciano Berti" was founded in Italy. Ali claims to select its group companies very carefully in order to maintain a standard of excellence. Nowadays, the group consists of 45 major international brands and it manufactures in 30 facilities, situated in 12 different countries.

¹⁰⁷ http://www.aligroup.it/main_en/main.asp; 2006-04-07

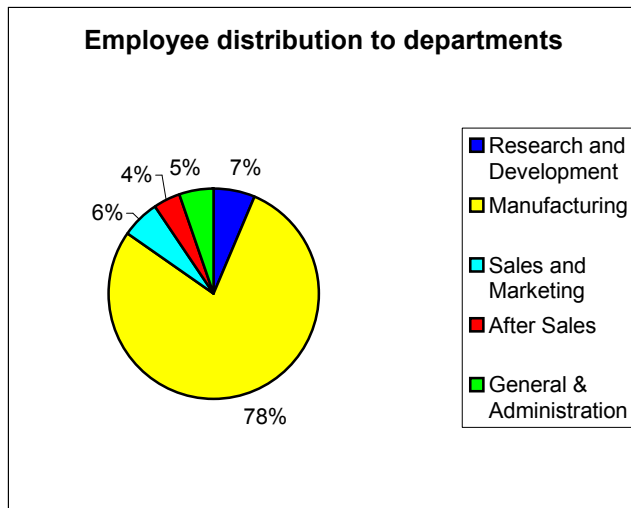


Graph 3: "Group Companies"; Source: http://www.aligroup.it/main_en/settori_attivita.asp

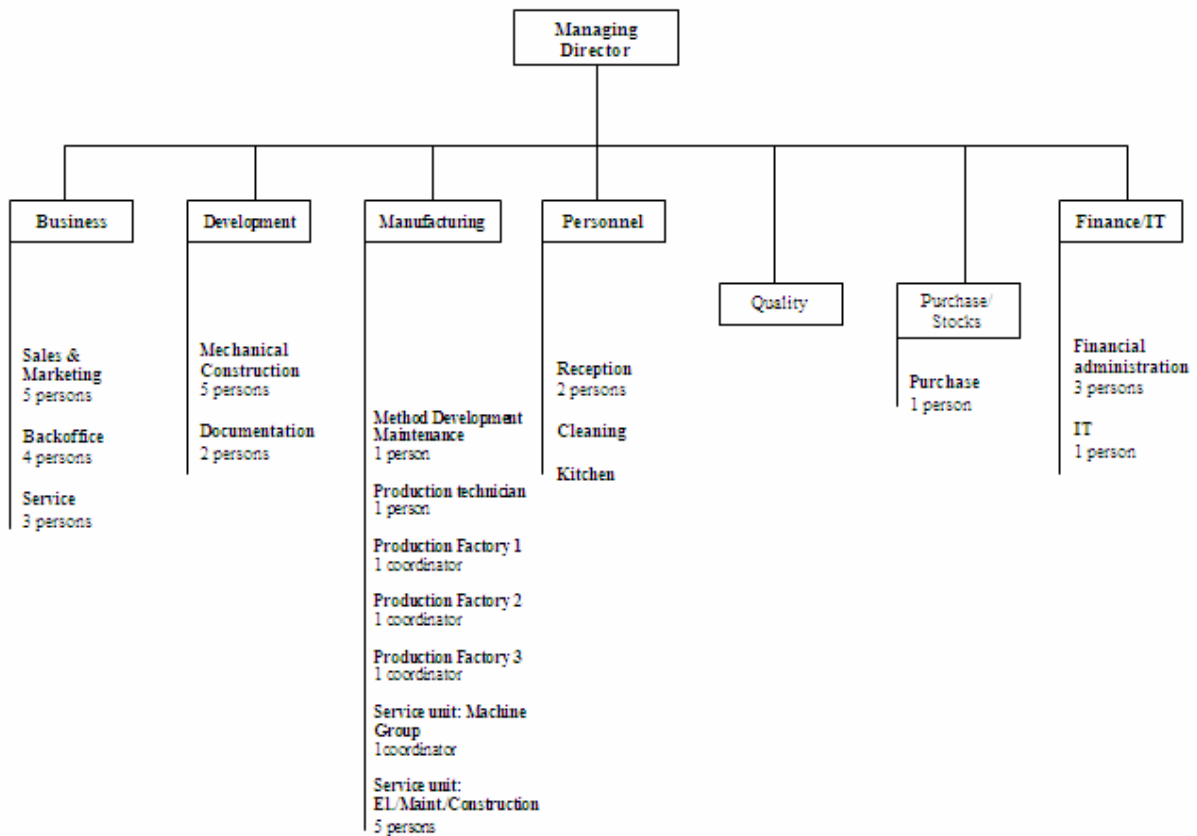
4.1.4 The departments

Currently, the seize of the plant is about 11.000 sqm and Wexiödisk employs around 175 people.¹⁰⁸ The distribution of these employees in different fields is as follows:

¹⁰⁸ http://www.wexiodisk.com/frameAbout_EN.htm; 2006-04-07



Graph 4: “Employee distribution to departments”; adapted from the information material as provided directly by Wexiodisk, 2006-04-05.



Graphic 5: Source: adapted from information provided by Wexiödisk.

The ideas and statements given by the financial department and the management position serve as a basis for this study. Therefore, only these roles will be illustrated.

The finance/IT department of Wexiödisk consists of five people whereof four are working in the finance field and one person is responsible for the IT. Of the four people in charge of finance, three are part-time workers.

The management department is composed of six people: of one representative per main department and of the Managing Director himself. The five main departments are Business, Development, Manufacturing, Personnel, and Finance/IT. The organization has a flat structure and is very open minded and so direct contacts between the different departments are possible.

4.2 Research participants and Surrounding

Our initial and main contact person was the financial manager, who had been in Wexiödisk for four and a half years. He pursued financial and economic studies in the evenings and was working daytimes. After that he started to work in a big consulting company. Before his present job in Wexiödisk, he was employed in another company in the same position for approximately twelve years.

In addition, we also interviewed the managing director of Wexiödisk. He is a diploma-engineer in technology and he has started his working career by being engaged in nuclear plants in Sweden and Finnland. Further he was a consultant and leading manager for Electrolux and Asea. In 1998, when the old founders retired and the company was acquired by a Finnish holding, he started working for Wexiödisk. There he was occupied in different management positions: development manager, division manager, general manager, and eventually he became managing director. He has been in leading positions for 25 years.

The two interviews conducted were held in the offices of the responsible managers. When we arrived for the first interview with the financial manager the secretary awaited us already. A screen situated in the entry hall announced our arrival by showing our names, appointment time and interview partner. Thus, everything seemed very well organized and friendly. After a phone message by the secretary the financial manager came to guide us to his office on the third floor.

He had an office for his own with a wall made of glass to the corridor side. This gave us the impression of an open atmosphere as everybody could see into all the offices and the other way around. The office was rather simply furnished with a big desk, chairs on both sides and bookshelves.

The second interview was carried out a few weeks later with the managing director. The welcoming process was similar to the one of the first interview. The office of the director was situated on the second floor and it had a comparable size as the financial manager's working place. However the furniture seemed to be of higher quality and the chairs were more comfortable.

Both managers treated us in a very friendly way and devoted plenty of time to us. The communication was rather informal with some private topics flowing into the conversation. We felt quite comfortable and as equal interview partners. In general, our prepared questions served as a good guideline however, we had to adapt and add some questions in order to get more detailed information.

4.3 Interview contents

We started the interviews with some general open questions to allow both managers to talk freely. Later on we tried to guide the conversation towards decision-making, financial tools and their interrelation. To structure this interview we thought a fluent text would be better than different headlines because the topics interfere with each other throughout the text. Indeed it was very difficult for us to separate the interview contents as the open questions led the interviewees to give very broad and thus sometimes mixed up answers. In order to help the reader to follow easier we marked some key words in bold.

4.3.1 General information about accounting and decision-making

For a better understanding of management accounting applied in the company it is necessary to define Wexiödisk's **strategic objective**. As declared on the homepage, Wexiödisk's overall objective is customer satisfaction. This importance of this overall intention became also apparent in the interview with the managing director, who stated "We believe if we do not

have satisfied customers than we can have profits in the short term, but in the long term the profit will go down”.

“We are a small player and the competition is of course hard”, with these words the managing director characterized the **company’s environment**. Wexiödisk is a market nicher and they focus more on environmental and economical issues, meaning that somebody who invests in one of their machines has to make a huge investment in the beginning but is saving money for electricity and water afterwards. “We are one of the most drivers in development – this is the only way of surviving...”, the managing director further said, underlining their focus on performance. Their biggest problem is that the other dish washing machine producers charge much lower prices. At the same time both interviewed managers pointed out that if they would change and focus on price as almost all the other competitors on the market they would probably not succeed.

According to the managing director, it is important to observe the environment, to go with the time and to pay attention to what is happening around. If the globalisation is taking place one has to “lower the price and keep the profit.” Their biggest competitive advantage is their innovative patents. Laughing, he said: “but when the Chinese are coming we have a problem” and he added “But I would say we are in the front when we are talking about technology.”

Wexiödisk tries to improve the production steadily. The financial manager compared this phenomenon with the Japanese thinking “kaizen”, which is the continuous improvement, in order to increase customer satisfaction. “The **production process** is both, complicated and simple”, explained the managing director, “We have a fairly big assortment of smaller machines, which produce masses of goods and some bigger ones which are more responsible for one piece productions. But in the future we will change [...] Especially, the bigger machines will produce customized goods, depending on the customers’ demands.” He ended his description with the following statement, “But all in all, we have a simple production system, as the company is still small.”

When being asked about the **role of accounting** in Wexiödisk the managing director gave a brief historical overview. “Looking six or eight year back we did not have any financial manager at all.” Considering the size of the company the managing director pointed out that an own controller had not been really necessary for the company until now. At present the

managing director sees the controlling functions as not so strongly developed in Wexiödisk. He added, “It is not only to deliver or collect figures [...]”, but the duties of the financial manager do also lie in making analysis and building simulations of the figures, like explaining potential results of a changing productivity or sales’ level. “Analysing the figures is more and more important”, he concluded. However, he sees the last two areas as rather underdeveloped and he would like to strengthen the financial manager’s role as a controller so that he becomes more than “a guy who is putting together the figures”.

The **task of the financial department**, as described by the financial manager, is mainly the control of costs. This control is achieved and supported by different measures, such as looking after receivables and payables or managing the value at stock. The main job of the employee operating in the IT part is to maintain and administer the IT system so that a proper working IT assistance is assured. The financial manager frequently discusses the financial situation in the management team and additionally reports it to other employees of Wexiödisk three or four times a year. In addition, further discussions are sometimes conducted in very informal surroundings, in Wexiödisk’s cafeteria. It is worth-mentioning that most staff members have a high interest in these accounting data, as Wexiödisk offers a profit sharing system that involves the organisational members in its financial result. Therefore the profit data is shown on a screen in the cafeteria in order that every employee can see how successful the company currently is. This also serves as a motivation factor. In the interview, the financial manager underlined the importance of his department for Wexiödisk.

We tried to narrow the scope of the interviews down by asking about the persons for whom accounting information has relevance for. Spontaneously the financial manager identified the management team as the main **user of the accounting information**. The relationship and contact process within this management team was characterized by the managing director as open minded and interacting mainly through meetings, e-mails, reports and the data base. These meetings are a good possibility to get informed about the ongoing processes in every part of the company. When being asked about his relationship with the financial department he claimed that he delegated most of the financial work to the financial manager as he had a long experience in his field. The financial manager characterized the relationship to the managing director with the following words: “[...] good personal contact, we try to be very open minded, and we discuss if we have problems...]”.

We were curious in how far **external or internal accounting systems** are used for decision making. Considering the external accounting system, it is to say that Wexiödisk still uses a Swedish system, but there is an ongoing discussion about a change to the so-called SAP, which is a rather common solution among Ali-group-members. However, these external data serve only to a limited extent for decision-making. Indeed, the financial manager reported in the interview, “It is more or less the internal data that we use as a basis for decision-making”. Both managers agreed on the important role of accounting information in decision-making. “Figures are helping you in making the decisions”, reported the managing director. “You have to rely on figures – if you do not have the right figures in the system and if you do not give the right information other people can not make the right decision”, claimed the financial manager. He underlined this statement by giving an example: only after knowing the amount of earnings on a certain product one can make a decision whether to go on with producing or to stop. Also the financial manager made an example to illustrate the importance of his figures: “We cannot invest in machines for 1.000.000 € if we do not rely on information that we have.”

By asking both managers about the **decision-making processes** we tried to dig deeper into this phenomenon. The managing director discussed the problem of decision-making by describing that there is more to decision making than just “waking up in the morning and saying: ‘hey we have to make that decision!’”. He added that it can be a rather time consuming process. “All the time I am making some small decisions”, he went on, explaining further that everybody in the company is concerned with decision-making every day. He underlined this statement with an example: “Also out in the production a guy has to decide in what order he should do and what he should do at that time.”

The managing director stated further that bigger decisions require more time and a certain procedure: First the problematic nature of a decision is discussed in the management team. “All the employees can come with ideas”, he explained. The best ones are even rewarded. The financial manager and other employees provide then calculations and other data about these various alternatives. Mostly the management team can agree on one alternative. If this is not the case the vote of the majority counts. If there is still no clear answer the managing director eventually decides.

“[...] all decisions are made in order to get a better long term performance”, the managing director reported, underlying that for him long term decisions are more important than short-term decisions. He explained, that it is sometimes difficult to define a decision as short or long-term in advance. Only after occurrence of a decision’s results, it is possible to categorize it. He admitted that some cases do exist, in which decisions are made that are positive for the short-term, but have negative effects on the long-term.

About the budgeting the financial manager stated that before they act they discuss in the management team “what volumes do we think we will have next year, how many people do we need for the production, in what kind of equipment shall we invest, do we need to invest in new software.” Afterwards the financial department puts all the figures together. The managing director added that they have to sent the budget for each year to the Ali-group.

The **control process** involves gathering monthly reports that are discussed in the management group and also checked by the Ali Group. The managing director further stated: “At the end of the month we are sitting together and looking at the figures and comparing them with the planned data, but of course if something happens you can also do it during the month.”

When being asked about the actions taken when discovering that a decision was wrong, the managing director answered to change the actions immediately. Winking he added, “[...] but I am not making any wrong decisions[...]”. According to him, changing a decision can often mean admitting a mistake, what is often quite difficult. However, he considers continuing the path of wrong decisions at any costs as stubborn.

4.3.2 Tools for decision making

In the following interview part more field data about the management accounting tools that are used for decision-making will be presented.

Being asked about the **classification of costs** in Wexiödisk, the financial manger explained the possibility to characterize them as either fix or variable. He clarified that Wexiödisk uses a very old way of defining costs, which considers all administration cost as fixed costs and all production costs as variable although within the production costs there would be fixed costs, like depreciation. Hence, labour costs of the production are also seen as variable. The

administration costs include for example the costs for the building, but not the heating and electricity costs, because around 90 % those elements are consumed in the production factory. Further on the manager explained that the above outlined classification possibility is defined by the Ali Group.

In the proceeding interview the financial manager mentioned some exemplary cases that show the role of costs and their classification in Wexiödisk. "We produce a lot of things in our own house today. Of course there are some things we cannot produce", he announced. Nevertheless, sometimes he is in the situation to choose whether to make product ingredients in Wexiödisk or to buy them from an outside supplier. "This decision is a matter of costs", he went on with his explanation, "If we can produce cheaper or more effective than to buy products, of course, we produce ourselves." Hence, the financial manager has to compare the costs of both alternatives and use the classification of costs defined by the Ali Group. Besides, he explained that it is sometimes quite difficult to calculate, as future events have to be considered, such as the future price of raw materials. He added that it is also necessary to take into account if new investments into equipments for producing in the own factory are necessary. If the buying-strategy is the final choice, the next step is to contact the project manager, who has to find a supplier. This one needs to consider also qualitative factors, like the delivery time and the reliability of the suppliers.

Further on, we got to know about the **indirect costs** or overhead in Wexiödisk, that need to be assigned to the dishwashers produced. The overhead is constituted by foreseeable costs, which means standard costs. These costs are build from estimated costs and volumes. The cost assignment done through a traditional accounting system. The cost centre overhead rates are applied in Wexiödisk. As the name already shows, this method distinguishes between cost centres. As a first step the overhead is allocated to these cost centres. This is done by the production manager's "best guess". In the interview the manager stated that Wexiödisk has such cost centres in the production and thus, it is possible to follow the costs for each cost centre. Further on he claimed that many machines of the production are seen together as cost centres.

The overhead per cost centre is divided through the allocation base, which are machine hours as the manger further explained, "[...] we know exactly how many hours we need to produce one type of machine in the production [...]". Finally, the out coming value is multiplied with

the amount of machine hours that are needed for producing a particular dishwasher-type. All the costs per cost-centre are then added to the direct costs and so the costs of a dishwasher result.

When being asked about the advantages and disadvantages about the presented system he admitted to have no opinion about this. He also talked about the idea of introducing the **ABC system**, which was discussed for about two years ago in Wexiödisk. To his mind ABC might be a good system, especially when considering that sometimes more time is needed for one customer than for another. Taking these differences in terms of costs into consideration the calculation would look differently. However, up to now no decision has been made about the introduction of ABC. The managing director told us further that he gained some experience about changing the accounting system in another company and that it resulted in total chaos and in a very expensive venture. Therefore he prefers to wait for the Ali-group to impose the change before they are going to take a step in that direction.

When being asked about the process of **pricing**, the financial manager stated that Wexiödisk uses a combination of cost-plus-pricing and target costing. He also refers on how the market reacts on their price. Giving an example about target costing he said that they decide first how much it costs and then their department works together with the production to stay within this cost frame.

In order to observe the competitors actions, Wexiödisk has their own men who go to the competitors on exhibitions and look what they have to offer and what technologies they are using and how their machines are working. They also check their websites. “We know that the competitors come to ours and look at our products.” The financial manager added: “It is an open kind of espionage”. Further they also get the data of the other dish-washing companies within the Ali-group. As the financial manager stated, this is a kind of motivation for them to perform better than the others.

Another commonly used tool in Wexiödisk is **profitability**, which is defined by the financial manager as the price the costumer pays minus the production costs. In Wexiödisk, they split up the product in different product groups and they also differentiate the costs of the machines for each product group. Based on these information, they calculate the gross profit for each product group every month. By this system Wexiödisk knows which product groups are

profitable. They are thus able to improve the products that are not profitable by changing the way to work or using other parts in the product. If it is not possible to improve, they delete the product from the product range.

The managing director stated: The “most important figure for the group is the profit”. He further explained that for them it is better to have more profit and a decent growth than a huge growth and a lower profit. According to his opinion the Ali-group prefers profit to get money for new investments. He further claims that profit has always been the purpose of the company. “Its better to have a decent profit, than you can sleep well, if you are growing and the profit goes down than you have a problem.” He also mentioned that it is typical for the region of Småland to take care of the money and thus making own money without paying high interests to the bank.

In order to achieve a better profit the managing director also made the most difficult decisions in his career: sending away people. “we have a good profit, but we have to prepare for the future. [...] And you can not make it easier it’s always a tragedy but it is something you have to take.”

As the financial manager stated in the interview, tools such as working capital, gross and operating profit are also regarded as very important within the management team.

For the big **investments** that affect the whole business for many years and that cost more than a determined amount, Wexiödisk calculates the capital budgeting and then sends the estimations to the Ali group who makes the final decision. For example, they are thinking now of doing a big investment into a new machine. The old machine has been in the company for eight years and considering the ongoing technological developments it is rather old now. The idea to replace it has developed through cost calculations. However, to invest in the new machine, Wexiödisk will need the agreement of the Ali group.

Digging deeper into the topic of investments the managing director said "As long as we are sending good figures, no problem." Moreover, he added that one month ago he was talking with a representative of the Ali group about it, and that person told him "If you believe in investment, do it." That means, Wexiödisk usually makes the budget, send the figures with a kind of report explaining what the company believes to Ali group, and that is it.

When we were asking about the **methods of evaluation** of the investment's projects, the managing director said: "we always make some sort of payoff calculation" and he added "all decision should be made over the costs over the years, it should be a cost reduction making an investment." Several people bring the information obtained from calculations. Like the production manager, who calculate the production capacity and the life time cost.

An accounting employee indicated that "it's more our need than special investment methods that decide to invest or not to invest." This joins the remarks made by the managing director: "If the machine is 2 or 5 years old, than we are not looking for a new one, but if it is more than 10 years, then yes".

Other factors than the financial and quantifiable figures found in the evaluation influence the final decision of investing or not in a project. As stressed by the managing director, the improvement of the quality or environmental issues can play a crucial role and weight more than financial information in the process of decision: "From machines it can also be increased quality or also a necessity out from environmental issues. We have made investments just to improve ergonomics for the people because we know in the long run it is good for us". He added also "We have robots and it has nothing to do with productivity. I would say just quality because not many people can make it like that with steel, but with robots you can do it. And I think one good guy can make it as quick as a robot but to keep up the quality, than you put it in the robot. And quality is of course also very important when you calculate the investments."

5. Analysis

The analysis will be divided into two parts: The first one deals with the first research question, whereas the second one will be concerned about the latter one. So, we will start this analysis by examining similarities and differences between accounting tools as applied in Wexiödisk and as described in the theory. Afterwards we analyze the role of the information gained through these tools in the decision-making process.

5.1 Accounting tools in use

According to the theory, actions of management accounting should support the attainment of Wexiödisk's strategic objective. Wexiödisk's key objective is of dual nature. Officially, customer satisfaction is stated to be the company's main intention. However, this goal indirectly implies the aim of profit generation, as expressed in the managing director's statement. By controlling costs, which is seen as the main task of management accounting in Wexiödisk, management learns about the company's performance and can in the following, contribute to profits. According to these findings, we can conclude that one main purpose of management accounting is to contribute to profits in Wexiödisk.

Wexiödisk followed the idea of profit ever since its foundation. Also the Ali-group sees profit as very crucial, as it contributes to the ability of making new investments. Therefore Wexiödisk considers profit as the most important accounting tool. This and other crucial tools will be illuminated in the following section, following the usual structure: cost accounting system, pricing, profitability and budgeting.

5.1.1 Cost accounting system

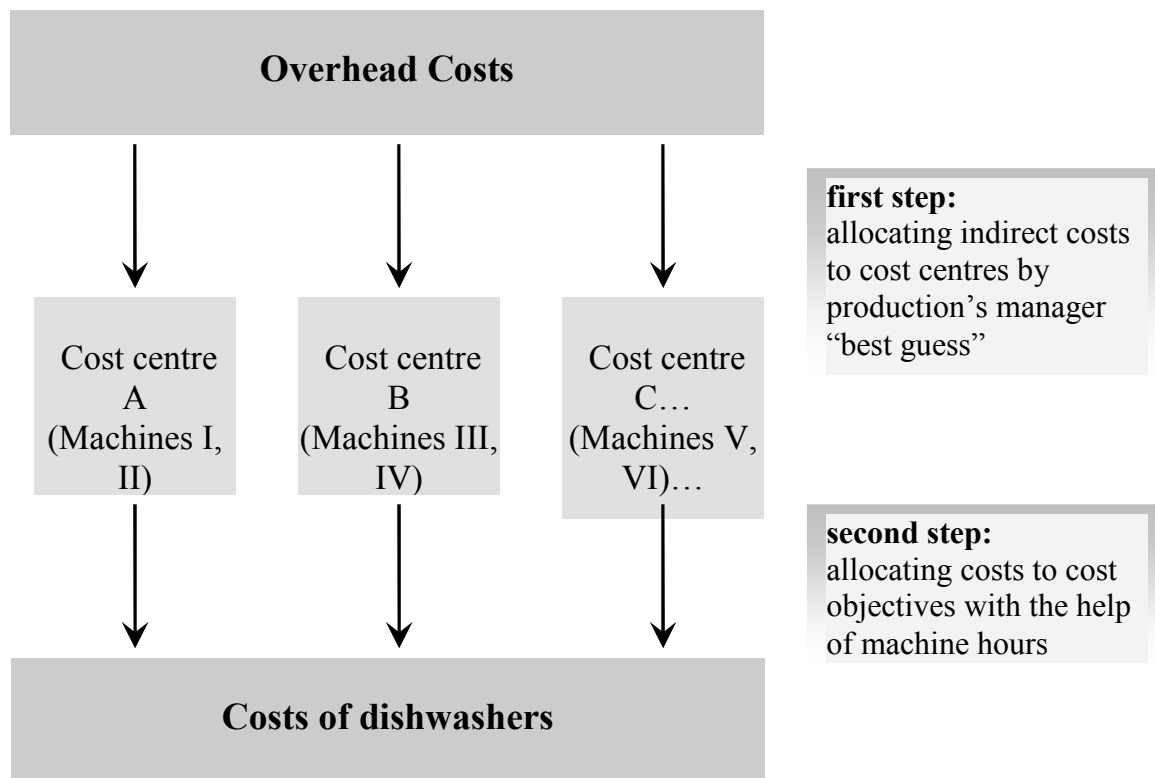
For different decisions costs are defined in different ways in Wexiödisk. First, the distinction between variable and fixed costs is made. However, the classification as used by Wexiödisk deviates a bit from theory, as the latter one takes the cost behaviour as only distinction-feature. Nevertheless, Wexiödisk only differentiates between administration costs, which are seen as fixed, and production costs, which are regarded as variable. This system is rather easy and circumvents potential differences in the interpretation of cost behaviours. It shall be

considered that the definition as either fixed or variable cost can influence the outcome of certain decisions.

When choosing between the strategy of outsourcing or production, the financial manager compares the costs of both alternatives. As suggested in the theoretical part, only relevant costs are considered in the case of producing in the organisation. Those costs, which cannot be avoided by outsourcing, are seen as irrelevant for the decision. As they occur in any case – independent of the choice between buying or producing - they are neglected in the cost calculation. In the situation of Wexiödisk all production costs are looked upon as variable costs. Consequently, there is no fixed factory overhead defined in the production costs. Such a fixed factory overhead could possibly include irrelevant costs, such as depreciation or insurance costs, which will continue regardless of the decision. However, as Wexiödisk does not differentiate its production costs, much more costs are seen as relevant. This can lead to the result that the decision for buying will sometimes seem more unfavourable than it actually is. So, the decision to determine certain costs as relevant and others as irrelevant can affect follow-up decisions.

From this example we can also derive that Wexiödisk also uses another possibility of clustering costs: relevant or irrelevant costs, although they did not explicitly mention this in the interview. In this example the financial manager also clearly underlines the crucial role of qualitative factors, like reliability of the suppliers. In accordance to the theory, we conclude that it is not always possible to rely only on figures. In this example, a personal relationship or empathy for a certain supplier might tip the scales for an outsourcing strategy. We think, when it comes to make decisions based on costs, a huge part of decision-making is based on habits, feelings, personal preferences, moral attitudes and on experience.

After the second classification of relevant and irrelevant costs, the identification of direct and indirect costs is the third cost classification schema that is applied in Wexiödisk. The assignment of the indirect costs to the cost objective is comparable to the traditional accounting system as presented in the theoretical part. It is remarkable that the allocation of indirect costs to the cost centres is done by the stomach feeling of the production manager. Hence, this might be another example of the above discussed role of subjective judgment in accounting. Because of the basic role of costs for decision-making, these subjective feelings might have an impact on the outcome of following decisions.



Adapted from: Drury, C. (2000), p. 53.

We were quite surprised that the financial manager could not name any advantages of the present system. Theory suggests the use of a traditional accounting system when the production is simple and transparent. Wexiödisk's system was described first with both adjectives, simple and complicated. However, in the proceeding interview, the managing director decided to classify the operating system as rather simple, in particular when considering the small size of Wexiödisk. Taking this statement into consideration, the application of a traditional accounting system seems to be quite reasonable. Nevertheless, future developments will make the operation system more complicated and hence, the idea of changing to ABC could be worth thinking about to make the calculation more exact. It should be considered that ABC might provide different numbers than the traditional system. For this cause, decisions based on this information might look differently. Nevertheless, the traditional accounting system is quite long in place in Wexiödisk. As a result, Wexiödisk might fear a change to a newer accounting system like ABC and be reluctant to this modification. This is understandable as the managing director had some bad experience with changing the accounting system in the past, which again indicates the influence of experience in the decision-making process.

5.1.2 Pricing and competition

Pricing is a very important tool within Wexiödisk. Through the interview we found out that they are a market nicher and that they differentiate themselves from the concurrence through their focus on environmental issues and reducing long term costs for the customer. According to the definition given in the theoretical part Wexiödisk can be classified as a price setter. Wexiödisk is also using a combination of cost-plus pricing and target. Consequentially cost information is very important for them in order to set the right price that can cover the costs and additionally assure certain revenue.

Related to competition, benchmarking was a big issue in the theoretical part. Also during the interview we found out that in Wexiödisk they have their own people who check the competitors' offers and prices. Also within the Ali-group the margins of the other dish-washing companies are seen as an incentive, a motivation, to work better and harder.

5.1.3 Profitability

The definition of profitability provided by the financial manager matches with the theoretical one. The theory suggested checking the profit margins regularly. The managing director underlined in the interview that he follows the profit data monthly and that this report is also forwarded to the Ali-group who is highly interested in. The theory further highlights the use of profit margin in order to eliminate not profitable products. The managing director supported this statement by saying that Wexiödisk continuously tries to improve not profitable products or if necessary to delete unprofitable ones. The financial manager also stated that working capital, gross and operating profit are the three most important tools within the company. According to the theory these three measures are closely related to the profit tool and thus it matches with the objective of Wexiödisk.

5.1.4 Capital budgeting

The answers about the investment methods that we got from the interviews and from the questionnaires were not precise. Indeed, Wexiödisk makes always some calculations before making the decision whether to invest or not to invest in a project. The managing director talked about "payoff calculation", apparently meaning the use of the payback method.

However, the payback method is not the only calculation made, as they mentioned to use other methods as well, without naming them. This goes along with the theory: before making the final decision, managers at Wexiödisk need to consider different elements of information provided by different methods of evaluation.

In Wexiödisk, the methods to evaluate projects are used to help managers to make decisions. But they are not the most important factors that they consider when investing in project. Indeed, we found that the need to invest is based on the effort to deliver high quality to customers, which is important as it is the strategy of Wexiödisk. This corresponds to the theory explained by David Crowther. We can also say that non-quantifiable factors are significant in the decision, like environmental benefits.

As stated, this financial information is used as a basis for decisions and flows into the decision-making process. Looking at investment-decisions, we can say that collected data are used like guidelines, they are part of planning the expenses of the future, they say if an investment is possible, and they make the project more concrete. Qualitative factors are crucial too.

5.2 Role of accounting information in the decision-making process

The accounting department within Wexiödisk seems to deliver valuable information as it makes quite successful decisions, although the managing director is not quite satisfied with the current management accounting system.

The information gained through accounting tools is discussed within the management team. The interview gave us the impression that there is a relationship of trust between the managers. Especially, the financial manager and the managing director seemed to have a favourable opinion of each other. The whole management team, but in particular the managing director, who has the final word, have to rely on the information provided by the financial manager in order to do decisions. That is why; we consider it very important to have a working climate built upon trust. In our opinion, this seems to be the case in Wexiödisk.

The exchange of information takes often place in the cafeteria, where also decisions and options are discussed. Therefore the decision participants can be all the persons within the

company. Therefore Wexiödisks uses a kind of organization decision. In the management team everybody has the same amount of authority. A democratic vote is conducted and everybody, regardless if it is the managing director or another manager have exactly one vote and additionally still everybody in the company can provide information for the decision. Therefore in this case the group decision is applied and it is in the same time a team decision with more final decision makers. Although if the democratic vote should not result in a clear answer the managing director will take the decision alone – this is more similar to a team decision. Thus in the case of Wexiödisk it is difficult to decide who is “the decision maker” as it varies from situation to situation and from the type of decision.

Decisions are done all the time in Wexiödisk. It is interesting to note that the managing director was not able to list a specific pattern of actions, when being asked directly if he follows certain steps when making important decisions. During the further progress of the interview however, the steps became more and more apparent. We therefore conclude that he is not consciously aware of the decision-making process he follows. Comparing Drury’s model of the decision-making process with the empirical data many similarities can be found.

5.2.1 The decision-making process

In general, the managing director seems to apply an intensive planning process. This becomes evident when looking at his statement that big decisions are not done when waking up in the morning but after a certain time of gathering and exchanging information between various parts of the organization. In stating that he further follows the margins of all products and that he checks the cost data every month, it became evident that accounting information is not only used for the planning but also for controlling phase. Now we are going to analyse step by step in how far the decision makers in Wexiödisk follow Drury’s model and where and to what extend accounting information interferes.

5.2.1.1 Planning Process

1. Identify objectives: As the managing director and also the financial manager stated several times in the interview, the main goal in Wexiödisk is maximizing the profit. Also the founder of the company followed this goal, and the Ali-group continues the habit in order to be able to make new investments. The Ali-group as the actual owner also influences this step of the

decision-making process. The managing director claimed that performance goals emerge through a dialogue with them. Concerning other goals they are rather independent as long as they deliver good figures.

As seen in the empirical part every employee within the company gets a certain “piece of the cake”. So if the company is doing well the employees earn more and are thus willing to help fulfilling Wexiödisk’s overall aim. According to these results the accounting tool profitability seems to play a very important role within Wexiödisk. Affecting already the first step of the decision making process it can be expected that it influence the following steps too.

2. Search for alternative courses of action: This is regarded to be the most difficult step in the decision-making process. During the interview we got the impression that Wexiödisk is very good at this stage. Through benchmarking they send people to check the products of the concurrence. Furthermore they are leading in development in their field and they possess many patents and are thus armed for the future. As the employees get rewarded for every good idea, Wexiödisk collects alternative impact from every single member of the organization. Certainly they do not have the time and resources to identify all possible alternatives but but with their rewarding system we think that they are still able to identify the most important ones.

3. Gather data about alternatives: Management accounting information makes an important contribution to this step, as well as to the previous one. By doing simulations, based on collected cost information, management accounting is able to predict likely effects of decisions and add value to them. Such simulations might for example include the prediction of results of price changes. However as the managing director mentioned, he would like the financial department to do more simulations in the future. It can be anticipated that this step might be developed further in the next years. Wexiödisk laid off some employees to prepare for the future if the business might go down. This shows that they consider economical factors that do not lie in their hand such as conjuncture and inflation. It also shows that they are very cost conscious and thus also this tool seems to be important also for this step of the decision-making process. Other tools such as pricing and management accounting itself surely also interfere to some extend – depending on the decision made. During the interview both managers claimed several times that Wexiödisk regards the long-term effects as much more

important than the short one. Thus when collecting information they will put more emphasis on the long-term outcomes. Furthermore with their rewarding system also everybody in the organization can be considered as a potential source of information about alternatives. These data might even serve as an input for the accounting process, like information about prices or expected sales level. Consequently, these departments, next to the financial department can affect the decision-making process through this provided information, but also through their vote in meetings of the management team.

4. Select appropriate alternative courses of action: As mentioned beforehand the decision itself is done by a majority voting where the managing director has the last word. We suppose that out of the vast pool of alternatives they will select the option that in their opinion achieves the company goals best. It shall be pointed out that it is often quite difficult to identify the commitment of the decision-makers, as well as the decision-makers themselves, because there is often no identifiable point when a decision is made. People are meeting in the cafeteria, discussing and maybe making some small decisions. These decisions and their following actions might be the basis for other decisions. So in the end one big decision might emerge.

So, Drury's model constitutes kind of lenses through which we can see the decision-making process in Wexiödisk. However, it is a strongly simplified model that does not take into account the above mentioned additional processes that come into play.

5. Implementation of the decision: In the management team a budget for every year is discussed. Thus all the decisions will be elaborated and put into number through this financial plan. The financial department once more plays a very important role within this last step of the decision-making process and also financial information is a crucial ingredient.

As more or less all the financial data is available for everybody within the organization the budgeted within Wexiödisk can also be regarded as a way of communicating the organizational aims. Thus everybody gets informed about the future changes and the role they play within.

The actual implementation of a decision is done by working closely together with the production or the fields that are affected by the decision and by constant feedback and

information exchange. This leads us to the control process, which is implemented after the decision-making process in Drury's model.

5.2.1.2 Control Process

6. *Compare actual and planned outcomes:* The financial department delivers the actual figures every month to the management team and to the Ali-group. As seen in the empirical part the management team looks at the figures and compares them every month. Thus the financial department plays a key role in showing problem areas and in terms of measuring the own performance within the control process. Profit is a commonly used feedback-tool. It allows for a comparison of different periods and an evaluation of their performances.

7. *Responding to divergences from plan:* As the managing director stated it is stubborn to follow the path of a wrong decision they try to change as soon as they detect that an error has occurred. The accounting control function plays a very important role in order to identify whether the company is moving in the right direction or not. The managing director further added that sometimes it is difficult to admit a mistake. Still the goodwill in favour of changing mistakes seems to be there.

As the information provided by management accounting in Wexiödisk supports the steps of the decision-making process, it can be seen as somehow integrated into the decision making process. Also the control process would hardly be possible without the data delivered from the financial department, which compares planned with actual outcomes. Hence, it helps in gathering data about possible alternatives, presents financial information about the possible outcomes and gives finally financial feedback during the implementation and afterwards.

6. Conclusion

To answer the first purpose of our paper “which accounting tools are used in Wexiödisk” it can be said that profitability is regarded as the most important tool for the owners and also for the managers. Tools that allow an examination of the relationship between accounting information and decision-making were analyzed. These tools included the traditional accounting system, a mixture between target and cost-plus pricing, a kind of benchmarking, working capital, gross and operating profit and the payback method. As shown, Wexiödisk adapted them and hence, there were some differences to their outlined theoretical descriptions.

However, these quantitative data is not enough for doing successful decisions. The role of qualitative data, as well as personal feelings, experiences and preferences of the accounting information providers, as well as the decision-makers has an important impact on decision-making.

Throughout this thesis the importance of financial information as gained through management accounting tools was underlined. Apparently, decisions are affected by this data. This is also the case in Wexiödisk. This leads us to the answer of the second purpose about how those accounting tools affects the decisions made by the company.

As stated, all interviewees agreed on the basic role of accounting information on decision-making. These data flows into the both, the planning and the control process afterwards.

The decision-making process itself is quite complex. The model of Drury, which consists of several successive steps, was applied to illustrate this process. However, we recognized that it is not always possible to squeeze all decisions into this model. In Wexiödisk’s situation, it might be sometimes quite difficult to determine the final decision maker. Mostly a bigger number of people and departments is involved, who often meet in the cafeteria to discuss informally. So decisions often emerge ‘accidentally’, making it quite hard, if not impossible to determine a final decision-making point.

We could identify various decision-making steps within Wexiödisk and moreover we were able to find out about the role that the accounting tools play within. Still as mentioned in the analysis that Drury’s model gives evidence for many critics.

As we have seen in the theory, accounting tools are information provided to guide decision. Often other non-financial factors are also considered and even weighted more than only numbers and figures. It is sometimes also very cost intensive to make exact figures about a certain problem, therefore estimations are made where also feelings and experiences influence the outcome of estimation, and thus, the final decision.

6.1. Recommendations and further research

Throughout the paper we already made suggestions how Wexiödisk could profit more of the financial data for decision-making purposes. It is left to say that we agree with the managing director who stated that the controlling function of the financial department should be more developed in the future.

To get a more in depth view about the research problem further research would be interesting. Such researches should be conducted in various and if possible in bigger companies.

6.2. Own Reflections

In the beginning of our research we were all very enthusiastic about our topic especially about combining accounting and leadership. The exciting thing was that we did not really know where it leads us. Until now we got a clearer picture about the decision processes keeping in mind that it is impossible to know all about it. From the interview we further learned that decision making happens more unconsciously as it was sometimes very difficult for the interviewees to give clear statements about it. This might also be due to the fact that decision making is a phenomena which varies from decision to decision and depends very much on the decision maker/s.

During these two months we worked many hours on this thesis and spend a lot of thoughts on it as it turned out to be very difficult to reasonably combine these two topics. Never the less it was also very enriching for us and also interesting to learn about these phenomena in a different way than just by sitting in a lecture hall. We moreover hope that we were able to depict the knowledge we gained during our research and that it makes sense to the reader.

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Graphs and Tables:

Table 1: page 17: adapted from Holsapple, C.W., Whinston, A.B. (1996) p. 69

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Graph 2: page 25: Adapted from: Drury, C. (2000), p. 53

Graph 3: page 32: “Group Companies”; Source:

http://www.aligroup.it/main_en/settori_attivita.asp

Graph 4: page 33: “Employee distribution to departments”; adapted from the information material as provided directly by Wexiodisk, 2006-04-05.

Graphic 5: page 34: Source: adapted from information provided by Wexiödisk